David W. Held

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CONTACT

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EDUCATION

1994 B.S., Horticulture (Pest Management Minor) University of Kentucky
2000 M.S. Entomology, University of Kentucky
2003 Ph.D. Entomology, University of Kentucky

PROFESSIONAL EXPERIENCE

Chair (Oct 2020-present) Auburn University, Department of Entomology and Plant Pathology
Professor of Entomology (Oct 2019-present) 75% Research, 25% Teaching
Auburn University, Department of Entomology and Plant Pathology
Associate Professor of Entomology (Oct 2012-Oct 2019) 75% Research, 25% Teaching
Auburn University, Department of Entomology and Plant Pathology
Assistant Professor of Entomology (Aug 2008-Oct 2012) 75% Research, 25% Teaching
Auburn University, Department of Entomology and Plant Pathology
Assistant Professor of Entomology (Dec 2003-July 2008) 75% Extension, 25% Research, Mississippi State University; Coastal Research and Extension Center, and the Department of Entomology and Plant Pathology (Off campus faculty)
Principal Lab Technician\Research Analyst (Feb. 1995–Nov. 2003) Entomology Department, University of Kentucky.

RESEARCH INTERESTS

- Ecology, biological control, and management of pests of ornamental plants and grasses in landscapes and production.
- Invasive insects and the impacts caused by their introduction and reactive management.
- Increasing the ecological functionality of urban landscapes for insects.

The program aims to develop innovations or interventions that reduce reliance on synthetic inputs, primarily agrochemicals to manage pest outbreaks.

TEACHING

Primary instructor

- Economic Entomology, 4 CH with lab; Fall, 2009-2018, 2020, Spring 2021, Fall 2025 (online section developed by D. Held) 4 credits with lab
- General Entomology, 4 credits with lab; Fall, 2013-2018, 2020, 2021, and 2023, 2024 (co-taught with Dr. Penick)

- Landscape Entomology (developed by D. Held), 4 credits with lab; In-person 2010, 2017, 2019; Distance course in 2012, 2015, 2017, 2019 (developed by D. Held).
- Integrated Pest Management, Spring 2020, 2022, 2025 (developed the entomology section, co-taught with pathology and weed science colleagues each year)

International teaching

- **2017: Cuba,** 1 wk certificate course in BMP and IPM for ornamental horticulture.
- **2016: Cuba,** 1 wk certificate course in turfgrass IPM.
- **2014: China, Sichuan Agricultural University,** Primary instructor, 2 wk course on Turfgrass Entomology

Other instruction

- Guest lectures for various HORT and ENTM courses as needed.
- Faculty Coach for Debate team that competed at national ESA meeting; 2009-2017, 2021. Our team typically placed among the top teams at the annual ESA meeting.
- Faculty advisor to F.S. Arant Entomology Club (2009, 2016-2019)
- At least 6 mentored undergraduates mentored on research projects have advanced to graduate or professional school

STUDENT and POST-DOC MENTORING

- Four graduate students currently mentored as either Major or Co-major Advisor
- Contributed to >50 students completing degrees including students at Utah State University and MS State University.
- 22 completed as Major or Co-major Advisor
- Two post-docs mentored, one is a faculty member at University of IL

Student Name	Year	Degree	Role	Current Position
Bibechana Paudel	2025	MS	Co-Major Professor	Ph.D. program at Auburn University
Cora Yates	2024	MS	Major Professor	Diagnostician, ACES, Plant Diagnostic Lab
Jordan Melson-Jordan	2024	MS	Major Professor	Agriscience Teacher, Benjamin-Russell High School, AL
Nicole Baker	2024	MS	Major Professor	Insect diagnostician, OK State University
Elijah Carroll	2023	MS	Major Professor	PhD student, Auburn University
Oluwatomi Ibiyemi	2020	MS	Major Professor	PhD. student, University of Georgia
William Groover	2020	PhD	Co-Major Professor	Regional Agronomist, BASF
Selina Bruckner	2020	PhD	Co-Major Professor	Assistant Extension Professor, Auburn University

Kayla Sullins	2021	MS	Major professor	PhD student, Auburn University
Augusta (Thurmond) Kilburn	2019	MS	Major professor	Research Technician, University of IL
Fredericka Hamilton	2019	PhD	Co-Major Professor	
R. Murphey Coy	2017	PhD	Co-Major Professor	Head of Regulatory Services, KY State
C. Scott Clem	2015	MS	Major Professor	Assistant Professor of Ecology and Entomology, Illinois State Univ.
Adekunle Adesanya	2015	MS	Major Professor	Corteva Research Scientist
R. Murphey Coy	2014	MS	Major Professor	
Austin Gorzlancyk	2013	MS	Major Professor	
Yao Xu	2012	MS	Co-Major Professor	Secondary Science Teacher in China
Raymond Young	2012	MS	Major Professor	
David Bailey	2012	MS	Major Professor	Ag Technology Specialist, Crop Production Services
Sallie Martin Sells	2012	MS	Major Professor	Science Teacher, OK Christian Academy
Esther Ngumbi	2011	PhD	Post-doc	Associate Professor, University of Illinois
S. Addison Barden	2011	MS	Major Professor	Business owner, Atlanta, GA
Cheri Abraham	2008	MS	Major Professor	Field Scientists, Syngenta Crop Protection, FL

SYNERGISTIC ACTIVITIES

- Three successful awards from NIFA-SCRI to support multi-disciplinary teams (engineers, social scientists, horticulturalists, plant pathologists) focused on novel solutions for key pest problems in ornamental production.
- Co-lead an AFRI multi-state (GA, AL, MS) project to evaluate flowering forbs to interplant lawns for pollinator conservation (Refuge Lawn project)
- Funded by NSF to investigate the impacts of soil-tunneling grass pests on the hydraulic conductivity of infested soils (Engineering, Soil Physics, Entomology).
- Director or co-director of Alabama IPM programs for 7 years. Provided leadership for a multidisciplinary team of researchers focused on IPM across commodities.
- Co-inventor on 4 patented technologies.
- Co-lead a team of scientists at Auburn focused on the development of microbial biofertilizers to replace or reduce chemical inputs in turf and pasture grasses.

