

Douglas A. Landis

EDUCATION

Ph.D.	North Carolina State University	1987	Entomology
MS	North Carolina State University	1984	Entomology
BA	Goshen College	1981	Biology

PROFESSIONAL EXPERIENCE

2/20-present	Director, Great Lakes Bioenergy Research Center MSU Business Operations
7/00-present	University Distinguished Professor, Insect Ecology and Biological Control, Michigan State University, Department of Entomology. Ecology and Evolutionary Biology Program
5/13 - 7/14	Interim Chairperson, MSU Department of Entomology
11/09-present	MSU Asian Studies, Core Faculty
1/08-present	Biodiversity Team Leader, Great Lakes Bioenergy Research Center
1/05 to 2008	Co-Director MSU Invasive Species Initiative
1/98 to 1/03	Biological Control Program Co-Coordinator, Michigan State University
12/00 to 1/03	Associate Director, Center for Integrated Plant Systems, Michigan State University
9/96 to 7/00	Associate Professor: Insect Ecology and Biological Control, Michigan State University, Department of Entomology and Center for Integrated Plant Systems. Ecology and Evolutionary Biology Program
7/94 to 9/96	Associate Professor: Field Crop Entomology, Michigan State University, Department of Entomology and Pesticide Research Center, Ecology and Evolutionary Biology Program
3/88 to 7/94	Assistant Professor: Field Crops Entomology, Michigan State University, Department of Entomology and Pesticide Research Center
5/87 to 3/88	Postdoctoral Research Fellow: North Carolina State University, Dr. F. Gould
1/87 to 5/87	Visiting Assistant Professor: Duke University
1/84 to 12/86	Graduate Research Assistant: North Carolina State University, Department of Entomology
9/81 to 12/83	Graduate Research Assistant: North Carolina State University, Department of Entomology
9/81 to 5/82	Graduate Teaching Assistant: North Carolina State University, Interdepartmental Biological Sciences Program

HONORS and AWARDS

2020	Fellow, American Association for the Advancement of Science
2020	Basic and Applied Ecology, most-cited review paper award in 2020
2018	International IPM Award of Excellence. North Central Soybean Entomology Research and Extension Team award. 9 th International IPM Symposium.
2017	University Distinguished Professor, Michigan State University
2017	Distinguished Scientist Award, International Organization for Biological Control, Nearctic Regional Section (IOBC-NRS)
2016	Fellow of the Entomological Society of America
2013	Outstanding Alumnus Award. North Carolina State University, College of Agriculture and Life Sciences
2013	MSU Distinguished Faculty Award
2010	Two "Top Cited Article" awards in the journal Biological Control 2008-2010
2009	Meridian Township Environmental Stewardship Award

- 2008 Recognition Award in Entomology, Entomological Society of America, National and North Central Branch-level recipient
- 2007 Educational Project Award for: *Enhancing Beneficial Insects with Native Plants*. Board Certified Entomologists of Mid-America
- 2001 Entomology Educational Project Award for *Natural Enemies in Your Garden*. Board Certified Entomologists of Mid-America
- 2000 Purple Loosestrife Project included in CSREES Natural Resource and Environmental Management, Flagship Programs Database (one of two Michigan projects nominated)
- 1999 Youth Education/Community Outreach Project Award for *The Purple Loosestrife Project at Michigan State University*. Board Certified Entomologists of Mid-America
- 1998 Meridian Township Environmental Commission, Environmental Stewardship Award for the Purple Loosestrife Project at MSU
- 1996 Entomology Educational Project Award for *Midwest Biological Control News*. Board Certified Entomologists of Mid-America
- 1986 NC State Linnaean Games Team. National Competition Second Place
- 1985 NC State Linnaean Games Team. Southeastern Branch Champions
- 1983-4 E.G. Moss Fellowship in Tobacco Research
- 1983 Elected to Phi Kappa Phi
- 1982 Outstanding Graduate Teaching Assistant, Biological Sciences

SYNERGISTIC ACTIVITIES

- 2020- KBS LTAR, Steering Committee, Design Team Committee
- 2020 Great Lakes Bioenergy Center, Exploratory Committee
- 2019- Editorial Board of the Journal, Current Opinion in Insect Science
- 2019-21 Associate Editor, Basic and Applied Ecology
- 2018-20 Scientific Advisory Board Member, Center for Advanced Bioenergy & Bioproducts Innovation
- 2018 Environmental Risk Assessment of Generalist Biocontrol Agents Working Group. (invited participant)
- 2017 Workshop: Contrasting experimental findings of biodiversity services with real-world patterns. Georg-August University, Göttingen, Germany. (invited participant)
- 2016-19 External Advisor, “Tipping Points” project, Dutch National Science Foundation.
- 2015 Great Lakes Bioenergy Center, Frontiers Working Group
- 2015 EcoIntensive Agriculture Workshop. Netherlands Institute for Ecology – Royal Netherlands Academy of Arts and Sciences (invited participant)
- 2013-16 External Advisor, “Biodiversity Works” project, Dutch National Science Foundation.
- 2011 National Academies Keck Futures Initiative on Ecosystem Services (invited participant)
- 2009-12 Associate Editor, Journal of Applied Ecology
- 2004- Editorial Board, Entomologia Experimentalis et Applicata
- 2004-21 Editorial Board, Biological Control
- 2002 Michigan Nature Conservancy, Science Advisory panel
- 2002-5 Associate Editor, BioControl, Journal of the International Organization for Biological Control
- 2002 Visiting Fellow, Department of Natural Resources and Environment, Victoria, Australia

PROFESSIONAL ORGANIZATIONS

American Association for the Advancement of Science
 Ecological Society of America
 Entomological Society of America
 International Organization for Biological Control
 Michigan Entomological Society

INVITED PRESENTATIONS (past five years)

125. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. D. Landis. Wageningen University Evolution and Ecology Seminar series. Wageningen, The Netherlands. Feb 19, 2015.
126. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. DA Landis. University of Wyoming. Ecosystem Science and Management Seminar series. Laramie, WY. Mar. 27, 2015.
127. A Long-term Perspective on Insect Biodiversity and Ecosystem Services in Agricultural Landscapes. D.A. Landis. KBS LTER Symposium, Farming for Ecosystem Services: New Directions or Long-term Ecological Research in Agriculture. East Lansing, MI. April 16, 2015.
128. What makes for good research? Invited panelist, Iowa State University Graduate Program in Sustainable Agriculture colloquium. Sept. 22, 2015.
129. Managing Agricultural Landscapes for Insect-Mediated Ecosystem Services. University of Wisconsin-Madison. Joint meeting of Gratton, Jackson and Kucharik labs. Oct. 1, 2015
130. Managing Agricultural Landscapes for Insect-Mediated Ecosystem Services. D.A. Landis. Section Symposium: Insect-Mediated Ecosystem Services: Enhancing Interactions with our Beneficial Partners. Entomological Society of America National Meeting. Minneapolis, MN. November 17, 2015.
131. Designing Agricultural Landscapes for Multiple Ecosystem Services. D. Landis. University of Manitoba, Entomology Seminar series. Winnipeg, Manitoba. December 7, 2016.
132. Designing Agricultural Landscapes for Multiple Ecosystem Services. D. Landis. Cornell University Entomology Seminar series. Ithaca, NY. April 13, 2016.
133. Insecticide-Mediated Regime Shifts in Aphid-Ladybeetle Population Dynamics in the USA. DA Landis, CB Bahlai, W vanderWerf, M O'Neal, L Heimerik. Tipping Points in Pest Management Workshop. Wageningen, the Netherlands Sept. 13-16, 2016.
134. Designing Landscapes for Multiple Services. DA Landis. XXV International Congress of Entomology. Orlando, Florida September 25-30, 2016.
135. The Interface of Landscape Ecology and Biological Control. Lecture on receipt of the 2017 IOBC-NRS Distinguished Scientist Award. IOBC-NRS meeting in conjunction with the 2017 ESA National Meeting, Denver, Colorado. November 7, 2017.
136. Designing Agricultural Landscapes for Multiple Ecosystem Services. DA Landis. Perry Adkisson Distinguished Lecturer. Texas A&M University, Department of Entomology. April 5, 2018.
137. Designing Agricultural Landscapes for Biodiversity-Based Ecosystem Services. Plenary Speaker. 10th Congreso Argentino de Entomología 2018. Mendoza, Argentina. May 21-14.
138. Designing Agricultural Landscapes for Multiple Ecosystem Services. D. Landis. Keynote for symposium on: Arthropod-Mediated Ecosystem Services in Agriculture. European Congress of Entomology. Naples Italy. July 5, 2018,
139. Reverse Engineering Habitat Management to Enhance Survival of the Monarch Butterfly (*Danaus plexippus*) at Landscape Scales. DA Landis, N Haan, A Myers, S Herman, C Blackledge. Invited speaker in Symposium on Crossing New Frontiers in Conservation Biological Control. ESA National Meeting, Vancouver, BC Canada. November 14, 2018.
140. Designing Agricultural Landscapes for Multiple Ecosystem Services. Department of Entomology, The Ohio State University, Columbus. OH February, 20, 2019.

141. Biodiversity modeling: Impact of landscape metrics on pest suppression in bioenergy landscapes. DA Landis, Y. Zhang, N. Haan. DOE Bioenergy Research Center Joint Modeling Workshop, Chicago IL. May 2-3, 2019
142. Biodiversity modeling: Impact of landscape metrics on pest suppression in bioenergy landscapes. Landis, D.A., Zhang, Y., and Haan, N.L. GLBRC 2019 Environmental Sustainability Meeting. W.K. Kellogg Biological Station, Hickory Corners, MI. 9/30/2019.
143. Conserving Insects in Agricultural Landscapes: Managing disturbance regimes to support natural enemies, pollinators, and monarch butterfly. DA Landis, N Haan, S Herman, A Myers. Invited speaker in Symposium on Defying the Decline. ESA National Meeting, St. Louis, MO. November 17, 2019.
144. Conserving Biodiversity in Intensified Agricultural landscapes. DA Landis. University of Michigan, Conservation Ecology Seminar Series. 4/10/20 (delivered remotely to 53 participants during Covid-19 shut down).
145. Regrowing Milkweed for Monarchs: Strategic disturbance enhances monarch oviposition and survival. Douglas Landis, Nathan Haan. Invited speaker in Symposium on Designing Ecosystems for Insects, Humans and Other Species of Interest. ESA National Meeting virtual, 260 participants. November 16, 2020.
146. Designing Agricultural Landscapes for Biodiversity and Ecosystem Services. Keynote address. Landscape 2021: Diversity for Resilient and Sustainable Agriculture. Online conference organized by Leibniz Centre for Agricultural Landscape Research (ZALF), Berlin, Germany. September 20-22, 2021.

PAPERS/POSTERS/SEMINARS (past five years)

180. Insectary Plants to Enhance Beneficial Insects: Expanding the Palette to Increase Options for Sustainable Crop Production in the NC Region. DA Landis, **J Perrone**, R Isaacs, J Landis, L Brudvig, A Groves. The Stewardship Network Conference: The Science, Practice and Art of Restoring Native Ecosystems. East Lansing, MI. January 23-24, 2015. (poster)
181. Evaluating the Impact of Winter Cover Crops on Predator Diversity and Biocontrol Services in Continuous Corn Biofuel Cropping Systems. AF Fox, TN Kim, C Gratton, JM Woltz, and **DA Landis**. Great Lake Bioenergy Research Center Sustainability Retreat. Kellogg Biological Station. February 10, 2015. (poster)
182. Cover Crops and Biological Control. AF Fox, TN Kim, C Gratton, JM Woltz, and **DA Landis**. Great Lake Bioenergy Research Center Retreat. South Bend, IN. May 20, 2015.
183. The Role of Ants in Managed Grasslands. **BD Wills**, and DA Landis. Great Lakes Bioenergy Research Center Science Retreat. South Bend, IN. May 19-21, 2015. (poster)
184. Impact of Switchgrass (*Panicum virgatum*) Cultivar and Cropping System on Insect Communities and Biological Control Services. **Schuh, M.** and D. Landis. North Central Branch Meeting of the Entomological Society of America, Manhattan, KS. June 3, 2015.
185. Exploiting the Landscape of Fear as an Insect Control Tactic. **Hermann SL**, Bahlai CA and Landis DA. 2015 All-Scientist Meeting- NSF Long-Term Ecological Research Network. Estes Park, CO. August 2015. (poster)

