

Jordan M. Marshall
Department of Biology
Purdue University Fort Wayne

office (260) 481-6038
email marshallj@pfw.edu
url users.pfw.edu/marshallj/

EDUCATION

PhD 2007 Natural Resources, The University of Tennessee
MS 2004 Forestry, Michigan Technological University
BS 2002 Natural Resources and Environmental Management, Ball State University

PROFESSIONAL EXPERIENCE

Associate Professor (2016-Present) Department of Biology, Purdue University Fort Wayne
Assistant Professor (2010-2016) Department of Biology, Indiana University-Purdue University Fort Wayne
Post-Doc Researcher (2007-2010) School of Forest Resources and Environmental Science, Michigan Technological University

PUBLICATIONS

- Boyes, KN¹, KG Hietala-Henschell², AP Barton¹, AJ Storer, and **JM Marshall**. 2019. Linking tree growth rate, damage repair, and susceptibility to a genus-specific pest infestation. *Journal of Forestry Research* 30, 1935-1941.
- Harman, RR², AR De Leon¹, HM Lancaster¹, and **JM Marshall**. 2019. Relative influence of spatial and structural characteristics of forest fragment on woody plant communities. *Great Lakes Botanist* 58, 32-54.
- Yaney-Keller, AM², P Santridrián Tomillo, **JM Marshall**, and FV Paladino. 2019. Using unmanned aerial systems (UAS) to assay mangrove estuaries on the Pacific coast of Costa Rica. *PLoS One* 14, e0217310.
- Granger, JJ, DS Buckley, TL Sharik, JM Zobel, WW DeBord, JP Hartman, JG Henning, TL Keyser, and **JM Marshall**. 2018. Northern red oak regeneration: 25-year results of cutting and prescribed fire in Michigan oak and pine stands. *Forest Ecology and Management* 429, 467-479.
- Keough, S², J Danielson¹, **JM Marshall**, D Lagos-Kutz, DJ Voegtlin, R Srinivasan, and P Nachappa. 2018. Factors affecting population dynamics of thrips vectors of soybean vein necrosis virus. *Environmental Entomology* 47, 734-740.
- Warrix, AR², and **JM Marshall**. 2018. Callery pear (*Pyrus calleryana*) response to fire in a managed prairie ecosystem. *Invasive Plant Science and Management* 11, 27-32.
- Warrix, AR², AL Myers², and **JM Marshall**. 2017. Estimating invading Callery pear (*Pyrus calleryana*) age and flowering probability in an Indiana managed prairie. *Proceedings of the Indiana Academy of Science* 126, 153-157.
- Marshall, JM**. 2017. Insect visitors of *Cirsium pitcheri*, a threatened and endemic dune species, in relation to annual weather variation. *The Great Lakes Entomologist* 50, 86-92.
- Bisht, A², KL Fracica¹, AM Gutierrez², JR Hinson², AA Hopkins², JM Josimovich², MN Matthews², AL Myers², JE Myers¹, RA Ratsch², AJ Rudolph¹, AJ Silowsky², CE Smith², K Tolliver², AM Yaney-Keller², and **JM Marshall**. 2017. Survey of Haskamp Woods, Allen County, Indiana, and floristic comparison with neighboring forest properties. *Phytoneuron* 2017-69, 1-13.
- Adkins, KD¹, JA Chang¹, LA Danels¹, LM DeBruhl¹, MM Ellison¹, JL Hammond¹, DC Klepper¹, TM Lehman², SD Rupert¹, M Shistova¹, RR Smith¹, DL Thomas¹, JA Thompson¹, LW Vorndran¹, and **JM Marshall**. 2016. An analysis of a Hackberry-American Elm-Green Ash forest type at Moser Park, Allen County, Indiana. *Rhodora* 118, 189-205.

