

Valerie E. Peters

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Department of Biological Sciences
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Education

- 2004-2009 Ph.D. Ecology, University of Georgia
Odum School of Ecology
Co-Major Advisors: C. Ronald Carroll and Russell Greenberg (deceased)
- 1996 B.S. Biology, Ecology option, Pennsylvania State University
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Professional positions

- 2015–current Assistant Professor
Eastern Kentucky University, Department of Biological Sciences
- 2012–2015 Postdoctoral Researcher, Miami University
Research projects:
Using plant-animal network theory to inform tropical restoration and conservation. Collaborators: Dr. Tomas Carlo (PSU), Dr. Robert Rice (Smithsonian), Dr. Doug Tallamy (U of Delaware), Dr. Marco Mello (Federal University of Minas Gerais), Dr. Ted Fleming (Emeritus U of Miami)
- Can the Floristic Quality Assessment Index be used to predict grassland habitat quality for beneficial arthropods and birds? Collaborators: Dr. Thomas O. Crist and REU students
- Invasive honeysuckle affects on bees and pollination services in monoculture agriculture. Collaborators: Dr. Thomas O. Crist and Doctoral student, Michael Minnick.
- 2012–2014 Smithsonian Postdoctoral Research Associate, Smithsonian Conservation Biology Institute, Migratory Bird Center
- 2009–2011 Postdoctoral Fellow, Andrew W. Mellon Foundation ACS Environmental Fellowship Program, Rollins College
- 2003-2009 Graduate assistant, University of Georgia
- 1995-1996 Undergraduate Researcher, Pennsylvania State University
Conducted laboratory and greenhouse research for plant ecology and invertebrate zoology labs. Supervisors: Dr. Andrew Stephenson and Dr. Charles R. Fisher

Peer Reviewed Publications

** Indicates undergraduate student co-author

* Indicates graduate student co-author

Hoven, B.M. *, D. Gorchov, K. Knight, **V.E. Peters**. 2017. Invasional meltdown in Midwestern deciduous forests: EAB and Amur honeysuckle reduce tree seedling recruitment. 19: 2813-2836.

Peters, V.E., T.A. Carlo, R.A. Rice, D.W. Tallamy, T.H. Fleming, S.A. Caudill, M. Mello. 2016. Using plant-animal interactions to inform tree selection in tree-based agroecosystems for enhanced biodiversity. *BioScience* 66: 1046-1056.

Hernandez, S.M., C.N. Welch, S. Curry, **V.E. Peters**, M.J. Yabsley, E. Hammond, P. Gerner-Schmidt, W. Kistler, A. Presotto, M. Madden, E.K. Lipp, A. Conway, J. Maurer and S. Sanchez. 2016. Urban American White ibis (*Eudocimus albus*) are reservoirs of *Salmonella* spp. in South Florida. *PlosOne* 11: e0164402.

Gonzalez-Astudillo, V., S.M. Hernandez, **V.E. Peters**, K.M. Keel, B. Munk, J.R. Fischer, J. Brown and N.M. Nemeth. 2016. Mortality of selected avian orders submitted to a wildlife diagnostic laboratory (Southeastern Cooperative Wildlife Disease Study, USA): A 36-yr retrospective analysis. *Journal of Wildlife Diseases* 52: 441-458.

Peters, V.E., K.U. Campbell, G. Dienno **, E. Leake **, C. Loyke **, M. Garcia **, M. Ogle, B. Steinly and T.O. Crist. 2016. Ants and plants as indicators of biodiversity, ecosystem services, and conservation value in constructed grasslands. *Biodiversity and Conservation* 25: 1481-1501.

Crist, T.O. and **V.E. Peters**. 2014. Landscape and local controls of insect biodiversity in conservation grasslands: implications for the conservation of ecosystem service providers in agricultural environments. *LAND* 3: 693-718.

Peters, V.E. 2014. Intercropping with shrub species that display a 'steady-state' flowering phenology as a strategy for biodiversity conservation in tropical agroecosystems. *PlosOne* 9: e90510.