186. Dual Regime Shifts in Dynamics of an Invasive Predator are Linked to the Invasion and Insecticidal Control of its Prey. **Bahlai, C.A.**, W. van der Werf, M.E. O'Neal, L. Hemerik, and D.A. Landis. Long Term Ecological Research All Scientists Meeting. Estes Park, CO, Aug 30-Sept. 3, 2015 (poster)
187. Evaluation of Michigan Native Plants and 'Bee Keeper Picks' for Pollinators in Michigan. **Logan Rowe**, Rufus Isaacs, Daniel Gibson, Julia Perrone and Doug Landis. Poster presentation at the Protecting Pollinators in Ornamental Landscapes Conference. Hendersonville, NC. October 12-14, 2015. (poster)
188. Evaluation of Michigan Native Plants and 'Bee Keeper Picks' for Pollinators in Michigan. **Logan Rowe**, Rufus Isaacs, Daniel Gibson, Julia Perrone and Doug Landis. Poster presentation Entomological Society of America National Meeting. Minneapolis, MI November 15-18, 2015. (poster)
189. Exploring the Landscape of Fear: the role of non-lethal predator effects in manipulating *Pieris rapae*. **Hermann SL**, Bahlai CA, Landis DA. Entomological Society of America National Meeting. Minneapolis, MN. November 16, 2015. (awarded second place in student competition)
190. Enhancing Arthropod-Mediated Ecosystem Services Using Plants Native to Dry Sandy Soils in Michigan. **DR Gibson** and DA Landis. Entomological Society of America National Meeting. Minneapolis, MN. November 16, 2015.
191. Impact of Switchgrass (*Panicum virgatum*) Cultivar and Cropping System on Insect Communities and Biological Control Services. **Schuh, M.** and D. Landis. Entomological Society of America National Meeting. Minneapolis, MN. November 16, 2015.
192. Evaluating Native Plants to Enhance Beneficial Insects for Sustainable Crop Production in Michigan. **DR Gibson, L Rowe**, R Isaacs, DA Landis, and J Perrone. Great Lakes Fruit, Vegetable, and Farm Market Expo. Grand Rapids, MI. December 9, 2015. (poster)
193. Oak Savanna Restoration by Prescribed Fire and Overstory Thinning. **L. Brudvig** and DA Landis. The Stewardship Network Conference: the Science, Practice and Art of Restoring Native Ecosystems. East Lansing, MI. January 15-16, 2016.
194. Ants in Restored Grasslands. **BD Wills** and DA Landis. The Stewardship Network Conference: the Science, Practice and Art of Restoring Native Ecosystems. East Lansing, MI. January 15-16, 2016. (poster)
195. Evaluation of Michigan Native Plants and 'Bee Keeper Picks' for Pollinators in Michigan. **Logan Rowe**, Rufus Isaacs, Daniel Gibson, Julia Perrone and Doug Landis. Poster presentation at the Great Lakes Stewardship Network Conference. East Lansing, MI. January 15-16, 2016. (poster) *student competition award winner.
196. Integrating Agriculture and Prairie Restoration: Native Wildflowers to Support Natural Enemies of Crop Pests. **DR Gibson**, L Rowe, J Perrone, R Isaacs, and DA Landis. Stewardship Network Science Practice & Art of Restoring Native Ecosystems. East Lansing, MI. January 15-16, 2016. (poster)
197. Impact of Switchgrass (*Panicum virgatum*) Cultivar and Cropping System on Insect Communities and Biological Control Services. **Schuh, M.** and D. Landis. Stewardship Network Science Practice & Art of Restoring Native Ecosystems. East Lansing, MI. January 15-16, 2016. (poster)
198. Conservation Lands and Beneficial Arthropods in Agricultural Landscapes. **PC Charland** and D. Landis. Stewardship Network Science Practice & Art of Restoring Native Ecosystems. East Lansing, MI. January 15-16, 2016. (poster)

199. Exploiting the Landscape of Fear as an Insect Control Tactic. **Hermann SL**, Bahlai CA and Landis DA. Gordon Research Conference: Predator-Prey Interactions. Ventura Beach, CA. January 2016. (poster)
200. Virus Accumulation in a Native Perennial Prairie Grass Under Development as a Bioenergy Feedstock. **Bernardo, P.**, Bahlai, C., Bigelow, P., Busch, A., Cole, E., Landis, D., Nicholoff, K, Perrone, J., Schuh, M., Stelzner, L., Trębicki, P., Valice, E., VanDamme, M, Wood, A., and Malmstrom, C. M. 13th International Plant Virus Epidemiology Symposium, Avignon, France. June 6-10, 2016.
201. Prioritizing Spatial Investment in Pollinator Conservation Practices in Farmland. **Yajun Zhang**, Jason Gibbs, Meghan Milbrath, Doug Landis, and Rufus Isaacs. NCB-ESA meeting, Cleveland, OH. June 7, 2016.
202. Identifying Native Plants to Enhance Pollination Services for Sustainable Crop Production in Michigan. **Logan Rowe**, Dan Gibson, Douglas Landis, and Rufus Isaacs. XXV International Congress of Entomology. Orlando, Florida September 25-30, 2016.
203. Native Perennial Plants to Attract Natural Enemies. **Dan Gibson** and Douglas Landis. XXV International Congress of Entomology. Orlando, Florida September 25-30, 2016.
204. Prioritizing Spatial Investment in Pollinator Conservation Practices in Farmland to Support Crop Pollination and Honey Bee Health. **Yajun Zhang**. Jason Gibbs, Meghan Milbrath, Douglas Landis and Rufus Isaacs. XXV International Congress of Entomology. Orlando, Florida September 25-30, 2016.
205. Habitat Influences on Monarch (*Danaus plexippus*) Oviposition Rates and Survival of Eggs and Larvae. **Andrew Myers** and Douglas Landis. XXV International Congress of Entomology. Orlando, Florida September 25-30, 2016.
206. Opportunities for enhancing ecosystem services in Tajikistan agriculture. **Nurali Saidov**, Douglas Landis and Anvar Jalilov. XXV International Congress of Entomology. Orlando, Florida September 25-30, 2016.
207. Challenges and Opportunities for Wheat IPM in Central Asia. **Mustapha El Bohssini**, Douglas Landis, Nurali Saidov, Anvar Jalilov, Megan Kennelly, and Ram Scharma. XXV International Congress of Entomology. Orlando, Florida September 25-30, 2016.
208. Michigan native plants to attract beneficial natural enemies in agriculture. **DR Gibson**, L Rowe, R Isaacs, and DA Landis. Stewardship Network Science Practice & Art of Restoring Native Ecosystems. January 13-14, 2017. East Lansing, MI. (poster)
209. Variation in Plant Attractiveness to Pollinators in 3 Regions of Michigan. **Logan Rowe**, Daniel Gibson, Rufus Isaacs, Douglas Landis. The Science, Practice, and Art of Restoring Native Ecosystems. East Lansing, MI, January 13-14, 2017. (poster)
210. Conservation Lands and Beneficial Arthropods in Agricultural Landscapes. **PC Charland** and D. Landis. The Science of Conservation 2017. LaCrosse, WI. January 23-27, 2017. (poster)
211. Integrating agriculture and ecological restoration: Native wildflowers can support natural pest suppression. **DR Gibson**, L Rowe, R Isaacs, and DA Landis. Society for Ecological Restoration MWGL Chapter Meeting. March 24-26, 2017. Grand Rapids, MI.
212. The Ecology of Fear: Understanding how the threat of predation influences insect prey. **Sara Hermann** & Douglas Landis. Entomology Seminar Series, The Pennsylvania State University, College Station, PA. April 2017. (invited presentation)