- Warrix, AR², D Moore, and **JM Marshall**. 2015. Influence of garlic mustard presence and leaf litter composition on litter dwelling arthropod diversity. *Proceedings of the Indiana Academy of Science* 124, 16-25.
- Clark, RE², KN Boyes¹, LE Morgan¹, AJ Storer, and **JM Marshall**. 2015. Development and assessment of ash mortality models in relation to emerald ash borer infestation. *Arboriculture & Urban Forestry* 41, 270-277. (<https://github.com/PlantEcology/ESM>)
- Habegger, RA¹, and **JM Marshall**. 2015. Relationships between algal biomass and diversity with stream size and adjacent land use. *Fine Focus* 1, 21-28.
- Arvola, KD¹, PF Booth¹, CC Ellinwood¹, AJ Fry², JL Furge¹, KA Haehnle¹, LE Hall², MA Jablonski¹, DK Jones¹, JT Martin¹, KM McLane², KC Mensch¹, RN Quirindongo¹, MJ Ravesi², JJ Rinard¹, PR Selig¹, AP Sellan¹, MB Slijivar¹, EA Stulik², TR Sunday¹, AN Turley¹, MT Voors¹, AR Warrix¹, VA Wesolowski², TC Wood², and **JM Marshall**. 2014. Comparative analysis of urban and rural forest fragment structure and diversity in Northeastern Indiana. *The Michigan Botanist* 53, 39-59.
- Marshall, JM**. 2014. Noteworthy collection of *Papaver rhoeas* from Indiana. *Phytoneuron* 112, 1-4.
- Marshall, JM**. 2014. Influence of topography, bare sand, and soil pH on the occurrence and distribution of plant species in a lacustrine dune ecosystem. *Journal of the Torrey Botanical Society* 141, 29-38.
- Marshall, JM.**, MA Miller¹, JP Lelito, and AJ Storer. 2013. Latitudinal variation in body size of *Agrilus planipennis* and relationship with fecundity. *Agricultural and Forest Entomology* 15, 294-300.
- Marshall, JM**. 2013. Occurrence of *Diabrotica undecimpunctata howardi* Barber (Coleoptera: Chrysomelidae) feeding on *Cirsium pitcheri* flowers. *Great Lakes Entomologist* 46, 138-141.
- Marshall, JM**, EL Smith, R Mech, and AJ Storer. 2013. Estimates of *Agrilus planipennis* infestation rates and potential survival of ash. *American Midland Naturalist* 169:179-193.
- Marshall, JM**, MJ Porter, and AJ Storer. 2012. Predicting emerald ash borer, *Agrilus planipennis* (Coleoptera: Buprestidae), landing behavior on unwounded ash. *Great Lakes Entomologist* 45, 29-39.
- Marshall, JM**. 2012. Agroforestry. Pp. 24-28. *Salem Science: Applied Sciences*. Pasadena, CA: Salem Press.
- Marshall, JM**. 2011. *Tanacetum bipinnatum* germination and competitive interaction with *Centaurea stoebe* seedlings. *The Michigan Botanist* 50, 139-145.
- Marshall, JM**, AJ Storer, I Fraser, and VC Mastro. 2011. A predictive model for detection of *Agrilus planipennis* larvae in girdled ash (*Fraxinus* spp.). *Journal of Applied Entomology* 135, 91-97. (Addendum. *J Appl Ent* 135, 714)
- Marshall, JM**, AJ Storer, I Fraser, and VC Mastro. 2010. Efficacy of trap and lure types for detection of *Agrilus planipennis* (Col., Buprestidae). *Journal of Applied Entomology* 134, 296-302.
- Marshall, JM**, and DS Buckley. 2009. Influence of *Microstegium vimineum* presence on insect abundance in hardwood forests. *Southeastern Naturalist* 8, 515-526.
- Marshall, JM**, DS Buckley, and JA Franklin. 2009. Competitive interactions between *Microstegium vimineum* and first-year seedlings of three central hardwoods. *The Journal of the Torrey Botanical Society* 136, 342-349.
- Marshall, JM**, AJ Storer, I Fraser, JA Beachy, and VC Mastro. 2009. Effectiveness of differing trap types for the detection of emerald ash borer (Coleoptera: Buprestidae). *Environmental Entomology* 38, 1226-1234.
- Buck, JH, and **JM Marshall**. 2008. Hitchhiking as a secondary dispersal pathway for adult emerald ash borer (*Agrilus planipennis*). *Great Lakes Entomologist* 41, 155-157.