Hernandez, S.M., B.J. Mattsson, **V.E. Peters**, R.J. Cooper and C.R. Carroll. 2013. Coffee agroforests remain beneficial for Neotropical bird community conservation across seasons. *PlosOne* 8: e65101.

Hernandez, S.M., **V.E. Peters**, P.L. Weygandt, C. Jimenez, P. Villegas, B. O'Connor, M.J. Yabsley, M. Garcia, S.M. Riblet and C.R. Carroll. 2013. Do shade-grown coffee plantations pose a disease risk for wild birds? *EcoHealth* 10: 145-158.

Peters, V.E. and R. Greenberg. 2013. Fruit supplementation affects birds but not arthropod predation by birds in Costa Rican agroforestry systems. *Biotropica* 45: 102-110.

Peters, V.E., C.R. Carroll, R.J. Cooper, R. Greenberg and M. Solis. 2013. The contribution of plants with a steady-state flowering phenology to native bee conservation and bee pollination services. *Insect Conservation and Diversity* 6: 45-56.

Peters, V.E. and C.R. Carroll. 2012. Temporal variation in coffee flowering may influence the effects of bee species richness and abundance on coffee production. *Agroforestry Systems* 85: 95-103.

Peters, V.E. and N. Nibbelink. 2011. The value of fruit security for the conservation of a neotropical frugivore in human-dominated landscapes. *Biodiversity and Conservation* 20: 2041-2055.

Peters, V.E., R. Mordecai, C.R. Carroll, R.J. Cooper, and R. Greenberg. 2010. Bird community response to fruit energy. *Journal of Animal Ecology* 79: 824-835

Publications (Non-peer reviewed)

Peters, V.E. 2000. Case Study in Natural Resources work, Peace Corps, Latin America and Caribbean Region Conference, Guatemala

Peters, V.E. 2000. La Montaña de la Botija Biological and Socioeconomic Study Report. Submitted with legal reserve status proposal to Honduras National Congress, obtained legal status in 2006. Document now serves as management plan for Parque Nacional La Botija.

Manuscripts in revision or review:

Fulton, S.A. *, **Peters V.E.**, Dickinson M.B., Lacki M.J., Rieske L.K., and Dodd L.E. Relationships between bats and their insect prey following the arrival of white-nose syndrome to a fire-managed landscape, In review *Oecologia*.

Cunningham-Minnick, M.J. *, **Peters, V.E.** and T.O. Crist. Nesting habitat enhancement for wild bees within soybean agricultural fields increases crop production. In review *Environmental Entomology*.

Hoven, B.M. *, D. Gorchov, K. Knight, **V.E. Peters**. Ash loss releases growth of interspecific competitors and increases the abundance of introduced seedlings. In prep.

Dunaway, A. *, and V.E. Peters. The importance of surface mining as a landscape variable in shaping bee communities of Central Appalachian forests. In prep.

Grants and Fellowships

2019-2021 Earthwatch Institute Project Grant (\$175k) Renewal

- 2018-2019 Disney Conservation Fund Grant (\$48k)
 2016-2017 Steele-Reese Foundation Grant (\$35k)
 2016-2019 Earthwatch Institute Project Grant (\$175k)
 2012 Smithsonian Migratory Bird Center grant (\$20k)
 2009–2011 Andrew W. Mellon Foundation Postdoctoral Fellowship (\$45k)
 2009–2011 Andrew W. Mellon Foundation Postdoctoral research grant (\$7,000)
 2006–2009 Earthwatch Institute Project Grant (\$118k)
 2003 Smithsonian Graduate Fellowship (\$5,000)
 2003 Birders' Exchange Equipment Grant (\$1,000)
 1999-2001 U.S. Peace Corps Biodiversity Grant. Conservation of La Montaña de La Botija, Honduras. Resulted in the legal protection of 19,100 ha of semi-deciduous broadleaf forest (Parque Nacional la Botija). (\$2,500)