213. Effects of prescribed fire and thinning during Midwestern oak savanna restoration. **Bassett, T.**, L. Brudvig, DA. Landis. 2017 Natural Ares Conference, Fort Collins, CO. October 10-12, 2017.
214. Plant selection to support pollinators and natural enemies in Michigan farm landscapes and beyond. **Logan Rowe**, Dan Gibson, Doug Landis, Rufus Isaacs. Entomological Society of America. Denver, Colorado, November 5-8th, 2017. (invited presentation)
215. Effects of habitat on monarch butterfly (*Danaus plexippus*) oviposition and egg and larvae survival. **Myers, Andrew T.**, CA Bahlai, DA Landis. Entomological Society of America Meeting, Student Competition, Denver, CO. November 8, 2017.
216. The Ecology of Fear: Understanding how the threat of predation influences insect prey. **Sara Hermann** & Douglas Landis. Entomological Society of America. Denver, Colorado, November 5-8, 2017.
217. Ant Suppression Reduced Biological Control Potential in Grasslands. **Bill D. Wills**, Tania N. Kim, Claudio Gratton, and Douglas A. Landis. Entomological Society of America. Denver, Colorado, November 5-8, 2017.
218. Enhancing Great Lakes Landscapes for Healthy Pollinators. **Rufus Isaacs**, Doug Landis, Meghan Milbrath, Larry Gut, Zsofia Szendrei, Julianna Wilson, Angie Zhang, Kelsey Graham, Thomas Wood, Jacquelyn Albert, Amos Ziegler, Julia Perrone, and Jason Gibbs. USDA NIFI Investigators Meeting November 2017. (poster)
219. Habitat management to support beneficial insects: selecting the right plant species. **Logan Rowe**, Daniel Gibson, Douglas Landis, Rufus Isaacs. The Science, Practice, and Art of Restoring Native Ecosystems. East Lansing, MI, January 12-13, 2018. (presentation)
220. The Ecology of Insect Fear: Understanding how the threat of predation impacts insect prey. **Sara Hermann** & Douglas Landis. Gordon Research Conference on Predator-Prey Interactions. Ventura, CA. Jan. 28- Feb. 2, 2018. (poster)
221. Altering Disturbance Regimes to Enhance Monarch Survival at Landscape-Scales. **Douglas Landis**, Andrew Myers, Nathan Haan. In symposium entitled: Monarch butterfly (*Danaus plexippus*) conservation in the north central states: Challenges and opportunities. Entomological Society of America North Central Branch Meeting, Madison WI. Mar. 18-21, 2018.
222. Arthropod natural enemies of monarch butterfly (*Danaus plexippus*) eggs and neonates in central Michigan. **Carissa Blackledge**, Doug Landis, Sara Hermann. Entomological Society of America North Central Branch Meeting, Madison WI. Mar. 18-21, 2018. (poster)
223. Arthropod natural enemies of monarch butterfly (*Danaus plexippus*) eggs and neonates in central Michigan. **Carissa Blackledge**, Doug Landis, Sara Hermann. MSU University Undergraduate Research and Arts Forum (UURAF), April 13, 2018. East Lansing, MI
224. Variable monarch butterfly (*Danaus plexippus* L.) oviposition and survival in agroecosystems. **Andrew Myers**, Christie Bahlai, and Douglas Landis. Michigan State University Ecology, Evolutionary Biology, and Behavior Program Research Symposium. April 30, 2018. (poster).
225. Altering disturbance regimes for monarch butterfly conservation. **Nathan Haan**, Andrew Myers and Douglas Landis. Ecological Society of America Annual Meeting, New Orleans, LA. August 7, 2018

