

Jeffrey D. Holland, Ph.D.

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Professional and Academic Experience

2010 – Present	Associate Professor, Purdue University
2004 – 2010	Assistant Professor, Purdue University
2003 – 2004	Post- h Fellow, University of Windsor
1999 – 2003	Research Assistant, Carleton University (Ph.D., May 2003)
1998	Field Research Leader, Carleton University
1995 – 1997	Research Assistant, Carleton University (B.Sc., May 1997)

Awards and Honors

Nominated for Montclair Who's Who Among Collegiate Faculty 2011/12 ed.	2010
Natural Science and Engineering Research Council, Canadian Forest Service supplement to PGS-B	2001 - 2003
Natural Science and Engineering Research Council PGS-B, Doctoral studies scholarship	2001 - 2003
Natural Science and Engineering Research Council PGS-A, Masters studies scholarship	1999 - 2001
Ontario Graduate Scholarship, Science and Technology	1999
Senate Medal for Outstanding Academic Achievement	1997
Director's Award in Environmental Science (top in program)	1997
Natural Science and Engineering Research Council, Undergraduate Studies Research Award (competitive)	1996

Membership in Academic, Professional, and Scholarly Societies

Entomological Society of America
Ecological Society of America
International Association for Landscape Ecology
Society for Conservation Biology
Coleopterists Society

DISCOVERY (Primary area, 75% of appointment)

Research Publications

Refereed Articles

Holland, J. and L. Fahrig. 2000. Effect of woody borders on insect density and diversity in crop fields: A landscape-scale analysis. *Agriculture, Ecosystems and Environment* 78: 115-122.

Hopkin, A.A., S. Greifenhagen and J. Holland. 2001. Decay, stains, and beetles in ice-storm-damaged forests: a review. *The Forestry Chronicle* 77: 605-611.

- Holland, J.D., D. Bert and L. Fahrig. 2004. Determining the spatial scale of species' response to habitat. *Bioscience* 54: 227-233.
- Holland, J.D., L. Fahrig and N. Cappuccino. 2005. Body size affects the spatial scale of habitat-beetle interactions. *Oikos* 110: 101-108.
- Holland, J.D., L. Fahrig and N. Cappuccino. 2005. Fecundity determines the extinction threshold in a Canadian assemblage of longhorned beetles (Coleoptera: Cerambycidae). *Journal of Insect Conservation* 9: 109-119.
- Holland, J.D. 2006. Cerambycidae life history predicts trap efficiency. *Environmental Entomology* 35: 1647-1653.
- Holland, J.D. 2006. Sensitivity of Cerambycid biodiversity indicators to definition of high diversity. *Biodiversity and Conservation* 16: 2599-2609.
- Hamilton, R.M., R.E. Foster, T.J. Gibb, C.S. Sadof, J.D. Holland and B.A. Engel. 2007. The distribution and dynamics of Japanese beetles along the Indianapolis airport perimeter and the influence of land use on trap catch. *Environmental Entomology* 36: 287-296.
- Brady, V.J., J.J.H. Ciborowski, L.B. Johnson, N.P. Danz, J.D. Holland, D.H. Breneman and J.P. Gathman. 2007. Optimizing fishing time: one vs. two-night fyke net sets in Great Lakes coastal systems. *Journal of Great Lakes Research* 33 (Sp. 3): 236-244.
- Holland, J.D. 2009. *Glycobius speciosus* (Say) (Coleoptera: Cerambycidae) has been extirpated from much of Midwestern USA. *The Coleopterists Bulletin* 63: 54-61.
- Holland, J.D. 2009. Density of *Megacyllene caryae* (Gahan) (Coleoptera: Cerambycidae) larvae in hickory and notes on gallery mates. *The Coleopterists Bulletin* 63: 230-231.
- Holland, J.D. 2009. Dispersal kernel determines symmetry of spread and geographical range for an insect. *International Journal of Ecology* 2009, 4pp.
- Foley, C.J. and J.D. Holland. 2010. Do flying beetles perceive human-dominated landscapes as complex mosaics or binary patterns? *Landscape Online* 2010: 1-18.
- Holland, J.D. 2010. Isolating spatial effects on beta diversity for forest landscape planning. *Landscape Ecology* 25: 1349-1362.
- Raizman, E.A., J.D. Holland, L.M. Keefe and M.H. Moro. 2010. Forest and surface water as predictors of *Borrelia burgdorferi* and its vector *Ixodes scapularis* in Indiana, USA. *Journal of Medical Entomology* 47: 458-465.

Seiter, N.J., D.S. Richmond, J.D. Holland, and C.H. Krupke. 2010. A novel method for estimating soybean herbivory in western corn rootworm (Coleoptera: Chrysomelidae). *Journal of Economic Entomology* 103: 1464-1473.