- Marshall, JM**, and DS Buckley. 2008. Effects of microsites created by selective harvesting on growth of *Microstegium vimineum* in a Central Hardwood forest. *Forest Science* 54, 534-542.
- Marshall, JM**, AJ Storer, and B Leutscher. 2008. Comparative analysis of plant and ground dwelling arthropod communities in lacustrine dune areas with and without *Centaurea biebersteinii* (Asteraceae). *American Midland Naturalist* 159, 261-274.
- Marshall, JM**, and DS Buckley. 2008. Influence of litter removal and mineral soil disturbance on the spread of an invasive grass in Central Hardwood forests. *Biological Invasions* 10, 531-538.
- Marshall, JM**. 2007. Parasitism of *Urophora affinis* (Diptera: Tephritidae) by *Aprostocetus* sp. (Hymenoptera: Eulophidae) in Michigan. *Great Lakes Entomologist* 40, 166-168.
- Marshall, JM**, and AJ Storer. 2007. Presence of the “Threatened” *Trimerotropis huroniana* (Orthoptera: Acrididae) in relation to the occurrence of native dune plant species and the exotic *Centaurea biebersteinii*. *Great Lakes Entomologist* 40, 17-22.
- Marshall, JM**, and AJ Storer. 2006. Influence of *Centaurea biebersteinii* patch size on *Urophora quadrifasciata* (Dipt. Tephritidae) in Michigan, USA. *Journal of Applied Entomology* 130, 91-95.
- Marshall, JM**, RA Burks, and AJ Storer. 2004. First host record for *Pteromalus cardui* (Hymenoptera: Pteromalidae) on *Urophora quadrifasciata* (Diptera: Tephritidae) in spotted knapweed (*Centaurea maculosa*, Asteraceae) in Michigan, U.S.A. *Entomological News* 115, 273-278.

FUNDING

	<i>¹undergraduate student, ²graduate student</i>
IRSC Faculty Community Engagement Program, Co-PI (2018-2019) Calibration of moss as a bio-indicator of toxic air contamination.	\$4,462
CELT Summer Instructional Development Grant, PI (2016) Digitization of the IPFW herbarium and use in Field Botany and Dendrology courses.	\$2,000
IRSC Collaborative Grant Program, Co-PI (2016-2017) Diversity and soil microstructure associated with biological soil crusts of the Indiana Dunes State Park.	\$14,994
IRSC Collaborative Grant Program, Co-PI (2016-2017) Evaluation of genetic markers associated with tolerance-susceptibility gradients in ash under exposure to emerald ash borer.	\$14,684
Indiana Academy of Science Senior Research Grants Program, Advisor. 2014. Analysis of ash leaf nutrient content and emerald ash borer feeding behavior.	\$1,018¹
Indiana Academy of Science Senior Research Grants Program, Advisor. 2013. Diversity and Distribution of Herbaceous Plant Communities Related to Agricultural Forest Size, Shape, and Structure.	\$1,105²
Tree Research and Education Endowment Fund John Z. Duling Grant, PI. 2013. Development and Assessment of Municipal Ash Tree Management Decision Models.	\$9,428
Indiana Academy of Science Senior Research Grants Program, PI. 2012. Feeding Preference of Emerald Ash Borer Adults on Tolerant and Susceptible Ash.	\$944
Pro Products LLC., PI, 2012. Comparison of Fertilizers on Turfgrass Above- and Below-Ground Growth.	\$7,516
IPFW Summer Faculty Grant, PI, 2012. Survey of Pollinating Insect Visitors and Subsequent Seed Viability of Pitcher’s Thistle in Indiana Dunes National Lakeshore.	\$8,000
USDA Forest Service, Co-PI. 2011. Tolerance and Long-Term Survival of Ash Trees in the Presence of Emerald Ash Borer.	\$56,000 (\$13,695 sub-contract to IPFW)