226. Flying into the Face of Fear: Predator cues influence aphid development and behavior. **Sara Hermann** & Douglas Landis. International Society of Chemical Ecology. Budapest, Hungary. Aug. 12-17, 2018.
227. Effects of predation risk on insect behavior and physiology. **Sara Hermann** & Douglas Landis. Entomology Society of America Annual Meeting. Vancouver, Canada. Nov. 11-14, 2018.
228. Altering disturbance regimes for monarch butterfly conservation. **Nathan Haan** and Douglas Landis. Entomological Society of America Annual Meeting, Vancouver, British Columbia. November 14, 2018.
229. Determining the role of ants as monarch butterfly (*Danaus plexippus* L.) egg predators in Michigan grasslands using exclusion experiments and camera monitoring. **Andrew Myers** and Douglas Landis. Entomological Society of America, Entomological Society of Canada, and Entomological Society of British Columbia Joint Meeting. Student Competition, Vancouver, BC. November 11–14, 2018.
230. Altering disturbance regimes for monarch butterfly conservation. Nathan Haan and **Douglas Landis**. The Science, Practice and Art of Restoring Native Ecosystems, East Lansing, MI. Jan. 11-12, 2019. (poster).
231. Variable monarch butterfly (*Danaus plexippus* L.) oviposition and survival in agroecosystems. **Andrew Myers**, Christie Bahlai, and Douglas Landis. The Science, Practice and Art of Restoring Native Ecosystems, East Lansing, MI. Jan. 11-12, 2019. (poster).
232. Harnessing anti-predator behavioral responses to manage insect pests. **Hermann, S.L.** & Landis D.A. North Central Branch Meeting of the Entomology Society of America. Cincinnati, Ohio. March 2019.
233. Predicting effects of landscape configuration on pest suppression in future bioenergy landscapes. **Haan, N.L.**, Zhang, Y., and Landis, D.A. GLBRC 2019 Annual Science Meeting. Lake Geneva, WI. 5/21/2019. (poster)
234. Scale-dependent effects of landscape composition and configuration on pest suppression in agroecosystems. **Zhang, Y.**, Haan, N.L., and Landis D.A. GLBRC 2019 Annual Science Meeting. Lake Geneva, WI. 5/22/2019. (poster)
235. Influences of Bioenergy Cropping System Identity and Management on Microarthropod Communities. **Allison Zahorec**, Doug Landis, Lisa Tiemann. The Soil Ecology Society Biennial Meeting. May 28-31, 2019. Toledo, OH (poster).
236. Risk Management: consequences of predation risk on behavior, physiology and fitness. **Hermann, S.L.** & Landis, D.A. International Society of Chemical Ecology. Atlanta, Georgia, June 2019.
237. Monarch butterfly conservation: the importance of predation and ecological disturbance. **Haan, N.L.**, A.T. Myers, S.L. Hermann, and D.A. Landis. Ecological Society of America Annual Meeting, Louisville, KY (August 15)
238. Agricultural intensification: impacts on microarthropod communities. **Allison Zahorec** and Douglas Landis. The Kellogg Biological Station LTER All Scientists Meeting, Hickory Corners, MI. Sept. 19, 2019. (poster).
239. Landscape configuration and composition influence pest suppression in a scale-dependent fashion. **Zhang, Y.**, Haan, N.L., and Landis, D.A. GLBRC 2019 Environmental Sustainability Meeting. W.K. Kellogg Biological Station, Hickory Corners, MI. 9/30/2019. (poster)

240. Predicting landscape configuration effects on agricultural pest suppression. **Haan, N.L.**, Zhang, Y., and Landis, D.A. GLBRC 2019 Environmental Sustainability Meeting. W.K. Kellogg Biological Station, Hickory Corners, MI. 9/30/2019. (poster)
241. Monarch butterfly conservation. **Haan, N.L.**, and D.A. Landis. Natural and Applied Sciences Seminar. University of Wisconsin, Green Bay. October 25, 2019
242. Influences of bioenergy cropping system identity and management on microarthropod communities. **A Zahorec**, L Tiemann and DA Landis. ESA National Meeting, St. Louis, MO. November 18, 2019
243. The effects of grassland reintegration on ant community structure and pest control services. **B Wills** and DA Landis. ESA National Meeting, St. Louis, MO. November 19, 2019.
244. Predation, disturbance, and monarch butterfly conservation. **N Haan**, A Myers, S Hermann and DA Landis. Invited speaker P-IE Section Symposium: Using Integrated Observational, Mechanistic, and Experimental Research Approaches to Drive Conservation Decisions: Lessons from Butterfly Species in Peril. ESA National Meeting, St. Louis, MO. November 19, 2019.
245. Scale-dependent effects of landscape composition and configuration on pest suppression in agroecosystems. **Y Zhang**, N Haan and DA Landis. ESA National Meeting, St. Louis, MO. November 20, 2019. (virtual poster).
246. Tri-trophic interactions alter above- and belowground switchgrass productivity and associated arbuscular mycorrhizal fungi growth. **Matthew L. Reid**, Amanda L. Lietz, Douglas A. Landis, Lisa K. Tiemann. Ecol. Soc. Am National Meeting Salt Lake City, UT Aug 2-7, 2020.
247. Landscape composition and configuration influence the natural pest control services in rice agroecosystems.. Md Panna Ali, C Gemma-Orta, MMM Kabir, SS Haque Meri Biswas, DA Landis. ESA National Meeting virtual, November 11-25, 2020.
248. Exploring bioenergy cropping system effects on microarthropod communities. **A Zahorec**, L. Tiemann, DA Landis. In Symposium Insects in Soils: Peering into the Black Box. ESA National Meeting virtual, November 11-25, 2020.
249. Grasslands in agriculture and their potential to support a resilient landscape. **BD Wills**, DA Landis, C Gratton, T Kim. PIE Section Symposium; Insect Pests and Beneficial Arthropods in Climate-Change-Resilient Diversified Cropping Systems. ESA National Meeting virtual, November 19, 2020.
250. The Value of Long-Term Data: Lessons from 30+ years of Coccinellid data from the KBS LTER. **DA Landis**, C. Bahlai, SH. Gage* 2021 KBS LTER All Scientists Meeting, 9/23/21. Hickory Corners, MI (*deceased June 19, 2019)

PUBLICATIONS

Citation metrics as of 2/10/2020 Web of Science. N=162 articles, H-index=51, 9 highly cited* (“top 1% of its academic field”), 2019 citations = 1237. Sum of times cited w/o self-citations=9,199, Average citations per article=52.1, Maximum citations per article=1,591 for Landis, Wratten and Gurr 2000 Ann. Rev. Entomol.

Peer-Reviewed Journals

1. Farrar, R.R. Jr., and D.A. Landis. 1985. An evaluation of a portable geiger counter to trace radiolabeled *Heliothis zea* (Boddie) (Lepidoptera: Noctuidae) larvae in corn and cotton. J. Entomol. Sci. 20: 62-65.

2. Landis, D.A., J.R. Bradley, Jr., and F. Gould. 1987. Behavior and survival of *Heliothis zea* (Lepidoptera; Noctuidae) Prepupae in no-tillage and conventional tillage corn. *Environ. Entomol.* 16: 94-99.
3. Landis, D.A., and F. Gould. 1988. A screening program to detect feeding deterrents for protection of corn seeds/seedlings from southern corn rootworm feeding damage. *J. Entomol. Sci.* 23(3): 201-211.
4. Landis, D.A., 1988. Response of corn seedlings to simulated southern corn rootworm (Coleoptera: Chrysomelidae) feeding damage. *J. Econ. Entomol.* 81(4): 1209-1213.
5. Landis, D.A., 1989. A technique for artificially infesting field plots with southern corn rootworm larvae (Coleoptera: Chrysomelidae). *J. Agric. Entomol.* 6(2): 119-126.
6. Landis, D.A., and F. Gould. 1989 Investigation of the mode(s) of action of several feeding deterrents against the southern corn rootworm, using behavioral bioassays and toxicity testing. *Entomol. Exp. Appl.* 51: 163-174.
7. Gould, F., A. Anderson, D. Landis, and H. Van. Mellaert. 1991. Feeding behavior and growth of *Heliothis virescens* larvae on diets containing *Bacillus thuringiensis* formulations or endotoxins. *Entomol. Exp. Appl.* 58: 199-210.
8. Carlson, J.D., M. E. Whalon, D.A. Landis, and S.H. Gage. 1992. Springtime weather patterns coincident with long distance migration of potato leafhopper into Michigan. *Agric. and Forest. Meteorology.* 59:183-206.
9. Landis, D.A., and M. Haas. 1992. Influence of landscape structure on abundance and within-field distribution of *Ostrinia nubilalis* Hubner (Lepidoptera: Pyralidae) larval parasitoids in Michigan. *Environ. Entomol.* 21: 409-416.
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In Preparation:

Rowe, L, D. Gibson, J. Gibbs, D Landis, R Isaacs. A dataset consisting of plant traits, bee species and their visitation rates to native Michigan wildflowers. *Ecological Archives*. In Prep.

Herman, S and DA Landis. Predator cues have limited impact on *Pieris rapae* oviposition and larval growth. In Prep.

Publication-associated Data sets

1. Blossey, Bernd et al. (2021), Data on long-term demographic information for *Alliaria petiolata* in eastern North America, Dryad, Dataset, <https://doi.org/10.5061/dryad.mpg4f4qxb>

Book Chapters and Entries

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7. Haas, M.J. and D.A. Landis. 1999. Cereal leaf beetle. p. 56. *In*. Steffey et. al (eds.) Handbook of Corn Insects. Entomological Society of America.
8. Orr, D.B., C. Garcia-Salazar, and D.A. Landis. 2000. *Trichogramma* non-target impacts: a method for biological control risk assessment. pp. 111-125. *In*. P.A. Follett and J.J. Duan (eds.) Nontarget effects of insect biological control, Kluwer Academic Publishers, Boston.
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49. Caroline E. Ridley, Henriette I. Jager, Christopher M. Clark, Rebecca A. Efroymson, Charles Kwit, Douglas A. Landis, Zakiya H. Leggett, and Darren A. Miller 2013. Debate: Can Bioenergy Be Produced in a Sustainable Manner That Protects Biodiversity and Avoids the Risk of Invaders? Bulletin of the Ecological Society of America 94:277–290. <http://dx.doi.org/10.1890/0012-9623-94.3.277>
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Other Miscellaneous Publications (past five years)

161. GLBRC Frontiers Working Group, F. Brandizzi, A.P. Gasch, S. Hamilton, G. Huber, D. Landis, R. Last, S. Mansfield, C. Maravelias, D.R. Noguera, M.G. Thomas. Final Report to Management Team. May, 2015. 46 pp.
162. Supporting beneficial insect on your farm or garden. Douglas Landis and Rufus Isaacs, MSU Entomology. MSUE News June 7, 2016
163. Discover best plants to support beneficial insects at upcoming field day. Doug Landis and Rufus Isaacs, MSU Entomology. MSUE News July 12, 2016
164. Why so few monarchs this season? Doug Landis, David Mota-Sanchez, MSU Entomology Duke Elsner, MSU Extension. MSUE News July 26, 2016
165. Guidelines for Future Biofuel Crops. Landis DA, Schemske DW, Dale BE, Gratton C, Hamilton SK, Izaurrealde RC, et al. Sustainability GLBRC A4 White Paper. 2016. 7pp. <https://lter.kbs.msu.edu/pub/3574>
166. Monarch butterfly 2017 update in Michigan. Douglas Landis, MSU Entomology. MSU Extension. MSUE News. October 5, 2017.

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Program Coverage (past five years)

98. Exotic ladybeetles displace native species. KBS “Key Finding” in 2014 NSF LTER Annual Report, published 2015 LTER Network Office.
99. New research on beneficial insects with native plants: An interview with Dr. Doug Landis. 30 min. podcast by Kim Eireman, EcoBeneficial. <http://www.ecobeneficial.com/videos/interview-dr-doug-landis-research-beneficial-insects/> first aired 2016.
100. Natural enemies with Dan Gibson of the Landis Lab. 30 min. podcast by Kim Eireman, EcoBeneficial. <http://www.ecobeneficial.com/videos/natural-enemies-with-dan-gibson-of-the-landis-lab/> first aired 2016.
101. Tajikistan: Integrated pest management brings better agriculture. MSU AgBioResearch Futures Fall/Winter 2016 pp. 24-27. http://agbioresearch.msu.edu/news/tajikistan_integrated_pest_management_brings_better_agriculture
102. Cover Crops and Pest Suppression in Annual Maize Bioenergy Cropping Systems. Paper by Fox et al. 2016 was featured as a DOE BER Highlight. Jan. 31, 2017. <https://www.glbrc.org/research/highlights/cover-crops-and-pest-suppression-annual-maize-bioenergy-cropping-systems>
103. A “Landscape of Fear” may Offer Alternative Pest Control. National LTER Network Stories. Nov. 6, 2017 <https://lternet.edu/stories/landscape-fear-may-offer-alternative-pest-control/>
104. Superweeds, secondary pests and lack of biodiversity are frequent GMO concerns. MSU Futures. Spring/Summer 2018.
105. Mowing Milkweed Means More Monarch. Article and podcast in Great Lakes Echo. May 17, 2019 <http://greatlakesecho.org/2019/05/17/mowing-milkweed-means-more-monarchs/>
106. Monarch Butterfly Research Update. MSUE News article reprinted in Morning Ag Clips. May 20, 2019. <https://www.morningagclips.com/monarch-butterfly-research-update/>
107. Mow the Milkweed. Natural History Magazine on-line. June 2019. <http://www.naturalhistorymag.com/samplings/263649/mow-the-milkweed>
108. Insectary Plants to Enhance Beneficial Insects. NCR SARE Video. June 2019 <https://www.youtube.com/watch?v=Pf276d9u-A0&list=PLQLK9r1ZBhhE1LqK9hKOt5O3CcamlpHOR&index=6&t=0s>
109. The edge of agriculture: crop configuration and pest suppression. NSF Research News https://www.nsf.gov/discoveries/disc_summ.jsp?cntn_id=302233&org=NSF&from=news&utm_source=miragenews&utm_medium=miragenews&utm_campaign=news

GRANT SUPPORT Total awarded 1988- present \$39,536,466 with \$9,357,205 assigned to D Landis (updated 1.31.20)

Pending

Current

Digital Agriculture to Enhance the Sustainability of US Cropping Systems. B. Basso, S. Swinton, DA Landis, N Haddad, J Andresen. USDA-Natural Resources Conservation Service. 3/3/2021 - 12/31/2025 \$2,571,064 (Landis portion \$58,127)

2021-22 MSU MacCready Reserve Restoration, Education and Outreach. L. Brudvig, D. Landis. MSU Office of Land Management. \$10,000 5/2021-4/2022.