FUNDING

Funding for my program comes from Federal (NIFA-SCRI, AFRI Foundation Program, and NSF), Regional (Southern SARE, Southern Region IPM Center, IR-4 Program), State (Specialty Crop Block Grants) competitive programs as well as commodity and industry support. Industry has funded numerous grants for applied work in grasses or with pests of ornamental/amenity plants. As PI or co-PI, awards for extramurally funded projects exceed $11 million with $2.5 million in funds directly to my program.

PUBLICATIONS

**indicates a student or post-doc co-authors. Co-authorship of refereed papers or book chapters include 48 student co-authors, 120 AU and external faculty, USDA colleagues and technical staff, and 6 post-docs.*

Original Textbook

Urban Landscape Entomology, D.W. Held, Academic, October 2019.

Invited Reviews *(Submissions require a proposal reviewed and approved by the editorial board. This is the highest ranked entomology journal; impact factor of 13.6)*

Held, D.W. and D.A. Potter. 2012. Problems and prospects for managing turfgrass insect pests with reduced chemical inputs. Annu. Rev. Entomol. 57: 329–354. (101 citations)

Potter, D. A. and D. W. Held. 2002. Biology and management of the Japanese beetle. Annu. Rev. Entomol. 47: 175–205. (379 citations)

Book chapters (13 since 2003)

1. *Bartlett. D. and D.W. Held. 2025. Carpenterworm. In: J.C. Chong (ed). *Handbook of Wood Boring Insects of Ornamental Trees and Shrubs in the Eastern United States*. (Invited).
2. McGraw, B.A. and D.W. Held. 2023. Insect pests, In: L. Tredway, M. Tomaso-Peterson, J.P. Kerns, and B.B. Clarke (eds). *Compendium of Turfgrass Diseases 4th Edition.* American Phytopathological Society. (Invited).
3. R.C. Williamson, D. W. Held, R. Brandenburg, F. Baxendale. 2013. Turfgrass Insect Pests. In: B. Horgan, J. Stier, and S. Bonos (eds.) *Turfgrass Monograph.* Crop Science Society of America. (Invited).
4. Held, D.W. and P.J. Vittum. 2012. Japanese beetles. In: C. Prater and R. Brandenburg (eds.) *ESA Handbook of Turfgrass Insects*. *2nd Ed.* (Invited,).
5. Hellman, J.L. and D.W. Held. 2012. Green June beetle. In: C. Prater and R. Brandenburg (eds.) *ESA Handbook of Turfgrass Insects*. *2nd Ed.* (Invited).
6. Held, D. and D. Potter. 2008. June beetles, *Phyllophaga* spp. In: J. Capinera [ed] *Encyclopedia of Entomology*, Kluwer (Invited, revision of 2004 chapter).
7. Held, D.W. 2008. A unique perspective on the biological consequences and Recovery from Hurricane Katrina in Mississippi. Proc. Forest Products Society Conference on the Lessons Learned from Natural Disasters. (Invited)
8. Potter, D. and D. Held. 2008. Japanese beetle. In: J. Capinera [ed] *Encyclopedia of Entomology*, Kluwer (Invited, revision of 2004 chapter).

9. Peck, D.C. and D.W. Held. 2007. Injurious Arthropods: Root Feeders: Crane Flies. In: W.O. Lamp, R.C. Berberet, L.G. Higley, C.R. Baird. *ESA Handbook of Forage and Rangeland Insects*, Entomological Soc. America.
10. Held, D. and D. Potter. 2004. June beetles, *Phyllophaga* spp. In: J. Capinera [ed] *Encyclopedia of Entomology*, Kluwer (Invited).
11. Potter, D. and D. Held. 2004. Japanese beetle. In: J. Capinera [ed] *Encyclopedia of Entomology*, Kluwer (Invited).
12. Held, D. and D. Potter. 2003. Japanese beetle. In: V. Resh and R. Carde [eds.] *Encyclopedia of Insects*, Academic, San Diego, CA. (Invited).
13. Potter, D. and D. Held. 2003. May beetle. In: V. Resh and R. Carde [eds.] *Encyclopedia of Insects*, Academic, San Diego, CA. (Invited).