- Indiana Academy of Science Senior Research Grants Program, PI. 2011. Ash Regeneration in Hardwood and Pine Dominated Forest Stands. **\$1,187**
- IPFW Grant-in-Aid of Research, PI, 2011. Distribution of Lake Huron Tansy in Dune Ecosystems. **\$950**
- IPFW Summer Faculty Grant, PI. 2011. Distribution of Lake Huron Tansy and Competitive Interactions with Spotted Knapweed in Dune Ecosystems. **\$8,000**
- USDA APHIS PPQ CPHST New Research Initiative, Co-PI. 2010. Multistate Comparison of Emerald Ash Borer Trapping and Survey Tools. **\$75,000**
- USDA APHIS PPQ CPHST New Research Initiative, Co-PI. 2009. Multistate Comparison of Emerald Ash Borer Trapping and Survey Tools. **\$83,000**
- Sigma Xi Grant-in-Aid of Research Program, PI. 2005. Competition Between Seedlings of Three Native Hardwoods with Different Strategies and *Microstegium vimineum* Under Contrasting Light Regimes. **\$938**

PRESENTATIONS AND POSTERS

1undergraduate student, 2graduate student

- Aby, TM¹, AR Warrix, and **JM Marshall**. 2019. Soil transfer from a mesic prairie to conserve a native seedbank and control non-native plants. Poster presentation at the Midwest-Great Lakes Society for Ecological Restoration Annual Meeting, Pella, IA.
- Danielson, JC², and **JM Marshall**. 2019. Community patterns and distribution of rare species in Grand Sable Dunes, Pictured Rocks National Lakeshore. Oral presentation at the 134th Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Marshall, JM**. 2018. Forest change through exposure to emerald ash borer. Natural Areas Conference, Bloomington, IN.
- Aby, TM¹, AR Warrix, and **JM Marshall**. 2018. Soil transfer from a mesic prairie to conserve a native seed bank and control non-native plants. Poster presentation at the 133rd Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Smith, CE², VJ Nalam, and **JM Marshall**. 2018. SNP identification in *Fraxinus* linking genetic characteristics to tolerance of emerald ash borer. Oral presentation at the 133rd Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Myers, AL², and **JM Marshall**. 2017. Influence of forest fragment compositional and structural heterogeneity on ground-dwelling arthropod communities. Oral presentation at the 132nd Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Rudolph, AJ¹, VJ Nalam, and **JM Marshall**. 2017. *Asimina triloba* patch density and reproduction in four urban forest fragments. Oral presentation at the 132nd Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Myers, AL², and **JM Marshall**. 2016. Relationships between ground-dwelling arthropod communities and forest fragment environmental and spatial characteristics. Poster presentation at the Natural Areas Conference, Davis, CA.
- Warrix, AR², and **JM Marshall**. 2016. Callery pear (*Pyrus calleryana*) response to fire in a managed prairie ecosystem. Oral presentation at the Midwest-Great Lakes Society for Ecological Restoration Annual Meeting, Bloomington, IN.
- Marshall, JM**. 2016. Characterization of an uncommon Northern Indiana forest type: Hackberry-American Elm-Green Ash. Oral presentation at the 131st Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.