LTER: KBS – Mechanisms of Resilience in Agricultural Landscapes. Hamilton, Stephen; Basso, Bruno; Swinton, Scott; Robertson, GPhilip; Marquart-Pyatt, Sandra; Lau, Jennifer; Landis, Douglas; Haddad, Nicholas; Evans, Sarah. NSF DEB \$4.5 M 12/1/2018 - 11/30/2022. (D. Landis \$248,000)

Great Lakes Bioenergy Research Center. T.J. Donohue PI. US Department of Energy, Office of Science: Office of Biological and Environmental Research. \$141,989,000. 2017-2021. (Landis one of 64 Senior/Key Personnel, funded in Aim 1 and Aim 7).

Actual award by year: 2017-18	\$282,813
Actual award by year: 2018-19	\$299,992
Actual award by year: 2019-20	\$331,959
Actual award by year: 2020-21	\$342,088
Actual award by year: 2021-22	\$370,969

Completed

2020-21 MSU MacCready Reserve Restoration, Education and Outreach. L. Brudvig, D. Landis. MSU Office of Land Management. \$11,500 5/20-4/21.

Increasing IPM Adoption through Science-Based Resources Addressing the Changing and Emerging Needs of Michigan Growers. JN Landis, FW Ravlin. USDA \$637,540. 9/2017-8/2020 (D. Landis \$0, role is as Key Personnel re monarch/pollinator research and extension).

Enhancing Great Lakes landscapes for healthy pollinators. Isaacs, R., Landis, D., Gibbs, J., Milbrath, M., Gut, L.J., Szendrei, Z. and Wilson, J. USDA-NIFA. \$999,882. 2/1/17-1/31/20. (Landis Portion \$113,661).

2019-20 MSU MacCready Reserve Restoration, Education and Outreach. L. Brudvig, D. Landis. MSU Office of Land Management. \$10,000 5/19-4/20.

Ecosystem Services in a changing climate; assessing critical services in Bangladesh rice production landscapes. Panna MD Ali. USAID PEER Cycle 6. \$223,704. 2017-19. (Landis portion \$0, role is as US Government-supported partner linking to my NSF LTER project).

Understanding how predation risk by lady beetles shapes aphid behavior and physiology in agroecosystems. S. Hermann and DA Landis. USDA NIFA Predoctoral Fellowship. \$94,892. 8/16/2017 – 8/15/2019. (D. Landis \$0).

2018-19 MSU MacCready Reserve Restoration, Education and Outreach. L. Brudvig, D. Landis. MSU Office of Land Management. \$10,000 5/18-4/19.

2017-18 MSU MacCready Reserve Restoration, Education and Outreach. L. Brudvig, D. Landis. MSU Office of Land Management. \$12,524 5/17-4/18.

LTER: The Ecology of Row Crop Ecosystems and Landscapes at the KBS LTER Site. S Hamilton, S Evans, D Landis, J Lau, S Marquart-Pyatt, GP Robertson, S Swinton. NSF DEB-Ecological Biology Cluster. \$2,254,000 12/16-11/18. (Landis Portion \$121,600).

2018 Michigan Agricultural Production Pollinator Habitat Utilization Survey. JN Landis, R. Isaacs, DA Landis. NC Regional IPM Competitive Research Grants Program. \$20,000. 1/1/2018-12/31/2018 (D. Landis \$7,954).

Developing Highly Productive Monarch Butterfly Habitats for Michigan’s Agricultural Landscapes. D. Landis, B. Wills, A. Myers. Project GREEN and MSU Entomology Discretionary \$30,000. 5/1/2016-6/30/2017

2016-17 MSU MacCready Reserve Restoration, Education and Outreach. L. Brudvig, D. Landis. MSU Office of Land Management. \$12,524 5/16-4/17.

Insectary Plants to Enhance Beneficial Insects: Expanding the Palette to Increase Options for Sustainable Crop Production in the NC Region. D.A. Landis. R. Isaacs, J.N. Landis NC SARE. \$199,887. 10/1/2014-9/30/2017

Great Lakes Bioenergy Research Center. T.J. Donohue PI. US Department of Energy, Bioenergy Research Center program. \$125,000,000. 12/12-11/17: Thrust 4. Development of a Sustainable Bioenergy Economy, Objective 4.4. Biodiversity Responses (Biodiversity team leader: D.A. Landis)

Actual award by year	T.4.4 Team	Landis
2013	\$520,526	\$235,255
2014	\$447,922	\$266,320
2015	\$427,189	\$210,447
2016	\$427,191	\$210,446
2017	\$427,191	\$210,446
Total	\$2,250,019	\$1,132,914

The KBS LTER Project: Long-Term Ecological Research in Row Crop Agriculture. G.P. Robertson, K.L. Gross, S.K. Hamilton, D.A. Landis, S.M. Swinton, TM. Schmidt. NSF DEB-Ecological Biology Cluster. \$5,640,000. 12/11-11/17. (Landis Portion \$310,200).