Articles in Refereed Journals (80 published since 1998) *indicates a student author

1. *Chih, J.W., E.G. Begitschke, A.A. Young, J. McCurdy, D.Held. 2025. The bloom factor: the effect of mowing height on flowering lawn forbs. Urban Forestry & Urban Greening. *Submitted, in review.*
2. *Carroll, E.P., D.W. Held, N.E. Turley, S. Bruckner. 2025. Crape myrtle bark scale *Acanthococcus lagerstroemiae* (Coccidae: Eriococcidae) infestation seasonally alters the abundance and composition of insect assemblages on crape myrtle trees. Oecologia 207: 155. https://doi.org/10.1007/s00442-025-05792-3
3. *Kirby, S., N. Minaev, J. McCurdy, *C. Wang, G. Henry, D. Held, C. O'Neal. 2025. Alternative approaches to turf systems: A review of pollinator-friendly lawns. Crop Science 65: e70143. https://doi.org/10.1002/csc2.70143
4. *Yang, Zimo, E. Woodruff, D. Held, N. Hardy. 2025. Predicting the phenology of herbivorous insects. *Ecology and Evolution* 15, no.7: e71734. https://doi.org/10.1002/ece3.71734.
5. Mueller, D.S., L.C. Iles, C.L. Pilcher, A.J. Sisson, R. Magarey, R. Adams, W.I. Almodovar, D. Alston, P. Beauzay, R. Bessin, M. Bish, M. Burrows, A. Calixto, R. Chandran, J.B. Colquhoun, M. Concklin, A.J. Dreves, P.C. Ellsworth, P.D. Esker, J.J. Farrar, A. Fournier, D. Frank, K. Hamby, G. Hamilton, A. Hanson, A. Hazelrigg, N, Hein-Ferris, D. Held, J. Jasinski, H.M. Kelly, D. Kerns, M. Kersten, L. Kerzicnik, J. Knodel, G. Koehler, H. Kratsch, C.H. Krupke, N.C. Leppla, E. Lizotte, C. Matney, R. A. Melanson, F. Miller, M. Murray, D. Owens, D. Plewa, F. P F Reay-Jones, S.I. Rondon, T.A. Royer, P.A. Rozeboom, H.A. Sandler, S.P. Schell, M. Schuh, T. Seipel, D.S. Carley, A. Sial, R. Singh, D.L. Smith, T. Stock, G. Studebaker, A. Szczepaniec, L. Tewksbury, J. Tooker, A.J. Varenhorst, A. Vinchesi-Vahl, D. Walsh, D. Wickwar, R.J. Wright, S. Zebelo. 2025. Integrated pest management: state infrastructure status after 50 yr of Federal support (1973 to 2023), J. Int. Pest Manage. 16(1): 30. https://doi.org/10.1093/jipm/pmaf016
6. *Murphy, R.O., *J.S. Cotton, *I.M. Owens, J.D. Carroll, K.M. Martin, D. Held, K. Lawrence, J. F. Beckmann. 2025. Fast screening libraries of plant growth promoting rhizobacteria (PGPRs) for insecticidal activity, Journal of Applied Microbiology, Volume 136, Issue 3, lxaf054, https://doi.org/10.1093/jambio/lxaf054
7. *Boyle, P., D. Held, K. Kopp, X. Dai. 2025. Plant growth-promoting rhizobacteria have varied effects on quality and yield of drought stressed creeping bentgrass

(*Agrostis stolonifera*). HortTechnology 35(1):62-66. https://doi.org/10.21273/HORTTECH05550-24
8. *Ibiyemi, O.D., E.P. Carroll*, D.W. Held, A.M. Chicas-Mosier. 2025. Evaluation of olfactory and visual cues for conservation biological control of crape myrtle bark scale in urban landscapes. Pest Management Science 81(4):1944-1952. https://doi.org/10.1002/ps.8608
9. Carroll*, E., N. Kunte, E. McGraw, S. Gautam, R. Range, J.A. Noveron-Nunez*, D. Held, A. Avila Flores. 2023. Nanoparticle-assisted delivery of double stranded RNA through feeding in *Popillia japonica.* Frontiers in Insect Science 3: https://doi.org/10.3389/finsc.2023.1151789
10. Sullins*, K.N., S.L. Dillard, D.W. Held, E.P. Caroll. 2023. Utility of plant growth-promoting rhizobacteria for sustainable production of bermudagrass forage. Microorganisms 11(4): 863. https://doi.org/10.3390/microorganisms11040863
11. *Pekarcik, A.J., M.O. Lorentz, *C. Scott Clem, A.L. Raudenbush, D.W. Held, K.J. Tilmon. 2022. Preliminary feeding assessments for Asiatic garden beetle, *Maladera formosae* (Coleoptera: Scarabaeidae), grubs and adults. Great Lakes Entomologist 55(2): article 8. https://doi.org/10.22543/0090-0222.2416
12. de Souza*, I. G. P., E. B. de Castro, E. B., G. M. Henry, D. W. Held, J.G. Hill, J. D. McCurdy. 2022. Evaluation of flower visiting insects specimen sampling methodology in turfgrass–forb habitat. International Turfgrass Society Research Journal 14:1026–1029. https://doi.org/10.1002%2Fits2.114
13. McGraw, E., J. Roberts, N. Kunte*, M. Westerfield, X. Streety, D. Held, L. A. Avila. 2022. Insight into cellular uptake and transcytosis of peptide nanoparticles in *Spodoptera frugiperda* cells and isolated midgut. ACS Omega 7:10933-10943. https://doi.org/10.1021/acsomega.1c06638
14. Carroll*, E.P., Carson, K.H, and D.W. Held. 2022. Residues and routes of exposure of insecticides in turfgrass for control of fall armyworm larvae (Lepidoptera: Noctuidae). Journal of Entomological Science 57(2): 182-193.
15. Joseph, S.V. Chong, J., Campbell, B., Kunkel, B., Lauderdale, D., Jones, S., Gill, S., Chen, Y., Schultz, P., Held, D., Hale, F., Dale, A., Vafaie, E., Hudson, W., Gilrein, D., Del Pozo-Valdivia, A. 2021. Current pest status and management practices for *Systena frontalis* (Coleoptera: Chrysomelidae) in ornamentals plants in the Eastern USA: An online survey. J. Integrated Pest Management 12(1): 17; 1-10.
16. Groover*, W., D. Held, K. Lawrence, K. Carson. 2020. Plant growth-promoting rhizobacteria: a novel management strategy for *Meloidogyne incongnita* on turfgrass. Pest Manage. Sci. 76: 3127-3138.
17. Griffin*, M., M. Mullenix, R. Muntifering, D. Held, and S. Dillard. 2020. Evaluation of plant growth promoting rhizobacteria on stockpiled bermudagrass. Crop Forage and Turf Manage. 2020;6:e20028.
18. Joshi, P. P., A. V. Cleave, D. W. Held, J. A. Howe, and M. L. Auad. 2020. Preparation of slow release encapsulated insecticide and fertilizer based on superabsorbent polysaccharide microbeads. J. Appl. Polym. Sci. 2020;137:e49177
19. Coy*, R.M., D.W. Held, and J.W. Kloepper. 2020. Rhizobacterial treatment of bermudagrass alters tolerance to damage from tawny mole crickets (*Neoscapteriscus vicinus* Scudder) Pest Manage. Sci. 76: 1078-1084.