Cambron, S.E., G.D. Buntin, R. Weisz, J.D. Holland, K.L. Flanders, B.J. Schemerhorn, and R.H. Shukle. 2010. Virulence in Hessian Fly (Diptera: Cecidomyiidae) Field Collections from the Southeastern United States to 21 Resistance Genes in Wheat. *Journal of Economic Entomology* 103:2229-2235.

Holland, J.D. 2010. Landscape genetics of an American chestnut borer. One page research box in DeWoody, J.A., J.W. Bickham, C. Michler, K. Nichols, G. Rhodes, and K. Woeste (eds.) *Molecular Approaches in Natural Resource Conservation and Management*, Cambridge University Press, New York.

Extension Publications

Shively, G., O. Doering, N. Diffenbaugh, L. Bowling, C. Krupke, B. Pijanowski, J.D. Holland, and J. Dunning. 2008. Forecasting the Likely Impacts of Climate Change on Indiana Agriculture. *Purdue Agricultural Economics Report*, August 2008.

Holland, J.D., V. Ferris, K. Raje, H. Abdel-Moniem, L. Farlee. 2010. A survey of wood borer beetles on private forest lands in Indiana. *Hardwood Tree Improvement and Regeneration Center E-newsletter*, April 2010.

Conference Proceedings

Holland, J.D. and L. Fahrig. 2001. Landscape woody border increases insect diversity in alfalfa fields. In C. Barr and S. Petit (eds.), *Hedgerows of the world: their ecological functions in different landscapes*, Proceedings of the tenth annual IALE (UK) conference. Birmingham University, England, September 5-8, 2001. Pp. 167-176.

Arns, L.L., M. Brisbin, D. Foldes and J.D. Holland. 2006. Virtual reality for ecosystem dynamics education. *Siggraph Conference Proceedings*. Boston, USA, July 30 – August 3, 2006. 4 pp.

Research Posters

Holland, J.D., L. Fahrig, N. Cappuccino and D. Bert. The scale of habitat interactions in Cerambycidae. 139th annual meeting of the Entomological Society of Ontario, Ottawa, Ontario, Canada. October 18-20, 2002.

Holland, J.D., J.J.H. Ciborowski, T.P. Hollenhorst and L.B. Johnson (LBJ presented). Quantifying spatial scales of responses to stress in fish. EPA Science to Achieve Results (STAR) program conference. September 30, 2004.

- Foley, C. and J.D. Holland. Locating habitat for longhorned beetles (Coleoptera: Cerambycidae). Indiana GIS Conference, Indianapolis, IN. March 7-8, 2006. [1st place student poster].
- Foley, C.J. and J.D. Holland. How does the red-headed ash borer perceive a fragmented landscape? North American Forest Insect Work Conference, Asheville, NC. May 22-26, 2006.
- Yang, S. and J.D. Holland. Identifying ecologically relevant spatial scales for longhorned beetles. North American Forest Insect Work Conference, Asheville, NC. May 22-26, 2006.
- Foley, C.J. and J.D. Holland. Locating habitat for specialist longhorned beetles (Coleoptera: Cerambycidae). Annual Meeting of the North Central Branch of the Entomological Society of America, Winnipeg, MN, Canada, March 26, 2007.
- Shukle, J. and J.D. Holland. mtDNA barcoding within the genus *Agrilus*. Annual Meeting of the North Central Branch of the Entomological Society of America, Winnipeg, MN, Canada, March 26, 2007.
- Shukle, J. and J.D. Holland. mtDNA barcoding for taxonomic identification within the genus *Agrilus*. Purdue Undergraduate Research Symposium, West Lafayette, IN, April 5, 2007. [Second place overall; Dean's Prize first place for Ag.]
- Yang, S. and J.D. Holland. Species distribution modeling for Indiana longhorned beetles. Annual Meeting of the Entomological Society of America, San Diego, CA, December 10, 2007.
- Abdel-Moniem, H. and J.D. Holland. Is beetle diversity correlated to host tree diversity in Morgan-Monroe and Yellowwood State Forests?: A GIS approach. Annual meeting of the Hardwood Ecosystem Experiment, Brown County State Park, IN, March 25, 2009.
- Abdel-Moniem, H. and J.D. Holland. Is beetle diversity correlated with the diversity of host trees? Annual meeting of the Entomological Society of America, Indianapolis, IN, Dec. 13-16, 2009.
- Mager, T. and J.D. Holland. Diversity and abundance of beneficial versus pest Cerambycidae. Annual meeting of the Entomological Society of America, Indianapolis, IN, Dec. 13-16, 2009.
- Guo, J., J.D. Holland, and V.R. Ferris. Identification and phylogenetic analysis of Indiana fireflies. Summer Undergraduate Research Fellowship Symposium, Purdue University, August 3-4, 2010. [1st place biology category poster]
- Guo, J., J.D. Holland, and V.R. Ferris. Molecular study of fireflies, and integral part of the Indiana landscape. Fourth annual Ecological Science and Engineering Symposium, Purdue University, October 27, 2010. [1st place undergraduate poster]