- Warrix, AR₂, B Yankowiak, and **JM Marshall**. 2016. Use of soil transfer with a native seed bank to control invasive plant species. Oral presentation at the 131st Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Lehman, TM₂, **JM Marshall**, and BA Kingsbury. 2016. Accuracy of GIS data in predicting habitat type for the Massasauga (*Sistrurus catenatus*). Poster presentation at the 76th Midwest Fish and Wildlife Conference, Grand Rapids, MI.
- Warrix, AR₂, and **JM Marshall**. 2015. Influence of fire on Callery pear (*Pyrus calleryana*) in a managed prairie. Poster presentation at the Midwest Great Lakes Society for Ecological Restoration Annual Chapter Meeting, Chicago, IL.
- Clark, RE₂, and **JM Marshall**. 2015. *Fraxinus* survival and mortality: Decision models for urban ash tree management. Oral presentation at the 130th Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Smith, CE₁, RE Clark₂, and **JM Marshall**. 2015. Preferential feeding behavior of emerald ash borer relative to tolerance gradients and nutrient content of ash. Oral presentation at the 130th Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Warrix, AR₂, and **JM Marshall**. 2015. Influence of fire on Callery pear (*Pyrus calleryana*) in a managed prairie. Poster presentation at the 130th Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Boyes, KN₁, and **JM Marshall**. 2014. Dendrochronological assessment of ash growth rates relative to emerald ash borer infestation. Poster. 129th Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Deleon, AR₁, and **JM Marshall**. 2014. Characterization of forest structure in Northeastern Indiana. Poster. 129th Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Fuelling, RR₂, and **JM Marshall**. 2014. Diversity and distribution of plant communities related to forest fragment size, shape, age, and structure. Presentation. 129th Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Hunnicut, RE₂, and **JM Marshall**. 2013. Feeding preference of emerald ash borer adults on tolerant and susceptible ash foliage. The 128th Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Soule, T, and **JM Marshall**. 2013. The use of course response systems to assess student learning in the classroom. Fort Wayne Teaching Conference, Fort Wayne, IN.
- Hietala, KG₂, **JM Marshall**, and AJ Storer. 2012. Evaluation and monitoring of ash trees that have survived long-term exposure to *Agrilus planipennis* in southeast Michigan. Presentation. The Entomological Society of America 60th Annual Meeting, Knoxville, TN.
- Marshall, JM**, AJ Storer, and KG Hietala₂. 2012. Monitoring ash trees tolerant to long-term exposure to emerald ash borer. Poster. Forest Health Monitoring Workgroup Meeting, Tucson, AZ.
- Marshall, JM**. 2012. Ash regeneration in hardwood and pine dominated forest stands. Presentation. 127th Annual Meeting of the Indiana Academy of Science, West Lafayette, IN.
- Miller, MA₁, and **JM Marshall**. 2011. Influence of accumulated growing degree days and relative population density on emerald ash borer body size. Presentation. 126th Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- Poland, TM, DG McCullough, AJ Storer, **JM Marshall**, and I. Fraser. 2011. Evaluation of different trap types and lures for capturing emerald ash borer adults in low density populations. Presentation. 22nd USDA Interagency Research Forum on Invasive Species, Annapolis, MD.