20. Kunte*, N., E. McGraw, S. Bell, D. Held, L-A. Avila. 2020. Prospects, challenges and current status of RNAi through insect feeding. Pest Manage. Sci. 76: 26-41.*(167 citations)*
21. Coy*, R.M., D.W. Held, and J.W. Kloepper. 2019. Rhizobacterial treatment of tall fescue and bermudagrass increases tolerance to damage from white grubs. Pest Manage. Sci. 75: 3210-3217.
22. Coy*, R.M., D.W. Held, and J.W. Kloepper. 2019. Rhizobacterial colonization of bermudagrass by *Bacillus* spp. in Marvyn loamy sand soil. Appl. Soil Ecol. 141: 10-17.
23. Adesanya*, A., D.W. Held, and N. Liu. 2018. Ontogeny, sex, and adult tissues influence activities of detoxification enzymes in the Japanese beetle, *Popillia japonica* Newman. Physiol. Entomol. 43: 306-314.
24. Clem*, C.S. and D.W. Held. 2018. Associational interactions between urban trees: Are native neighbors better than non-natives? Environ. Entomol. 47(4): 881-889.
25. Adesanya*, A., D.W. Held, and N. Liu. 2017. Geranium intoxication induces detoxification enzymes in the Japanese beetle, *Popillia japonica* Newman. Pestic. Biochem. Physiol. 143: 1-7.
26. Larson, J., A. Dale, D.W. Held, B. McGraw, D.S. Richmond, K. Wickings, R.C. Williamson. 2017. Optimizing pest management practices to conserve pollinators in turf landscapes: Current practices and future needs. J. IPM 81: 1-10.
27. Coy*, R.M., D.W. Held, and J.W. Kloepper. 2017. Bacterial inoculant treatment of bermudagrass alters ovipositional behavior, larval and pupal weights of the fall armyworm, *Spodoptera frugiperda* (Lepidoptera: Noctuidae). Environ. Entomol. 46(4):831-838.
28. McCurdy, J., D.W. Held, J.M. Gunn, and T.C. Barickman. 2017. Dew from warm-season turfgrass as a possible route for pollinator exposure to lawn-applied imidacloprid. Crop Forage Turfgrass Science 2017 :doi:10.2134/cftm2016.09.0063.
29. Adesanya*, A., N. Liu, and D.W. Held. 2016. Host suitability and diet mixing influences activities of detoxification enzymes in adult Japanese beetles. J. Insect Physiol. 88:55-62.
30. Boyd Jr., D.W. and D.W. Held. 2016. Development of *Thripastichus gentilei* (Hymenoptera: Eulophidae) in the thrips *Gynaikothrips uzeli* (Thysanoptera : Phlaeothripidae). Fla. Entomol. 99:440-444.
31. Obear, G.R., A. Adesanya*, P.J. Liesch, R.C. Williamson, and D.W. Held. 2016. Fungicides affect the survival and activities of detoxification enzymes in Japanese beetle (Coleoptera: Scarabaeidae) larvae. Pest Manag. Sci. 72: 966-973.
32. Held, D.W. and Y. Xu*. 2015. Field performance and consumption of indoxacarb bait for control of mole crickets (*Scapteriscus* spp.) in turfgrass. Crop Forage Turfgrass Manage. 1: doi:10.2134/cftm2015.0132
33. Clem*, C.S. and D.W. Held. 2015. Species richness of eruciform larvae associated with native and alien plants in the southeastern United States. J. Insect Conserv. 19:987-997.
34. Hong, S.C., G.R. Obear, P.J. Liesch, D.W. Held, R.C. Williamson. 2015. Suitability of creeping bentgrass and bermudagrass cultivars for black cutworms and fall armyworms (Lepidoptera: Noctuidae). J. Econ. Entomol. 108(4): 1954-1960.
35. Bailey*, D.L., D.W. Held, A. Kalra, N. Twarakavi, F. Arriaga. 2015. Biopores from