Invited Research Presentations

Holland, J.D., T. Contreras, L. Fahrig, N. Charbonneau, D. Ladd and S. Macko. Monitoring changes to vegetation and hardwood borers in response to ice storm damage. Invited seminar to the Eastern Ontario Model Forest - Forest Science Committee. Kempville, Ontario, Canada. March 14, 2000.

Holland, J.D. and T. Contreras. Initial impacts of the 1998 ice storm in the Ottawa, Ontario region. Invited seminar at the National Wildlife Research Centre. Canadian Wildlife Service. Hull, Quebec, Canada. March 15, 2000.

Holland, J.D., L. Fahrig, T. Contreras, N. Charbonneau, D. Ladd and S. Macko. Impacts of the 1998 ice storm on vegetation and boring beetles. Invited presentation to the Lanark Naturalist Society, Almonte Public Library, Almonte, Ontario, Canada. September 21, 2000.

Holland, J.D., J.J. Ciborowski, L.B. Johnson and J.C. Brazner. Biotic homogenization of macroinvertebrate assemblages along an anthropogenic stress gradient. Invited seminar in organized oral session, 90th Annual Meeting of the Ecological Society of America / 9th International Congress on Ecology. Montreal, Quebec, Canada. August 9, 2005.

Holland, J.D. Landscape ecology and forest beetles. Invited seminar to Ecology lunch seminar series, Purdue University. September 28, 2005.

Holland, J.D. Landscape ecology of forest beetles in the Midwest. Invited seminar to The Department of Biology, Bowling Green State University, OH. November 2, 2005.

Holland, J.D. Statistical tools for examining the influence of landscapes on forest insects. Invited seminar at North American Forest Insect Work Conference, Asheville, NC. May 22-26, 2006.

Holland, J.D. Habitat connectivity and native longhorned beetles. Invited seminar to Department of Entomology, University of Illinois, Champaign-Urbana, IL. October 23, 2006.

Holland, J.D. New range dynamics of an old pest wood-borer. Invited seminar to Department of Biological Sciences, Purdue University – Calumet, Hammond, IN. February 27, 2007.

Holland, J.D. Landscape dynamics of a very well-behaved beetle. Invited seminar at the University of Idaho (several departments), Moscow, ID. April 4, 2008.

Holland, J.D. Bugs in space: entomological questions that can be answered with GIS. Invited symposium seminar at Annual meeting of the Entomological Society of America, November 18, 2008. Reno, NV.

Yang, S., J.D. Holland, and K. Raje. Identifying habitat requirements for two longhorned beetles, *Gaurotes cyanipennis* and *Urgleptes querci*. Invited symposium seminar at Annual meeting of the Entomological Society of America, November 18, 2008. Reno, NV.

Holland, J.D., H. Abdel-Moniem, T. Mager, K. Raje, J.T. Shukle, S. Yang. Propagating ecosystem services across landscapes. Invited symposium seminar at Annual meeting of the North-Central Branch of the Entomological Society of America, March 15, 2010. Louisville, KY.

Other Research Presentations

Contreras, T. and J.D. Holland. Methods for monitoring vegetation and insect response to ice storm damage. Ice Storm Science Committee of the Ontario Ministry of Natural Resources. November 18, 1998.

Holland, J.D., L. Fahrig, N. Cappuccino, J.T. Arnason and A. Hopkin. Trap response of hardwood boring beetles (Coleoptera: Buprestidae, Cerambycidae) to ice storm damage. Ice Storm 1998 Forest Research Conference. Carleton University, Ottawa, Canada. October 19-22, 2000.

Holland, J.D. and L. Fahrig. Landscape woody border increases insect diversity in alfalfa fields. 10th annual IALE (UK) conference. Birmingham University, England. September 5-8, 2001.

Holland, J.D., D. Bert and L. Fahrig. Spatial scaling of longhorned beetle – habitat interactions. Annual meeting of the International Association for Landscape Ecology, US Chapter. Banff, Alberta, Canada. April 2-6, 2003.

Holland, J.D., V. Brady, J.J.H. Ciborowski, T. Hollenhorst, L.B. Johnson and C. Richards. The spatial scale at which indicator species indicate. International Association of Great Lakes Research conference 2004. Waterloo, Ontario, Canada. May 27, 2004.