Honors and Awards

- 2005 Solitary Glove Award, Odum School of Ecology (\$500)
 2004 Tinker Travel Award, University of Georgia (\$1,400)
 2002 National Counties Award, Martin County, FL

Invited talks

- 2018 Invited Seminar Speaker, Wild bees & pollination networks: involving citizen scientists to understand threats and potential recovery strategies, Department of Biology, University of Louisville
- 2017 Invited Guest Lecturer, Bees and Pollination Services, Department of Biology, Centre College
- 2014 Audubon Lecture Series, Birds and Coffee, Audubon Miami Valley
- 2014 Integrative Conservation Seminar Series, Understanding the ecology of ecosystem services in order to link people and conservation, Warnell School of Forestry and Natural Resources, University of Georgia
- 2014 Invited Guest Lecturer, Conservation Decision-Making, University of Georgia
- 2014 ACS Postdoctoral Fellows meeting, Landscape diversity and spatial configuration as drivers of species diversity and ecosystem services in rowcrop agroecosystems, Trinity University, TX
- 2010 Invited Guest Lecturer, Shade-grown coffee and ecology, National Geographic field course, University of Georgia Costa Rica Campus, Costa Rica
- 2010 Smithsonian Institute Seminar Series, Resource constancy and ecosystem services in shade-grown coffee, Smithsonian National Zoological Park, Washington, D.C.

- 2010 Invited Guest Lecturer, Topics in International Conservation, University of Georgia
- 2009 Invited Course Assistant Instructor, Conservation Medicine, University of Georgia course taught at various sites in Costa Rica
- 2009 Invited Guest Lecturer, Tropical Field Ornithology and Entomology, University of Georgia Costa Rica Campus, Costa Rica
- 2008 Invited Guest Lecturer, Tropical Field Ornithology and Entomology, University of Georgia Costa Rica Campus, Costa Rica
- 2007 Biology Seminar: Making Parks Work- A Case Study in Latin America, Berry College, GA, USA
- 2000 Birds of La Montaña de la Botija, Partners in Flight Conference, Panama
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Contributed presentations

** *Indicates undergraduate student co-author*

* *Indicates graduate student co-author*

- Hinton, C. *, V.E. Peters. 2018. Flowering Duration as a Selection Trait for Hub Species in a Plant-Pollinator Network. Association of Southern Biologists Annual Meeting, Myrtle Beach, SC.
- Dunaway, Amanda *, V.E. Peters. 2018. The impact of reclaimed surface mines on bee (Hymenoptera, Apoidea) communities in SE Kentucky. Association of Southern Biologists Annual Meeting, Myrtle Beach, SC.
- Cunningham-Minnick MJ*, T.O. Crist, V.E. Peters. 2018. The roles of wild bees and nesting substrate to enhanced soybean yields in Midwestern agricultural landscapes. Southeastern branch of ESA, Orlando, FL.
- Fleitz, A. *, V.E. Peters. 2017. Pre-montane altitudinal range limitation in Small Carpenter Bees (Tribe Ceratinini) in Costa Rica. UK CEEB Symposium, EREC, University of Kentucky.
- Brown, S. **, K.U. Campbell, V.E. Peters. 2017. Host Specificity and Elevation Biodiversity of Costa Rican Ants and Mites. UNCP Symposium. University of North Carolina.
- Fleitz, A. *, V.E. Peters. 2016. Using network theory to inform ecological restoration in the Neotropics. Ecological Restoration Symposium. Missouri Botanical Garden.
- Hoven, B. *, D. Gorchov, K. Knight, V.E. Peters. 2016. Woody seedlings and invasive plant responses to emerald ash borer (*Agrilus planipennis*)-caused tree mortality. Ecological Society of America annual meeting, Fort Lauderdale, FL.