mole crickets (*Scapteriscus* spp.) increase soil hydraulic conductivity and infiltration rates. Appl. Soil Ecol. 94: 7-14.
36. Sells*, S.M., D.W. Held, S.F. Enloe, N.J. Lowenstein, and L.G. Eckhardt. 2015. Impact of cogongrass management strategies on generalist predators in cogongrass-infested longleaf pine plantations. Pest. Manag. Sci. 71: 478-484.
37. Coy*, R.M., D.W. Held, and J.W. Kloepper. 2014. Rhizobacterial inoculants increase root and shoot growth in 'Tifway' hybrid bermudagrass. J. Environ. Hortic. 32(3) :149–154.
38. Gorzlancyk*, A.M.,D.W. Held, C.M. Ranger, Z. Barwary, and Dong-Joo Kim. 2014. Capture of *Cnestus mutilatus*, *Xylosandrus crassiusculus* and other Scolytinae (COLEOPTERA: CURCULIONIDAE) in response to greenlight emitting diodes, ethanol, and conophthorin. Fla. Entomol. 97(1): 301–303.
39. Ranger, C., A. Gorzlancyk*, K. Addesso, J. Oliver, M. Reding, P. Schultz, and D. Held. 2014. Conophthorin enhances the electroantennogram and field behavioral response of *Xylosandrus germanus* (Coleoptera: Curculionidae) to ethanol. Agric For. Entomol. 16(4):327–334.
40. Gorzlancyk*, A.M.,D.W. Held, Dong-Joo Kim, and C.M. Ranger. 2013. Capture of *Xylosandrus crassiusculus* and other Scolytinae (COLEOPTERA: CURCULIONIDAE) in response to visual and volatile cues. Fla. Entomol. 96: 1097-1101.
41. Enloe, S.F., N.J. Loewenstein, D.W. Held, L.G. Eckhardt and D.K. Lauer. 2013. Impacts of prescribed fire, glyphosate, and seeding on cogongrass, species richness and species diversity in longleaf pine. Invasive Plant Sci. Manage. doi: http://dx.doi.org/10.1614/IPSM-D-13-00007.1
42. Xu*, Y., D.W. Held, and X.P. Hu. 2013. Dietary choices and their implication for survival and development of omnivorous mole crickets (Orthoptera: Gryllotalpidae). Appl. Soil Ecol. 71:65–71.
43. Held, D.W. and D.A. Potter. 2012. Problems and prospects for managing turfgrass insect pests with reduced chemical inputs. Annu. Rev. Entomol. 57: 329–354.
44. Xu*, Y., D.W. Held, and X.P. Hu. 2012. Potential negative effects of earthworm prey on damage to turfgrass by omnivorous mole crickets (Orthoptera: Gryllotalpidae) Environ. Entomol. 41:1139-1144.
45. Hong, S.C., R.C. Williamson, and D.W. Held. 2012. Leaf biomechanical properties as mechanisms of resistance to black cutworm (*Agrotis ipsilon*) amond *Poa* species. Entomologia Exp. Applic. 145: 201–208.
46. Hong, S.C., R.C. Williamson, and D.W. Held. 2012. Preference and performance of black cutworm (Lepidoptera: Noctuidae) on *Poa* species. J. Environ. Hortic. 29(4):207–212.
47. Barden*, S.A., D.W. Held, and L.C. Graham. 2011. Lack of interactions between red imported fire ants or fire ant control products and white grubs (Coleoptera:Scarabaeidae) in turfgrass. J. Econ. Entomol. 104: 2009–2016.
48. Hong, S.C., D.W. Held, and R.C. Williamson. 2011. Beneficial arthropods and predation on black cutworm larvae (*Agrotis ipsilon*) in close mown creeping bentgrass. Fla. Entomol. 94(3):714–715.