Johnson, L., J. Ciborowski, J. Holland, N. Danz, G. Host, G. Niemi, J. Shuldt, R. Regal, T. Hollenhorst, V. Brady and T. Brown. Strategies for identifying reference conditions in Great Lakes coastal wetlands. 90th annual meeting of the Ecological Society of America / 9th International Congress on Ecology. Montreal, Quebec, Canada. August 11, 2005.

Holland, J.D. Landscape ecology of forest beetles in the Midwest. Seminar to The Thomas Say Society meeting, Purdue University. November 8, 2005.

Holland, J.D. Land-use effects on longhorned beetle (Col.: Cerambycidae) assemblages. Entomological Society of America annual meeting, Fort Lauderdale, FL. December 17, 2005.

Holland, J.D. Land use effects on Cerambycidae in the Midwest. Department of Entomology, Purdue University. January 26, 2006.

Holland, J.D., C.J. Foley and S. Yang Spatial scale and movement from the perspective of a hardwood borer. 17th Biennial International Plant Resistance to Insects Workshop, Purdue University. April 10, 2006.

Foley, C. and J.D. Holland. Using least-cost path modeling to determine how two species of longhorned beetles (Coleoptera: Cerambycidae) are perceiving the landscape. 54th Annual Meeting of the Entomological Society of America, Indianapolis, IN. December 11, 2006.

Holland, J.D. Forest fragmentation determines the new range boundary of a cerambycid beetle. 54th Annual Meeting of the Entomological Society of America, Indianapolis, IN. December 11, 2006.

Holland, J.D., C.J. Foley, J.M. Webb, and S. Yang. Influence of riparian forests on aquatic insects. Indiana River Rally, West Lafayette, IN, June 8, 2007.

Holland, J.D. Using GIS to predict the new range boundary of an old pest insect. GIS Day 2007. West Lafayette, IN, November 14, 2007.

Foley, C. and J.D. Holland. Costs associated with longhorned beetle (Coleoptera: Cerambycidae) movement through a heterogeneous landscape. Annual Meeting of the Entomological Society of America, San Diego, CA, December 10, 2007.

Yang, S. and J.D. Holland. Landscape scaling for longhorned beetles. Annual Meeting of the Ohio Valley Entomological Association, Indianapolis, IN, October 17, 2008.

Shukle, J. and J.D. Holland. Species identification of wood-boring beetles using mtDNA from gallery frass. Annual meeting of the North Central Branch of the Entomological Society of America, St. Louis, MO, March 16, 2009. [1st place in student competition].

Skvarla, M. and J.D. Holland. Non-target Coleoptera Caught by EAB Purple Traps. Annual meeting of the North Central Branch of the Entomological Society of America, St. Louis, MO, March 16, 2009.

Holland, J.D. Functional diversity of longhorned beetles in the H.E.E. project. Annual meeting of the Hardwood Ecosystem Experiment, Brown County State Park, IN, March 25, 2009.

Holland, J.D. Field methods for monitoring of longhorned beetles. Annual meeting of the Hardwood Ecosystem Experiment. Brown County State Park, IN, March 26, 2009.

Raje, K., J.D. Holland, and V. Ferris. Molecular phylogeny of the long-horned beetles (Family: Cerambycidae). Twenty-second Annual Forum of the Ohio Valley Entomological Association. Cincinnati, OH, November 6, 2009 [Second place PhD talk].

- Holland, J.D. Disturbance drives shifts in the dominance structure of forest longhorn beetles. Annual meeting of the Entomological Society of America, Indianapolis, IN, Dec. 13-16, 2009.
- Yang, S. and J.D. Holland. Do beetles flow? Annual meeting of the Entomological Society of America, Indianapolis, IN, Dec. 13-16, 2009.
- Raje, K., J.D. Holland, and V. Ferris. Molecular phylogeny of the long-horned beetles (Family: Cerambycidae) based on 18S rDNA sequences and CO1 sequences. Annual meeting of the Entomological Society of America, Indianapolis, IN, Dec. 13-16, 2009.
- Shukle, J. and J.D. Holland. Species identification of wood-boring beetles using mtDNA from gallery frass. Annual meeting of the Entomological Society of America, Indianapolis, IN, Dec. 13-16, 2009.
- Shukle, J., P. Bonants, and J.D. Holland. mtDNA barcoding for taxonomic identification within the genus *Agrilus*. Central Hardwood Forest Conference. April 5-7, 2010. Lexington, KY.
- Shukle, J. and J.D. Holland. Species identification of wood-boring beetles using mtDNA from gallery frass. Central Hardwood Forest Conference. April 5-7, 2010. Lexington, KY.
- Holland, J.D. Monitoring longhorned beetles in forestry operations. Forest Service Eastern Region Silviculture and Fuels Meeting, French Lick, IN, November 2-4, 2010.
- Holland, J.D. Changes in longhorned beetle assemblages in response to forestry. Annual meeting of the Hardwood Ecosystem Experiment. Purdue University, West Lafayette, IN, November 15, 2010.
- Holland, J.D., H.I. Rowe, B. Gramig, and K. Duszynski. Ecology and control of soybean aphids: Preliminary fieldwork results. Presentation to grower cooperators, Newton County Government Building, Morocco, IN, February 15, 2011.