- Marshall, JM**, MJ Porter, and AJ Storer. 2011. Predicting emerald ash borer landing behavior on unwounded ash trees. Poster. 22nd USDA Interagency Research Forum on Invasive Species, Annapolis, MD.
- Marshall, JM**, JA Beachy, I Fraser, AJ Storer, and VC Mastro. 2011. Multi-state comparison of emerald ash borer detection tools: A 5 year synthesis. Poster. 22nd USDA Interagency Research Forum on Invasive Species, Annapolis, MD.
- Marshall, JM**, MJ Porter, and AJ Storer. 2010. Use of unwounded ash trees for detection of emerald ash borer. Poster. 21st USDA Interagency Research Forum on Invasive Species, Annapolis, MD.
- Marshall, JM**, AJ Storer, R Mech, and SA Katovich. 2010. Prospects for long term ash survival in the core emerald ash borer mortality zone. Poster. 21st USDA Interagency Research Forum on Invasive Species, Annapolis, MD.
- Marshall, JM**, AJ Storer, I Fraser, and VC Mastro. 2010. Multi-state comparison of trapping tools at sites with low emerald ash borer density. Poster. 21st USDA Interagency Research Forum on Invasive Species, Annapolis, MD.
- Marshall, JM**, MJ Porter, and AJ Storer. 2009. Using unwounded host trees for detection of emerald ash borer (*Agrilus planipennis*) adults and prospects for long term tree survival. Presentation. Entomological Society of America Annual Meeting, Indianapolis, IN.
- Marshall, JM**, MJ Porter, and AJ Storer. 2009. Use of unwounded ash trees for the detection of emerald ash borer adults: EAB landing behavior. Presentation. Emerald Ash Borer Research and Technology Development Meeting, Pittsburgh, PA.
- Marshall, JM**, AJ Storer, I Fraser, and VC Mastro. 2009. Multi-state comparison of detection tools at low emerald ash borer densities. Presentation. Emerald Ash Borer Research and Technology Development Meeting, Pittsburgh, PA.
- Marshall, JM**, AJ Storer, I Fraser, and VC Mastro. 2009. Detection efficacy of different trap types for emerald ash borer. Poster. 20th USDA Interagency Research Forum on Invasive Species, Annapolis, MD.
- Marshall, JM**, I Fraser, AJ Storer, and VC Mastro. 2008. Assessment of traps for emerald ash borer (*Agrilus planipennis*) detection at low density. Presentation. Entomological Society of America Annual Meeting, Reno, NV.
- Marshall, JM**, AJ Storer, I Fraser, JA Beachy, and VC Mastro. 2008. Comparing emerald ash borer detection tools: Are bigger trap trees better? Poster. 19th USDA Interagency Research Forum on Invasive Species, Annapolis, MD.
- Storer, AJ, **JM Marshall**, M Philip, DG McCullough, and NW Siegert. 2008. The history of emerald ash borer discoveries in the Upper Peninsula of Michigan from 2005-2007. Poster. 19th USDA Interagency Research Forum on Invasive Species. Annapolis, MD.
- Marshall, JM**, AJ Storer, I Fraser, JA Beachy, and VC Mastro. 2007. Emerald ash borer (*Agrilus planipennis*): Comparing tools for detection in three Midwestern States. Presentation. Entomological Society of America Annual Meeting, San Diego, CA.
- Marshall, JM**, AJ Storer, I Fraser, JA Beachy, and VC Mastro. 2007. Comparing emerald ash borer detection tools. Presentation. Emerald Ash Borer Research and Technology Development Meeting, Pittsburgh, PA.
- Marshall, JM**, I Fraser, AJ Storer, and VC Mastro. 2007. A comparison of detection tools for emerald ash borer in three Midwestern states. Presentation. North Central Forest Pest Workshop, Shoreview, MN.
- Storer, AJ, I Fraser, TL Eberhart, **JM Marshall**, LM Nagel, JA Metzger, and VC Mastro. 2007. Components of a management program for the invasive emerald ash borer, *Agrilus planipennis* (Coleoptera: Buprestidae), in North America. Presentation IUFRO Forest Health Meeting, Vienna, Austria.

- Buckley, DS, and **JM Marshall**. 2005. Influence of silvicultural practices on understory disturbance regimes, microsites, and plants. Presentation. Society of American Foresters National Convention, Fort Worth, TX.
- Marshall, JM**, AJ Storer, and B Leutscher. 2005. Effects of *Centaurea biebersteinii* on plant and ground dwelling arthropod communities within a lacustrine dune system. Presentation. 4th Western Great Lakes Research Conference, Marquette, MI.
- Marshall, JM**, AJ Storer, and RA Burks. 2003. Influences of *Centaurea maculosa* patch size and parasitoid activity on the biological control agent *Urophora quadrifasciata*. Poster. Entomological Society of America Annual Meeting, Cincinnati, OH.
- Beachy, BL, JN Rosemier, EE Graham, **JM Marshall**, and AJ Storer. 2003. Impacts of an exotic disease complex on native forest arthropods. Presentation. 17th Annual Meeting of the Society for Conservation Biology, Duluth, MN.

THESES

- Marshall, JM**. 2007. Establishment, Growth, Spread, and Ecological Impacts of *Microstegium vimineum* in Central Hardwood Forests. PhD Dissertation. The University of Tennessee, Knoxville, Tennessee. (Advisor: DS Buckley)
- Marshall, JM**. 2004. Biological Control and Ecological Impacts of Spotted Knapweed (*Centaurea maculosa*) in the Upper Peninsula of Michigan. MS Thesis. Michigan Technological University, Houghton, Michigan. (Advisor: AJ Storer)