49. Held, D.W. and S.A. Parker. 2011. Efficacy of soil-applied neonicotinoid insecticides against Azalea lace bug, *Stephanitis pyroides*, in the landscape. Fla. Entomol. 94(3): 599–607.
50. Abraham*, C., D.W. Held, and C. Wheeler. 2010. Monitoring the seasonal and diurnal activity of *Larra bicolor* (Hymenoptera: Crabronidae). Appl. Turfgrass Sci. doi:10.1094/ATS-2010-0312-01-RS
51. Held, D.W., C. Wheeler, D.W. Boyd Jr. 2009. Kaolin particle film prevent galling by *Gynaikothrips uzeli*. Plant Health Progress. doi:10.1094/PHP-2009-0407-02-RS
52. Held, D.W. and C.H. Ray. 2009. Asiatic garden beetle, *Maladera castanea* Arrow (Coleoptera: Scarabaeidae) grubs found in damaged turf in Alabama. Fla. Entomol. 92: 670–672.
53. Held, D.W. and D. W. Boyd. 2008. New records of *Gynaikothrips uzeli* (Thysanoptera:Phlaeothripidae) on *Ficus benjamina* in Texas and O'ahu, Hawaii. Pan-Pacific Entomol. 84(2): 77–80.
54. Goddard, J., S. Upshaw, D. Held, and K. Johnson. 2008. Severe envenomation by the Brown Widow spider, *Latrodectus geometricus* (Araneae: Theridiidae) South Med J. 101(12): 1269–1270.
55. Held, D.W., C. Wheeler, C.M. Abraham, and K. Pickett. 2008. Paper wasps (*Polistes* spp.) attacking fall armyworm (*Spodoptera frugiperda*) larvae in turfgrass. Applied Turfgrass Science doi:10.1094/ATS-2008-07XX-01-RS.
56. Abraham*, C.M., Held, D.W. and C. Wheeler. 2008. First report of *Larra bicolor* (Hymenoptera: Sphecidae) in Alabama. MidSouth Entomol. 1:81–84.
57. Held, D. W. and D. W. Boyd. 2008. Monitoring and management of *Gynaikothrips uzeli* Zimmerman (Thysanoptera: Phlaeothripidae), an exotic thrips attacking *Ficus benjamina* Pest. Manag. Sci. 64: 133–140.
58. Robbins PS, Alm SR, Armstrong CD, Averill AL, Baker TC, Bauernfiend RJ, Baxendale FP, Braman SK, Brandenburg RL, Cash DB, Couch GJ, Cowles RS, Crocker RL, DeLamar ZD, Dittl TG, Fitzpatrick SM, Flanders KL, Forgatsch T, Gibb TJ, Gill BD, Gilrein DO, Gorsuch CS, Hammond AM, Hastings PD, Held DW, *et al.* 2006. Trapping *Phyllophaga* spp. (Coleoptera: Scarabaeidae: Melolonthinae) with sex attractants in the United States and Canada. J. Insect Sci. 6:39, available online: insectscience.org/6.39.
59. Boyd, D.W. and D.W. Held. 2006. *Androthrips ramachandrai* (Thysanoptera: Phlaeothripidae): an introduced thrips in the United States. Fla. Entomol. 89: 455–458.
60. Held, D.W. and J. Gelhaus. 2006. Damage in centipede sod associated with Crane fly and March fly larvae (Diptera: Tipulidae, Bibionidae) in Mississippi. Fla. Entomol. 89: 89–90.
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Non-refereed (About 75 Conference Proceedings, Technical Reports, Published Abstracts, or in Trade Journal mostly published as a co-author with my graduate and undergraduate students, or technicians.

Recent non-refereed publications:

- *Carroll, E.P., D.W. Held, N.E. Turley, S. Bruckner. 2024. Crape myrtle bark scale *Acanthococcus lagerstroemiae* (Coccidae: Eriococcidae) infestation seasonally alters the abundance and composition of insect assemblages on crape myrtle trees, Research Square https://doi.org/10.21203/rs.3.rs-4889308/v1
- *Wang, J., Young, A.A., Henry, G.M., Held, D.W., McCurdy, J.D. 2023. Fertility Affects the Competition between Warm-Season Grasses and Weeds Used As Floral Resources [Abstract]. ASA, CSSA, SSSA International Annual Meeting, St. Louis, MO. https://scisoc.confex.com/scisoc/2023am/meetingapp.cgi/Paper/150393
- *Sullins, K., A. Strayer-Scherer, D. Held. 2023. Effects of plant growth-promoting rhizobacteria and nitrogen fertilizer on forage biomass and quality and soil health in bermudagrass hay fields. [Abstract]. PHYTOPATHOLOGY 113(9S):38-39.
- Henson, M.B., L. Dillard, D.W. Held, M. Griffin*, M. Cole*, K. Sullins*. 2023. Use of plant growth-promoting rhizobacteria in forage systems." Animal-science Society Proceedings 14 (4):556-557.
- Vinson, A., *E. Carroll, D. Held. 2022. Controlling Crape Myrtle Bark Scale & Conserving Beneficials. Turftimes Summer 2022 (Alabama Turfgrass Association magazine, published Aug 2022).
- *de Souza, I. G. P., J.D. McCurdy, D.W. Held, G.M. Henry, J.G. Hill, C. *O'Neal, *J. Wang. 2022. Sampling Methodologies for Pollinators in Turfgrass-Forb Habitat [Abstract]. ASA, CSSA, SSSA International Annual Meeting, Baltimore, MD. https://scisoc.confex.com/scisoc/2022am/meetingapp.cgi/Paper/142653
- *Clem, S.C., K. Kesheimer, and D.W. Held. Outbreaks of the broad-headed bug Esperanza texana. Turftimes Winter 2022 (Alabama Turfgrass Association magazine, published Nov 2021).

Extension Publications

- 15 Extension publications at AU mostly published as a co-author with my students, or AU or regional collaborators.
- About 6 from time in appointment at MS State University

PRESENTED PAPERS AND INVITED LECTURES

Papers at professional meetings

About 150; mostly as a co-author with my graduate and undergraduate students, technicians, or collaborators.

Invited presentations

Held, D.W. 2025. Lessons learned and prospects for managing the impacts of *Popillia japonica. Popillia japonica* in Europa: strategie di contrasto e prospettive di gestione. Firenze (Florence) Italy 10 Sept 2025 (keynote speaker)

*Carroll, E.P., D. Held, R. Palli, A. Avila-Flores, J. Howell, and B. Sundararajan. 2024. Sprayable dsRNA formulations for management of *Popillia japonica* Newman. International Congress of Entomology, Kyoto Japan September 2024. (Session co-organizer, moderator, and speaker)

Held, D.W. 2023. Application of plant growth-promoting rhizobacteria for plant health and IPM in grasses. Utah State University, Department of Plants, Soils, and Climate, Logan, UT.