Other Evidence of Research Excellence and Activities

Research featured on Discovery Channel television	Jan. 1999
Developed spatial scaling software, free download	2004
Ad-hoc reviewer for 2 NSF grant proposals	Jan. 2006 - Feb. 2006
Ad-hoc reviewer for Leopold Center grant	Jan. 2006
Served on NRI Review Panel	Apr. 2006
Featured in Journal & Courier article: 'Longhorn beetles may deserve love – but won't get mine'	Feb. 19, 2007
Invited to CATIE (Costa Rica) to help Clean Stock Program	Feb. 2008
Research featured in Outdoor Indiana magazine	Mar. - Apr. 2008
Ad-hoc reviewer for Research Council of Norway	Jan. 2009
Bioblitz volunteer work featured in 2 National Geographic blogs	May 2009

Reviewer for 17 scientific journals

2001 - present

Student Involvement

Graduate students (2 programs, 3 current)

Carolyn Foley, M.Sc. student (former). Thesis topic: GIS resistance surfaces for determining how cerambycid beetles perceive landscape heterogeneity (**Major advisor**).

Shulin Yang, Ph.D. student (former). Thesis topic: Spatial scaling of cerambycid – landscape relationships (**Major advisor**).

Kapil Raje, Ph.D. student (current). Thesis topic: Phylogenetic analysis of biological and behavioral traits for prediction of invasive species risk (**Co-advisor** with: Virginia Ferris, ENTM).

Hossam Eldien Mohammed Abdel Moniem, Ph.D. student (current). Thesis topic: Landscape genetics and connectivity for endangered insect species (**Major advisor**).

Julie Speelman, Ph.D. student (current). Research topic: Aquatic insect assemblages as bio-indicators (**Major advisor**).

Graduate student committees (3 departments, 11 current)

Melanie Bergolc, Ph.D. student (former). Thesis topic: Geology as a possible controlling factor on beetle community structure and biodiversity in a mountainous environment (Committee member; Major advisor: Dan Pavuk, BGSU Biology).

Jonah Duckles, M.Sc. student (former). Thesis topic: Impacts of land use change on runoff in the Muskegon River watershed of Michigan, past, present and future: a stakeholder driven, scenario-based approach (Committee member, Major advisor: Bryan Pijanowski, FNR).

Brad Barnd, Ph.D. student (former). The behavioral and chemical ecology of the bark beetle *Phloeotribus liminaris* (Committee member, Major advisor: Matthew Ginzel, ENTM & FNR).

Matthew VanWeelden, M.Sc. student (former). Research topic: The effect of polydomy on intra-colony food distribution in ants as revealed by a protein marker (Committee member, Major advisor: Grzegorz Buczkowski, ENTM).

Byju Govindan, Ph.D. student (current). Thesis topic: Impacts of habitat fragmentation and climate change on storage grain beetles and acorn weevils (Committee member; Major advisor: Rob Swihart, Purdue FNR).

Nathan Lichti, Ph.D. student (current). Thesis topic: Effects of landscape structure and West Nile Virus on blue jay-mediated acorn dispersal in the central hardwoods (Committee member; Major advisor: Rob Swihart, Purdue FNR).

Mildred Linkimer, Ph.D. student (current). Thesis topic: Landscape influences on pest insect abundance on ornamental plants for the USA export market (Committee member, Major advisor: Fernando Casanoves, CATIE).

Brian Napolitano, Ph.D. student (current). Thesis topic: Patterns in biodiversity and biophony across different spatial scales (Committee member, Major advisor: Brian Pijanowski, FNR).

Kristi Zurawski, Ph.D. student (current). Thesis topic: Effect of chemicals on blow fly oviposition, growth and development (Committee member, Major advisor: Ralph Williams, ENTM).

Scott Williams, Ph.D. student (current). Research topic: Persistence of *Tribolium castaneum* in flour mills (Committee member, Major advisor: Linda Mason, ENTM).

Adam Sayler, Ph.D. student (current). Research topic: Aggressive interaction between odorous house ant and other ant species (Committee member, Major advisor: Grzegorz Buckowski, ENTM).

Katie Duszynski, Ph.D. student (current). Research topic: Carbon sequestration benefits of conservation plantings and tallgrass prairie (Committee member, Major advisor: Helen Rowe, FNR).