- Hoven, B. *, D. Gorchov, K. Knight, V.E. Peters. 2016. The effect of emerald ash borer-caused tree mortality on the invasive shrub Amur honeysuckle and their combined effects on tree and shrub seedlings. Midwest Ecology and Evolution Conference (MEEC), Miami University, Oxford, OH.
- Hoven, B. *, D. Gorchov, K. Knight, V.E. Peters. 2016. The relative importance of emerald ash borer-caused tree mortality and abundance of the invasive shrub Amur honeysuckle on tree seedling survival and recruitment in Midwestern deciduous forests. Ohio Invasive Plant Council (OIPC) Research Conference, Columbus, OH.
- Hoven, B. *, D. Gorchov, K. Knight, V.E. Peters. 2015. The relative importance of emerald ash borer-caused tree mortality and abundance of the invasive shrub Amur honeysuckle on tree seedling survival and recruitment in Midwestern deciduous forests. Entomological Society of America Annual Meeting, Minneapolis, MN.
- V Gonzalez-Astudillo *, SM Hernandez, VE Peters, MJ Yabsley, DG Meade, KM Keel, BA Munk, JR Fischer, MG Ruder, JD Brown, and NM Nemeth. Mortality of passerines and relatives submitted to a wildlife diagnostic laboratory (Southeastern Cooperative Wildlife Disease Study, USA): a 36-year retrospective analysis. November 4, 2015. University of Queensland, Gatton, Australia. **School of Veterinary Science Research Conference. Best poster in 'wildlife' category.**
- Gonzalez-Astudillo, V. *, S.M. Hernandez, V.E. Peters, M.J. Yabsley, D.G. Mead, K.M. Keel, B.A. Munk, J.R. Fischer, M.G. Ruder, J.D. Brown, N.M. Nemeth. 2015. Mortality of Passerines and relatives submitted to a wildlife diagnostic laboratory (Southeastern Cooperative Wildlife Disease Study, USA): a 36-year retrospective analysis. Wildlife Disease Association International Conference, Queensland, Australia.
- Minnick, M. *, V.E. Peters, T.O. Crist. 2015. Nesting habitat enhancement for wild bees within soy bean agricultural fields increases crop production. ESA Annual Meeting, Baltimore, MD.
- Hoven, B. *, D. Gorchov, K. Knight, V.E. Peters. 2015. Effects of an invasive shrub and emerald ash borer-caused tree mortality on tree seedling survival and recruitment in Ohio deciduous forests. ESA Annual Meeting, Baltimore, MD.
- Crist, T.O., V.E. Peters, K.U. Campbell*. 2015. Spatial Scaling of Biodiversity in Agricultural Landscapes. IALE World Congress, Portland, Oregon.
- Peters, V.E., A. Davis, A. Ponce De Leon**, T.O. Crist. 2015. Landscape Effects on the Biodiversity of Birds and Predatory Arthropods in Soybean Agroecosystems. IALE World Congress, Portland, Oregon.
- Minnick, M. *, V.E. Peters, T.O. Crist. 2015. Floral resources of an invasive shrub suppress native bee communities along forest edges in an intensive agricultural landscape. IALE World Congress, Portland, Oregon.