Held, D. W. 2022. Distinguished Alumni Lecturer: Consequences of crapemyrtle bark scale outbreaks in urban landscapes. Dept of Entomology University of KY, Lexington, KY

Held, D. W. and D.A. Potter. 2022. Feeding ecology of *Popillia japonica*, a biosecurity threat to European agriculture and beyond. International Congress of Entomology, Helsinki, Finland July (Keynote address)

Kunte, N, A. Avila-Flores, E. Carroll, E. McGraw, D. Held. Novel delivery of dsRNA to *Popillia japonica* assisted by peptide nanoparticles. International Congress of Entomology, Helsinki, Finland July 2022

Held, D.W. 2014. Manipulating multi-trophic relationships for management of turfgrass pests. University of Georgia, Entomology Dept., Athens, GA

Held, D.W. 2009. The novelty of being a generalist among herbivores and academics. University of Southern Mississippi, Biological Sciences Dept., Hattiesburg, MS.

Other presentations

- **Outdoor Reporter, WLOX–TV, Biloxi, MS.** This was a weekly, 1.5-minute informational segment hosted by faculty from the Coastal Research and Extension Center. Between 2004 and 2007, I wrote and edited 25 segments for this broadcast on topics ranging from household hazardous waste days to fire ant management. The segment was cancelled in 2007.
- **Midday and Good Morning Mississippi, WLOX–TV, Biloxi, MS.** Live appearance during the program. Guests discuss topics with the anchors and often take caller's questions on-air.

- **Fox 10 News, Mobile, AL.** News crew interviewed me about the Brown Widow spider outbreak that was prevalent along the MS Gulf Coast in 2006 and 2007 following a widow spider bite incident.
- **Radio appearances.** A monthly guest on a weekly show based on a station in Picayune, MS (Piney Woods Radio hour, 2004-2005). In 2007, I was a regular guest on the weekend gardening program to discuss landscape pests. Interviewed for an afternoon radio program based in New Orleans to talk about widow spiders after Hurricane Katrina.

HONORIFIC AWARDS

Faculty Awards

- LEAD21, Class 16.
- Alumni Professor, Auburn University, 2021 to 2024
- Distinguished Alumni, 2022, Dept of Entomology, University of KY
- Auburn University College of Agriculture Dean's Grantsmanship Award, 2010.

Recognition of Students in My Lab

- Friends of IPM Award Jordan Melson-Jordan, Master's category 2024
- Friends of IPM Award Oluwatomi Ibiyemi, Master's category 2021
- Six Outstanding Graduate Student Awards (departmental recognition)
- Larson Award for Leadership in Applied Entomology (national recognition)
- Kirby Hays Award, recognizes the most outstanding Master's student in the Southeastern Branch of the ESA (regional recognition)
- Undergraduate Research Fellowship, Auburn University, Elijah Carroll.
- Multiple awards for posters and oral presentations at regional and national meetings

PROFESIONAL SERVICE

University Service

- College of Agriculture\ Alabama Agricultural Experiment Station
    - Director of Alabama IPM Programs, (2021 to present)
    - Assistant Director of IPM Programs, (2017-2020)
    - Promotion and Tenure Committee (2019-2022)
    - College of Agriculture Research Team Leader for Tactical Sciences for Biosecurity, 2018-2019.
    - Distance Education Steering Committee
    - Instructional Advisory Committee (2017-2021)
    - Administrator Search Committees. Chair, SFAAS Director search 2024
- University Senate
    - Senator (Ended term early in 2020 when elected as Dept. Chair)
    - Chair of Senate Ad hoc committee on fringe benefits on summer salary for 9-month faculty (2016)
    - Member of Academic Standards Committee (2014-2017)
    - Non-Tenure track faculty committee, 2011-2014
    - Senate representative to Administrator Review 2018
- Department

- Executive Committee
- Curriculum Committee
- Peer Review of Teaching Committee
- Webpage and Social Media Committee
- Various faculty and staff search committees

Service for Professional Societies, Panels, or Agencies

- Chair roles
    - Co-Chair of CEDA (Council of Entomology Dept Administrators) ESA, 2023-2024.
    - Southeastern Branch of the Entomological Society of America Local Arrangement Committee 2019.
    - Entomological Society of America Education and Outreach Committee 2017-2018.
    - Entomological Society of America Nominations Committee

- Other service
    - External Reviewer, PhytoProtect funding initiative, German Federal Ministry of Research, Technology, and Space (Feb 2026)
    - Organizer, Southern Universities mixer, ESA national meeting (2023, 2024, 2025)
    - Science Advisory Panel on Japanese beetles, California Department of Food and Agriculture, 2015-2016.
    - Committee member, Southeast Branch of the ESA Auditing Committee-2007, 2008, 2009, 2010.
    - Committee member, ESA Nominations Committee, 2011-2014
    - Judge, student paper competition (multiple times)
    - Session organizer and moderator at branch and national meetings, as well as the International Congress of Entomology
    - Organized and co-moderated National Turfgrass Insect Workshop (multiple times)
    - Subject, Associate, or Section Editor for regional or national journals
    - Reviewer for several national and international journals
    - Promotion and tenure external reviewer for non-AU faculty (1-2 annually)
    - Panel member or Ad-hoc reviewer for NIFA, T-STAR, or North Central Region Pest Mgt Center