STUDENT RESEARCH

Undergraduate

- Tessa Aby, Summer 2019 – Forest plant community at Little Wabash River Nature Preserve.
- Madison Beckstedt, Summer 2019 – Forest composition at Little Wabash River Nature Preserve.
- Shilynn Whalen, Fall 2018 – Dendrochronological patterns in Haskamp Woods, New Haven, Indiana.
- Alexander Barton, Summer 2018 – Dendrochronological assessment of ash growth rates.
- Aaron Rudolph, Summer 2015-Spring 2017 – Distribution, habitat characteristics, and genetic variability of pawpaw in forest fragments.
- Asif Mortuza, Spring 2016 – Age and growth rate of Callery pear in a managed prairie.
- Jennifer Troy, Spring-Summer 2015 – Northern red oak growth response in drought and shade stress.
- Hannah Lancaster, Spring 2015 – Understory and midstory plant distributions relative to seed mass and dispersal mechanisms.
- Farzana Tarannum, Spring 2015 – Light response curves and biomass accumulation of dame's rocket.
- Lori Morgan, Summer-Fall 2014 – Light response curves for tree seedlings in southern Great Lakes forests.
- Cecelia Smith, Summer 2014 – Analysis of ash leaf nutrient content and emerald ash borer feeding behavior.
- Alexander Silowsky, Summer 2014 – Relationships between weevil diversity, plant strata structure, and soil types within a hardwood forest.
- Glenneicer Ffrench, Spring 2014 – Quantification and importance of coarse woody debris in a hardwood forest.
- Kayla Boyes, Summer 2013 – Dendrochronological assessment of ash growth rates relative to emerald ash borer attack.

Alicia De Leon, Summer 2013 – Characterization of forest structure in Northeast Indiana woodlots.

Rachel Habegger, Summer 2013 – Algal diversity and distribution related to adjacent land use.

Shreya Patel, Spring 2013 – Light response and saturation curves for native and exotic shrub species.

Shelby Gruss, Spring 2013 – Drought response of the invasive plant garlic mustard.

Daniel Moore and Adam Warrix, Summer 2012 – Garlic mustard invasion patterns in a hardwood forest.

Rachel Habegger, Summer 2012 – Comparison of fertilizers on turfgrass above- and below-ground growth.

Michael Zijlstra, Fall 2011 – Seed germination ecology and seedling establishment for Lake Huron tansy, meadow hawkweed, and spotted knapweed.

Rick Thomas, Fall 2011 – Live ash survey in Fort Wayne managed parks.

Rachel Hunnicutt, Summer 2011 – Effects of forest understory structure on diversity and distribution of ground dwelling beetles.

Celeste Grubaugh, Spring 2011 – Drought response of the invasive plant garlic mustard.

Molly A. Miller, Spring 2011 – Influence of accumulated growing degree days and relative population density on emerald ash borer body size.

Graduate

Ashley Kovach-Hammons, 2020-present – TBA

Kasey Fracica, 2018-2020 – TBA

Jonathan Danielson, 2018-2019 – Stable Regimes in an Unstable System: Floral Community and Diversity in the Grand Sable Dunes.

Cecelia Smith, 2016-2018 – Five Trees Undercover: Genome-wide SNP Identification in *Fraxinus* Linking Genetic Characteristics to Tolerance of *Agrilus planipennis*.

Andrea Myers, 2015-2017 – Influence of Forest Fragment Compositional and Structural Heterogeneity on Ground-Dwelling Arthropod Communities

Adam Warrix, 2014-2016 – Management of Old Field Prairie Ecosystems: Soil Transfer and Exotic Species Invasion.

Rachel Fuelling, 2012-2014 – Diversity and Distribution of Plant Communities Related to Forest Fragment Size, Shape, Age, and Structure.

Rachel Hunnicutt, 2011-2013 – Emerald Ash Borer Adult Feeding Behavior and Ash Tree Management Decision Modeling: Relationships between Pest and Host Tolerance Gradients.