Asya Ayrapetov, Ph.D. student (current). Research topic: The effects of climate variation on the pollination and reproductive of the spring woodland herb *Claytonia virginica* (Portulacaceae) (Committee member, Major advisor: Nancy Emory, BTNY).

Gina Angelella, Ph.D. student (current). Research topic: Aphid vectored virus transmission in pumpkin patches (Committee member, Major advisor: Ian Kaplan, ENTM).

Madeline Spigler, M.Sc. student (current). Research topic: *Orius insidiosus* in soybean (Committee member, Major advisor: Christian Krupke, ENTM).

Undergraduate students

Tabatha Carroll, B.Sc. student (2007). Capstone topic: Landscape influences on the diversity of Lepturinae (Coleoptera: Cerambycidae) in Indiana (Capstone advisor).

John Shukle, B.Sc. student (2007). Capstone topic: DNA bar-coding for analyzing phylogeny of native *Agrilus* species (Capstone advisor).

Kyle Schnepp, B.Sc. student (2009). Photographic dichotomous key for north-eastern U.S. *Agrilus* (Capstone advisor).

Alicia J. Kelley, B.Sc. student (2009). Insect biodiversity in remnant and restored tallgrass prairie (Research credit advisor).

Michael Skvarla, B.Sc. student (2009). Capstone topic: By-catch of Coleoptera on emerald ash borer (*Agrilus planipennis* Fairmaire) style purple traps (Capstone advisor).

Tommy Mager, B.Sc. student (2008 – current). BIOL research credit topic: Fragmentation effects on beetle predators of wood-borers (Research credit advisor).

Caitlin Race, B.Sc. student (2010). Capstone topic: Arthropod biodiversity on a green roof (Capstone advisor).

Brittany Kittle, B.Sc. student (2010-present). Capstone topic: Landscape influences on and detectability of *Typocerus v. velutinus*. (Capstone advisor).

Research Funding

Past Awards:

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1. Agency/Title of Grant: Parks Canada / Analytical software design
 2. Duration of Funding: Sept. 2002 – Apr. 2003
 3. Total amount of award: \$5,000
 4. Your role: Co-PI (with D. Bert)
 5. If Co-PI, for how much of the total funding are you directly responsible: \$5,000

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1. Agency/Title of Grant: ITaP Teaching Technology grant / Immersive ecological experience virtual reality simulation
 2. Duration of Funding: June 2005 – June 2006
 3. Total amount of award: \$15,000
 4. Your role: PI
 5. If Co-PI, for how much of the total funding are you directly responsible: N.A.

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1. Agency/Title of Grant: Purdue Agricultural Research Programs assistantship / Effects of land use patterns in agricultural landscapes on arthropod biodiversity
 2. Duration of Funding: Aug. 2005 – Aug. 2007
 3. Total amount of award: \$32,000
 4. Your role: PI
 5. If Co-PI, for how much of the total funding are you directly responsible: N.A.

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1. Agency/Title of Grant: Purdue Research Foundation graduate assistantship grant / Spatial scaling of cerambycids with landscape features
 2. Duration of Funding: June 2006 – May 2007
 3. Total amount of award: \$15,292
 4. Your role: PI

5. If Co-PI, for how much of the total funding are you directly responsible: N.A.

1. Agency/Title of Grant: Purdue Research Foundation summer faculty grant / Range dynamics of a hardwood-boring beetle
 2. Duration of Funding: May 2007 – Aug. 2007
 3. Total amount of award: \$7,000
 4. Your role: PI
 5. If Co-PI, for how much of the total funding are you directly responsible: N.A.
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1. Agency/Title of Grant: Purdue Agriculture mission-oriented grants / The ecological and socioeconomic impacts of forest management on public and private lands in Indiana.
 2. Duration of Funding: May 2008 – Dec. 2008
 3. Total amount of award: \$8,000
 4. Your role: Co-PI (with several in FNR)
 5. If Co-PI, for how much of the total funding are you directly responsible: \$2,500
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1. Agency/Title of Grant: Purdue Research Foundation graduate assistantship / A molecular phylogeny for longhorned beetle behavior
 2. Duration of Funding: June 2008 – May 2009
 3. Total amount of award: \$16,375
 4. Your role: PI (with V. Ferris)
 5. If Co-PI, for how much of the total funding are you directly responsible: \$16,375
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1. Agency/Title of Grant: Purdue Agriculture Mission-oriented / Molecular Tools to Predict Invasion Threat of Hardwood-borers in Indiana Forests
 2. Duration of Funding: One (1) year (2009)
 3. Total amount of award: \$23,700
 4. Your role: PI (with V. Ferris ENTM, L. Farlee FNR)
 5. If Co-PI, for how much of the total funding are you directly responsible: N.A.
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1. Agency/Title of Grant: World Trade Organization / Accessing New Ornamental Plant Markets by Reducing Phytosanitary Issues through Participatory Research and Extension: The Clean Stock Program
 2. Duration of Funding: One (1) year (2009)
 3. Total amount of award: \$30,000
 4. Your role: Co-PI (with T. Benjamin CATIE, C. Sadof ENTM, and others at CATIE and Purdue)
 5. If Co-PI, for how much of the total funding are you directly responsible: \$2,000
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Current Awards:

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1. Agency/Title of Grant: Indiana Dept. of Natural Resources, Forestry Division / Hardwood ecosystem experiment
 2. Duration of Funding: Mar. 2006 – Dec. 2012
 3. Total amount of award: \$714,000
 4. Your role: Co-PI (with many in FNR and elsewhere)
 5. If Co-PI, for how much of the total funding are you directly responsible: \$36,132
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1. Agency/Title of Grant: National Fish & Wildlife Federation Wildlife Links / Balancing Pest Management with Biodiversity Conservation on Golf Courses
 2. Duration of Funding: Two (2) years (2009-2011)
 3. Total amount of award: \$7,304
 4. Your role: PI (with D. Richmond ENTM)
 5. If Co-PI, for how much of the total funding are you directly responsible: N.A.
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1. Agency/Title of Grant: Entomological Society of America North Central Integrated Pest Management / IPM for White Grubs on Golf Courses: Clarifying Biological and Economic Trade-offs
 2. Duration of Funding: Two (2) years (2009-2011)
 3. Total amount of award: \$99,643
 4. Your role: Co-PI (with D. Richmond ENTM, T. Gibb ENTM, C. Alexander AGECE, C. Bigelow AGECE, R. Williamson U. Wisc.)
 5. If Co-PI, for how much of the total funding are you directly responsible: \$4,326 + incalculable interdisciplinary support
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1. Agency/Title of Grant: Purdue University / Sustaining Hardwood Ecosystems: Interdisciplinary Research on the Impacts of Modern Forest Management
 2. Duration of Funding: Two (2) years (2009-2011)
 3. Total amount of award: \$128,843
 4. Your role: Co-PI (with many in FNR)
 5. If Co-PI, for how much of the total funding are you directly responsible: Incalculable interdisciplinary support
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1. Agency/Title of Grant: Environmental Protection Agency / Enhancing Ecosystem Services From Agricultural Lands: Management, Quantification, and Developing Decision Support Tools
2. Duration of Funding: Four (4) years (2010 – 2014; not in total above)
3. Total amount of award: \$465,000

4. Your role: Co-PI (with H. Rowe FNR/C4E, J. Dukes FNR, B. Gramig AGECE)
5. If Co-PI, for how much of the total funding are you directly responsible: \$148,413

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1. Agency/Title of Grant: USDA / DNA barcoding for America's least wanted wood-borers
 2. Duration of Funding: 1 year (2010-2011)
 3. Total amount of award: \$87,000
 4. Your role: PI
 5. If Co-PI, for how much of the total funding are you directly responsible: N.A.

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1. Agency/Title of Grant: Indiana Academy of Science / DNA barcoding of Indiana's least wanted wood-borers
 2. Duration of Funding: 1 year (2010-2011)
 3. Total amount of award: \$1,800
 4. Your role: PI
 5. If Co-PI, for how much of the total funding are you directly responsible: N.A.

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1. Agency/Title of Grant: AFRI / Delivering on the promise of HIPVs: Manipulating Phytochemical Signals to Enhance Predation on Pests
 2. Duration of Funding: 1 year (2010-2011)
 3. Total amount of award: \$463,035
 4. Your role: Co-PI
 5. If Co-PI, for how much of the total funding are you directly responsible: \$18,331
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Professional Development

The 12 keys to success in grantwriting workshop	Fall 2004 (1/2 day)
Peer observation for teaching assessment	Fall 2004 (1/2 day)
News media Agriculture training	2005 (3 hours)
College teaching workshop series I	Spring 2005 (8 workshops)
Multi-cultural forum	Oct. 17-19, 2005
CITI training for human subjects research	Feb. 2006 (8 hours)
Graduate advisor orientation (Grad School)	Sept. 27, 2006 (3 hours)
USDA-CSREES grantsmanship workshop (Dallas, TX)	Oct. 17-18, 2006
Student group advisor orientation (Dean of Students)	Oct. 19, 2006 (3 hours)

TEACHING (Secondary area, 25% of appointment)**Courses Taught and Developed (Developed All Courses)**