Community Service

- Entomology Camp in Auburn, AL; 2015 to 2019
- Coach, Science Olympiad Team, 2010, 2011; Wrights Mill Rd School, Auburn AL. Coach for the “Don’t Bug Me” event
- College of Agriculture Roundup 2014, 2015, 2017, 2018.
- Leader for Entomology Camp (2004-2008), weeklong resident camp in Mississippi
- Auburn City Schools Fall Festival, Cockroach race Booth (2009-2013).
- Pack 29 Cub Scout Den Leader and Pack Committee Member, 2010-2014

- Volunteer, East Alabama Food Bank, Spring 2011-present

PROFESSIONAL AND HONOR SOCIETY MEMBERSHIP

Entomological Society of America (2006-present)
American Phytopathological Society (2020-present)
Gamma Sigma Delta, Honor Society of Agriculture
Florida Entomological Society (2005 to 2010)
Mississippi Entomological Association (2004-2008)
Louisiana-Mississippi Golf Course Superintendents Association (2004-2008)

ADMINISTRATIVE ACCOMPLISHMENTS AND LEADERSHIP

Selected leadership and outcomes from my term as EPP Department Chair.

College

- Committee to Align College Strategic Plan to the AU 2035 Strategic Plan. Chaired a working group to review and align one of the goals. *Outcome: Alignment metrics and goals made part of the College plan.*
- Search Committee Chair, Director School of Fisheries, Aquaculture, and Aquatic Sciences Fall 2023-Spring 2024. *Outcome: Successful search.*
- Search Committee Chair, Interim Department Head, Crop Soil and Environmental Sciences Fall 2022. *Outcome: Search failed due to lack of internal candidates. Worked with the Dean to appoint a faculty member with past department leadership experience to serve as interim head.*
- Chair of College Committee charged to Revise and Improve the Faculty Activities Report. *Outcome: The committee aligned FAR with our college scholarship guidelines. In addition to the Word document, we worked with ACES IT to produce an online form used by some units in the college.*

Department

- Worked alongside Dean Patterson, Provost Nathan, and Dr. Williams to develop the Bee Center proposal for the AU Board of Trustees. The proposal presented to the Board lead to the creation of the center in Spring 2025.

- Provide leadership for the AG STEM transition. *I have attended meetings with facilities, coordinated site visits for the department and advocated for change orders critical to the success of faculty programs.*

- Departmental bylaws revised. *Outcomes: One of my first activities as Chair was to clarify and document our department governance. I have since lead or charged faculty to revise the bylaws as needed.*

- Faculty Lab Practices and Rules documents. *Outcomes: Faculty developed a handbook for their lab to include required trainings, expectations, and incentive programs where applicable.*

- Strategic Planning Process. *Outcomes: In 2022, a facilitator was hired to lead a strategic planning process. The department Chair and committees are now working on issues and topics outlined in this 5-year strategic plan.*

- Academic Program Review. *Outcomes: Led our department in an Academic Program Review in Spring 2023. Final report was filed, and the Dean issued an Action Plan.*

- Revision of our P&T guidelines to update expectations and include guidance for recently hired non-tenure track faculty. *Outcome: A faculty committee and I guided the process ending with approve of our revised guidelines by the Provost's Office, and implementation of the new guidelines according to AU policy.*

- Faculty and Staff Hiring, Retention, Mentoring, and Promotion or Recognition.
  Outcomes:
  Hiring*: Lead department to maintain a list of faculty priorities. Five faculty have been hired since I became Chair. Secured funding from the College for a part-time financial assistant to assist our full-time accountant.*

  Retention: *I have successfully negotiated two faculty retention packages and secured a market adjustment (Provost's Office) for another faculty member.*

  Mentoring: *I charged and led an ad hoc committee to conceptualize a mentoring program for our department. This mentoring program was shared with leaders in other units in the College. Surveys of pre-tenured faculty indicate high satisfaction with the program.*

  Promotion and Recognition:
  - *Overseen the promotion and tenure of 8 faculty members. Oversaw the Department's largest cohort (7) of candidates for promotion or promotion and tenure in 2025.*
  - *Fostered an awards and recognition culture in the Department. Overall, national, regional and student and faculty awards in the Department have increased since 2020.*
  - *Overseen or contributed to the nomination of faculty for multiple internal and external awards. As of 2025, 20% of the current Department faculty are Fellows in one or more professional societies.*
  - *Since becoming Chair, all full-time office staff have been recognized with Spirit of Excellence awards.*

Student advocacy and promotion
Outcomes for Undergraduate Applied Biotechnology students
- *Secured funding for an APBT student scholarship*
- *Annually draft 10-12 letters of recommendation for students seeking external internships.*
- *Increased amounts of departmental student award through a Fund for Excellence.*
- *Co-authored instructional grants for teaching laboratory equipment and designated a laboratory for instruction in the undergraduate major. This laboratory provides students a sense of place within the department.*

- *Regularly attend Camp War Eagle student orientations and personally greet most of our incoming students and their families during that time on campus.*
- *Annually support the student club by providing dinner for their fall launch meeting.*
- *Maintain and annually update a list of REU and internships. Support students as one of their references for internships.*
- *Maintain accessibility for the students and serve as the APBT program champion to internal and external stakeholders.*

Outcomes for Graduate students:

- *Based on a listening session with students, I lead the department efforts to increase graduate student stipends.*
- *The faculty Lab Practices and Rules documents also serve as rationale for pay discrepancies within or between labs.*
- *Renovated a graduate student office suite in Upchurch Hall. There are no grad student office spaces in Funchess and student office space in Rouse was near or exceeding current capacity. The space in Rouse is now contemporary and functional and accommodate more students than the previous office suite.*