TEACHING

Purdue University Fort Wayne – Biology of Plants (BIOL 10800), Principles of Structure and Function (BIOL 11900), Intermediate Ecology (BIOL 21700) Field Botany (BIOL 50100), Invasion Biology (BIOL 54110), Ecological Statistics (BIOL 58600), Introduction to Environmental Conservation (FNR 10300), Dendrology (FNR 22500), Fundamentals of Horticulture (HORT 10100)

Michigan Technological University – Forest and Landscape Ecology (FW 3020), Insect Ecology (FW 3800)

The University of Tennessee – Dendrology and Silvics of North American Trees (FWF 212), Forest Ecology (FOR 215)

COMMUNITY OUTREACH

2018. Forest change over time: using current stages to interpret the past and the future. Presentation. Faculty Speaker Series, CollegeTV Fort Wayne, IN.
- 2014, 2016, 2018. Ecology and natural history of Indiana forests. Presentation. Noble County Indiana Master Naturalist Certification Program, Rome City, IN.
- 2013-2020. Ecology and natural history of Indiana forests. Presentation. Allen County Indiana Master Naturalist Certification Program, Fort Wayne, IN.
2014. Pushing the Limits – STEM programming for adults in small and rural libraries, Wells County Public Library, Bluffton, IN.
2013. Dig into Plants. Presentation. Wells County Public Library, Bluffton, IN.
2013. Where do bugs go in winter? Presentation. Lunch with an IPFW Scientist, Science Central, Fort Wayne, IN.
2012. “Faculty Spotlight”, CATV *Required Viewing*. Aired August 17, 2012.
2011. The merit of native plants in the woods and the garden. Presentation. Science Café, IPFW Sigma XI Chapter, Fort Wayne, IN.
2009. Interactions between native and invasive plants. Presentation. Wild Ones, Detroit Metro Chapter, Troy, MI.
2008. Insects and diseases threatening forest health in Michigan. Presentation. Michigan Forest Association / Michigan Tree Farm Program / The Friends of the Jordan Watershed, Forestry Field Day, East Jordan, MI.
2005. Japanese stiltgrass invasion following forest harvesting. Presentation. Kentucky-Tennessee Society of American Foresters East Tennessee Chapter, Fall Field Meeting, Oak Ridge, TN.

SERVICE

Department of Biology

- 2018-present. Graduate Program Director
2014. Ad Hoc USAP Committee
- 2013-present. Assessment Committee
- 2012, 2020. Ad Hoc Committees – Visiting Animal Biologist, Visiting Aquatic Biologist
- 2011-present. Graduate Committee (Member 2011-2014; Chair 2015-present; Thesis Format Advisor 2017-present)
- 2011-present. Welfare Committee

College of Arts and Sciences

2015. Symposium on Teaching and Learning, Faculty Facilitator
- 2012-2014. Student Affairs Committee, Member

Indiana Academy of Science

2018. Awarded Fellow
- 2017-2018. Botany Section (Vice-Chair 2017-2018; Chair 2018-2019)

Indiana Science Olympiad IPFW Regional Tournament

- 2012-2013. Forestry Competition Supervisor
2014. Entomology Competition Supervisor

Northeastern Indiana Regional Science and Engineering Fair Committee
2011-2018. Special Awards Coordinator

ADDITIONAL EDUCATION

Bayesian Statistics: From Concept to Data Analysis (2018) Coursera.org, University of California, Santa Cruz
Computing for Data Analysis (2013) Coursera.org, Johns Hopkins University, Bloomberg School of Public Health
Computational Science for Natural Resource Managers (2007) The University of Tennessee, The Institute for Environmental Modeling.

PEER REVIEWER

2020-present. Associate Editor (Pest Management), *Environmental Entomology*

Agricultural and Forest Entomology; Biological Invasions; Canadian Entomologist; Castanea; Catena; Entomologia Experimentalis et Applicata; European Journal of Entomology; Geology, Ecology, and Landscapes; Global Ecology and Conservation; Great Lakes Entomologist; International Journal of Biodiversity and Conservation; International Research Journal of Agricultural Science; Invasive Plant Science and Management; Journal of Insect Conservation; Journal of Pest Science; Journal of the Torrey Botanical Society; New Forests; Northeastern Naturalist; Proceedings of the Indiana Academy of Science; Shota Rustaveli National Science Foundation; Southeastern Naturalist; Western North American Naturalist

MEMBERSHIP

Entomological Society of America, 2020-present
Indiana Academy of Science (Fellow), 2010-present
Michigan Botanical Club, 2010-present