Biodiversity, ENTM 320 (2 cr.)	Spring 2006
Biodiversity & Systematics, ENTM 692 M (1 cr.)	Fall 2006
Advanced Insect Ecology, ENTM 692 E (1 cr.)	Spring 2007
Biodiversity & Systematics, ENTM 692 M (1 cr.)	Fall 2007
Biodiversity, ENTM 320 (2 cr.)	Spring 2008
Advanced Insect Ecology, ENTM 692 E (1 cr.)	Spring 2008
Insect Biology, ENTM 692 (with J. Neal, 3 cr.)	Fall 2009
Biodiversity, ENTM 320 (2 cr.)	Spring 2010
Design, Analysis, and Presentation of Ent. Exp. (1 cr.)	Spring 2010
Insect Biology, ENTM 692 (3 cr.)	Fall 2010

Other Evidence of Teaching Excellence**Teaching Presentations**

Holland, J.D. An immersive ecological experience. ITaP Teaching and Learning Technology Conference, Purdue University. March 1-2, 2006.

Holland, J.D., S. Matei and N. Rauh. Virtual simulation – making learning more real and concrete. Invited presentation in ITaP Teaching and Learning Brownbag Series. Purdue University. October 24, 2006.

Editorial Duties

Associate Editor of Journal of Natural Resources and Life Sciences Education. Jan. 2007 – Jan. 2013

Featured in Newspaper Articles

Purdue Exponent article: 'Entomology course will use virtual simulations.' Sept. 20, 2005.

Purdue Exponent article: 'Professor uses Envision Center to stimulate, teach students.' July 14, 2006.

5. Quality of Teaching**Course evaluations** (University cafeteria ratings):

<u>Year (F/Sp)</u>	<u>Course</u>	<u>Students</u>	<u>Course Rating</u>	<u>Instr. Rating</u>
2006 (Sp)	ENTM 320	18	3.6 /5	3.6 /5
2006 (F)	ENTM 692M	6	4.3 /5	4.0 /5
2007 (Sp)	ENTM 692 E	6	4.5 /5	4.5 /5
2007 (F)	ENTM 692 M	6	4.5 /5	4.5 /5
2008 (Sp)	ENTM 692 E	14	4.1 /5	4.4 /5

2008 (Sp)	ENTM 320	15	4.5 /5	4.8 /5
2009 (F)	ENTM 602	6	5.0 /5(lab)	5.0 /5.0(lab)
2010 (Sp)	ENTM 692 In. Biol.	11	4.0 /5	3.9 /5
2010 (Sp)	ENTM 320	14	4.8 /5	4.8 /5
2010 (F)	ENTM 692 In. Biol	9	4.5(lab) 4.5 /5	4.8(lab) 4.9 /5

SERVICE

Department of Entomology

Presenter 4-H Entomological Science Workshop	summer 2005, 2006
Presenter Clinton County Farm Conservation Camp	summer 2005
BugBowl volunteer	April 2005, 2006, 2007
Search committee, Forest Entomologist	Oct. 2005 - Jan. 2006
Search committee, Forest Insect Identifier (2x)	Aug. 2005 - Aug. 2006
Day in the Department day camp presenter	Apr. 25, 2007
Grad Survival Skills presentation	Apr. 26, 2007
ESA debate team advisor	Apr. 2008 – Nov. 2008
Science on Six Legs: Insectaganza presenter	Oct. 13, 2009
Advisor, Thomas Say Society	2005 - present
Bug Bowl Organization Committee	2006 - present
Teaching & Curriculum Committee	Aug. 2007 - present
College of Agriculture Honors Committee	Aug. 2007 – present

Purdue University

Environmental Science program retreat	Oct. 1, 2004
Judge Sigma Xi graduate research awards competition	Feb. 18, 2009
Board of Directors, Purdue Interdisciplinary Center for Ecological Sustainability	2004 - present
Internal Executive Committee, Purdue Center for the Environment	2005 - present
Advisor, Natural Resources and Environmental Science program	2005 - present
University Senate	Aug. 2007 – Aug. 2010
Governing Committee, Environmental Science and Engineering program	Nov. 2010 – present

Discipline

Volunteer judge for student talks, Ent. Soc. Amer. 2006	Dec. 11, 2006
NCB-ESA student award panel	February 2010, 2011

Community Service and Involvement

Lab helped with search for missing Purdue student with GPS	Feb. 3, 2007
Helped with Christmas toy drive with undergraduate student org.	Dec. 2006-09
Mentoring local high school students summer research	Summer 2007 - 09
Led research team at Dunes State Park Nat. Geogr. Soc. Bioblitz	May 15-16, 2009
Led research team at Brown County State Park Bioblitz	June 5-6, 2009

Lab conducted winter owl surveys for HEE outreach project
Led research team at Brown County State Park Bioblitz
Led research teams at IAS Goose Pond Biodiversity Survey

2009 - 2010
June 5-6, 2010
July 16-17, 2010