- Hoven, B. *, D. Gorchov, K. Knight, V.E. Peters. 2015. Effects of an invasive shrub and emerald ash borer-caused tree mortality on tree seedling survival and recruitment in Ohio deciduous forests. Midwest Ecology and Evolution Conference, Indiana University, Bloomington.
- Minnick, M. *, V.E. Peters, T.O. Crist. 2015. Invasive shrub flowers alter pollination services provided by native bee communities in agricultural landscapes. Midwest Ecology and Evolution Conference, Indiana University, Bloomington.
- Minnick, M. *, V.E. Peters, T.O. Crist. 2014. Influence of an invasive shrub on native bee communities adjacent to intensive agriculture. Entomological Society of America Annual Meeting, Portland, Oregon.
- Campbell, K.U. *, V.E. Peters, T.O. Crist. 2014. Ant Quality Index: an ant-based approach for assessing restoration success of grasslands from the ground up. ESA Annual Meeting, Sacramento, CA.
- Minnick, M. *, V.E. Peters, T.O. Crist. 2014. Native bee community functional diversity explains sentinel plant pollination in an intensive agricultural landscape. ESA Annual Meeting, Sacramento, CA.
- Peters, V.E. and T.O. Crist. 2014. Organized an oral session entitled: Quantifying the role of species in restoration of ecological processes and conservation decision-making. ESA Annual Meeting, Sacramento, CA.
- Peters, V.E. and T.O. Crist. 2014. Can the floristic quality assessment index be used to predict grassland habitat quality for beneficial arthropods? ESA Annual Meeting, Sacramento, CA.
- Peters, V.E. and R.J. Cooper. 2013. Using birds as a conservation strategy for bees in the cornbelt. Greenberg Innovation Sessions. Chestertown, MD.
- Cooper, R.J. and V.E. Peters. 2013. The role of insectivorous birds in forest ecosystems has not been adequately assessed because of poor design of enclosure experiments. Greenberg Innovation Sessions. Chestertown, MD.
- Peters, V.E. 2013. Sowing shrub species with a steady-state flowering phenology as a more spatially compact approach for biodiversity conservation in tropical agroecosystems. Ecological Society of America Annual Meeting. Minneapolis, MN.
- Peters, V.E. 2013. Arthropod community response to supplemental floral resources in coffee agroforestry systems. Association for Tropical Biology and Conservation annual meeting. San Jose, CR.
- Peters, V.E. and R. Greenberg. 2011. Food enrichment as driver in ecosystem service provisioning in shade-grown coffee. Ecological Society of America annual meeting, Austin, TX.

Peters, V.E. and C.R. Carroll. 2010. Coffee flower phenology changes and pollinator response in a strong el Nino year. Ecological Society of America annual meeting, Pittsburgh, PA.

Peters, V.E. 2006. Costa Rica Sustainable Coffee, Earthwatch PI Conference, Boston, MA, USA

Teaching experience

- Fall 2017 Biology 316, Ecology Lecture and Lab, 3-credit required course (21 students), Eastern Kentucky University
- Fall 2017 Biology 810, Biostatistics, 3-credit required graduate course (7 students), Eastern Kentucky University
- Spring 2016 Biology 316, Ecology Lab, Lab course for 3-credit required course (44 students), Eastern Kentucky University
- Fall 2016 Biology 316, Ecology Lab, Lab course for 3-credit required course (16 students), Eastern Kentucky University
- Fall 2016 Biology 810, Biostatistics, 3-credit required graduate course (15 students), Eastern Kentucky University
- Spring 2016 Biology 802, Citizen Engagement, 1-credit graduate seminar (3 students), Eastern Kentucky University
- Spring 2016 Biology 850, Dynamics of Ecosystems, 2-credit required graduate course (8 students), Eastern Kentucky University
- Spring 2016 Biology 316, Ecology Lab, Lab course for 3-credit required course (22 students), Eastern Kentucky University
- Fall 2015 Biology 112, Ecology and Evolution, 3-credit required course (47 students), Eastern Kentucky University
- Fall 2015 Biology 316, Ecology Lab, Lab course for 3-credit required course (22 students), Eastern Kentucky University
- Winter 2015 Institute for the Environment and Sustainability 412/512, Sustainability and Tropical Ecosystems of Costa Rica, 6-credit elective, field-based course in Costa Rica (29 students), Miami University.
- Fall 2014 Biology 671, Population and Community Ecology, 3-credit core course for PhD program in EEEB (11 students), Miami University.
- Winter 2014 Institute for the Environment and Sustainability 412/512, Sustainability and Tropical Ecosystems of Costa Rica, 6-credit elective, field-based course in Costa Rica (31 students), Miami University.
- July 2012 Ecology 4575/6575, Conservation Medicine, 6-credit elective, field-based course in Costa Rica (20 students), University of Georgia.
- Spring 2011 Environmental studies 305G, Birds and pollinators, 4-credit elective (12 students) Rollins College.
- Spring 2011 Environmental studies 305H, Community-based conservation, 6-credit elective with field-based component in Costa Rica (8 students), Rollins College.
- Fall 2010 Environmental studies 305A, Wildlife restoration, 4-credit elective (19 students), Rollins College.
- May 2010 Biology 105, Ecological perspectives of environmental issues, 4-credit course to fulfill science requirement for non-majors (21 students), Rollins College.

- Spring 2010 Environmental studies 305E, Large-scale ecosystem restoration, 4-credit elective (12 students), Rollins College.
- Spring 2010 Environmental studies 305G, Birds and pollinators, 4-credit elective (8 students), Rollins College.
- Fall 2009 Environmental studies 205, Ecological restoration, 4-credit course for non-majors (16 students), Rollins College.
- July 2008 Teaching Assistant, Ecology 1000, University of Georgia Costa Rica Campus, University of Georgia.
- Fall 2005 Teaching Assistant, Ecology 3500, Tropical Field Ecology, University of Georgia Costa Rica Campus, University of Georgia.
- Spring 2005 Our Shared Forests, curriculum design for migratory bird program Ecuador-Georgia, State Botanical Gardens of Georgia, University of Georgia.
- 1994–1996 Environmental Educator, Shaver’s Creek Environmental Education Center, Pennsylvania State University.

Research supervisees and mentoring

Current Graduate Students

Amelia Fleitz (2015 to present), M.S. candidate, Eastern Kentucky University
 Amanda Dunaway (2016 to present), M.S. candidate, Eastern Kentucky University
 Chelsea Hinton (2017 to present), M.S. candidate, Eastern Kentucky University
 Kristin Conrad (2018 to present), M.S. candidate, Eastern Kentucky University

Committee Member for the following Graduate Students

Reed Crawford, Eastern Kentucky University
 Jessica Bailey, Eastern Kentucky University
 Shelby Fulton, Eastern Kentucky University
 Kaitlyn Kelly, Eastern Kentucky University

Research mentor for the following groups, graduate and undergraduate students

Sandra Cutler Redjali, High School student, 2017
 Mike Minnick (2012 to present), Ph.D. candidate, Miami University
 Alberic Ponce de Leon, Miami University REU student, 2014
 Carol Ramos, Miami University REU student, 2013
 Melissa Brody, University of Georgia REU student, Costa Rica, 2008

Earthwatch (39 volunteers), Field study in pollinators, pollination services, climate change and ecological restoration, Costa Rica. June-July 2017

Earthwatch (36 volunteers), Field study in pollinators, pollination services, climate change and ecological restoration, Costa Rica. June-July 2016 and December 2016

Earthwatch (39 volunteers), Field study in shade-grown coffee, ecosystem services and biodiversity protection, Costa Rica, 2009, including volunteers from West Point Academy and Vermont Technical College

Earthwatch (31 volunteers), Field study in shade-grown coffee, ecosystem services and biodiversity protection, Costa Rica, 2008

Earthwatch (35 volunteers), Field study in shade-grown coffee, ecosystem services and biodiversity protection, Costa Rica. 2007.

Earthwatch (18 volunteers), Field study in shade-grown coffee, ecosystem services and biodiversity protection, Costa Rica. 2006

Professional memberships

Ecological Society of America

Association for Tropical Biology and Conservation

Peer reviewer

Agroforestry Systems; Ecosphere; Ecology; Biological Conservation; Journal of Field Ornithology; Biotropica; PlosOne; Journal of Insect Conservation; Arthropod-Plant Interactions; Apidologie; Biological Control; Global Change Biology; Ecological Applications; Biodiversity and Conservation; Insect Conservation and Diversity; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services: Thematic assessment of pollinators, pollination and food production

Public service experience

2001	Conservation planning consultant, Honduras Conservation Corps, Honduras
1998–2000	United States Peace Corps Natural Resources Volunteer, Honduras
1997–1998	Americorps American Red Cross Volunteer, Chicago, IL
1996–1997	Americorps National Civilian Community Corps Volunteer, Perry Point, MD