Building Pollinator-Supportive Landscapes for Michigan’s Diverse Agriculture. D.A. Landis. R. Isaacs, L. Brudvig. Project GREEN. \$79,100. 4/2014-6/30/2016

Accelerating Research on Pollinator-Supportive Plants/Landscapes in Michigan. D.A. Landis. Project GREEN Discretionary Funds. \$25,000. 9/24/2013-6/30/2014

Exploiting the Landscape of Fear as an Insect Control Tactic. C Bahlai, D. Landis, Z. Szendrei. Project GREEN. \$37,900. 5/1/2015-6/30/2016

Control and Mitigation of Generalist Pests in Perennial Grass-Dominated Bioenergy Landscapes. CM Malmstrom, DA Landis, R Isaacs. USDA AFRI Sustainable Bioenergy Research Program Feedstock Crop Protection. 01/01/2011-12/31/2015 + NCE. \$991,219

Developing sustainable perennial bioenergy crop management for birds and pollinators: effects of harvest, refuges and landscape context. Claudio Gratton, D. A. Landis, R. Isaacs. USDA NIFA AFRI 2011. \$496,053 (Landis/Isaacs \$155,789) 09/01/2012-02/28/2015

Spotted Knapweed Biocontrol Monitoring 2013. DA Landis and E Delfosse. MDNRE \$30,000 9/12-8/13 (Landis \$30,000)

Advancing Native Plants to Support Agriculture and the Environment. DA Landis, JN Landis, R Isaacs, Project GREEN GR11-023. Year 1 \$18,700, year 2 renewal \$18,700 4/1/2011- 3/31/2013 (Landis portion \$18,700)

Development and Delivery of Ecologically-Based IPM Packages for Field and Vegetable Crop Systems in Central Asia. K Maredia, GW Bird, DA Landis, J Landis, W Pett. US AID 10/1/09-9/30-2014. \$1,250,000.

Common Buckthorn (*Rhamnus Cathartica*) As a Keystone Invader in Agricultural Landscapes. M.M. Gardiner, A. Michels, D.A. Landis, D. Lusch, M. O'Neal. USDA AFRI Biology of Invasive and Weedy Species. 4 year \$499,887 (Landis portion \$122,946).

Great Lakes Bioenergy Research Center. T.J. Donohue PI. US Department of Energy, GTL Bioenergy Research Center program. \$125,000,000. 9/07-8/12: Thrust 4. Development of a Sustainable Bioenergy Economy, Objective 4.4. Biodiversity Responses (Biodiversity team leaders: D.A. Landis, D. Schemske [yr1-2])

		T.4.4 Team	Landis
Actual award by year	2008	\$253,950	\$160,535
	2009	\$416,335	\$238,179
	2010	\$532,852	\$208,210
	2011	\$529,576	\$214,184
	2012	\$545,230	\$209,739
	Total	\$2,277,943	\$1,030,847

Spotted Knapweed Biocontrol Monitoring and Seeding. DA Landis and E Delfosse. MDNRE \$49,967 9/11-8/12 (Landis \$49,967)

The Road to Recovery: Understanding Genetic and Host Parasite Constraints to Mitchell's Satyr Butterfly and Hine's Emerald Dragonfly Recovery. DA Landis, CA Hamm. USFWS Great Lakes Restoration Initiative, Endangered Species Program. 9/1/2010 – 8/31/2012. \$135,668

The KBS LTER Project: Long-Term Ecological Research in Row Crop Agriculture. G.P. Robertson, S.H. Gage, K.L. Gross, S.K. Hamilton, D.A. Landis, S.M. Swinton. NSF DEB-Ecological Biology Cluster. \$4,920,000. 12/04-11/10. (Landis Portion \$210,000).

Maximizing Arthropod-Mediated Ecosystem Services in Agricultural Landscapes. R. Isaacs, D. Landis, J. Tuell, A. Fiedler, M Gardiner. USDA NRI Integrative Biology of Arthropods and Nematodes. \$342,000. 9/07-8/11. (Landis Portion \$178,446).

Spotted/Diffuse Knapweed Biocontrol–Permit Application Project. DA Landis and E Delfosse. Michigan Department of Natural Resources and Environment. \$4,999

Biological Control of Knapweed and Restoration with Native Nectar Plants. DA Landis and E Delfosse. Michigan Department of Natural Resources and Environment. \$40,000

The Michigan Invasive Species Information Network (MISIN): engaging stakeholders in invasive species detection and management. Co-PI's Douglas Landis, Robert Ahern, Amos Ziegler, Phyllis Higman, Edward Schools. Sustainable Michigan Endowed Project 2008 Integrative Project Grants (IPG) program, \$75,000 3 yr. (Landis portion \$75,000).

Integrating Ecological and Genomic Approaches Towards Sustainable Biomass Production in Switchgrass. D.W. Schemske, Shin-Han Shiu, D.A. Landis. MSU Rackham Foundation. \$75,000. (Landis portion \$0).

2009 Supplement to KBS LTER Project DBB 0423627. G.P. Robertson, K.L. Gross, S.K. Hamilton, D.A. Landis, S.M. Swinton, TM. Schmidt. NSF DEB-Ecological Biology Cluster. \$59,000. 4/1/09-3/31/10 (Landis Portion \$0).

Cellulosic biofuel crops as a new source of grassland migratory bird habitat in the Midwest. US Fish Wildlife Service Joint Venture. 4/15/2010-6/15-2010. \$9,608.

Characterize genetic structure of *N. m. mitchellii* to facilitate translocations. D. Landis C. Hamm. USFWS Extinction Prevention Funding Proposal. FY 2009 \$50,000 1 yr.

Southeast Michigan Prairie Fen Initiative Collaborative. D. Landis, A. Fiedler, D. Pearsall, P. Doran. National Fish and Wildlife Foundation, 2007 Great Lakes Watershed Restoration Program. \$95,000 7/1/08-6/30/09 (Landis portion \$57,000).

2009 MSU MacCready Reserve Restoration Education and Outreach. D. Landis. MSU Office of Land Management. \$9,886 3/09-2-10.

Ecologically-Based Participatory and Collaborative Research and Capacity Building in IPM in Central Asia Region. K. Maredia et al. USAID IPM CSRP. \$700,000. 2006-10. (Landis Portion \$140,000)

2008 MSU MacCready Reserve Restoration Education and Outreach. D. Landis. MSU Office of Land Management. \$7,180 3/08-2-09.

2007 MSU MacCready Reserve Restoration Education and Outreach. D. Landis. MSU Office of Land Management. \$3,240 3/07-2-08.

Invasive Species Policy, Ecology and Management. D.A. Landis and D. Schemske. MSU Environmental Research Initiative. \$100,000. 7/06-6/08 (Landis portion \$85,000)

Using Demographic Models to Assess Biocontrol of an Invasive Plant. D.A. Landis, D.W. Schemske, A.S. Davis. USDA NRI Biology of Weedy and Invasive Plants. \$325,000. 11/05-10/08 (Landis portion 325,000).

Soybean Aphid in the North Central Region: Implementing IPM at the Landscape Scale. D.A. Landis, C.D. DiFonzo, M.J. Brewer, S.M. Swinton. USDA RAMP. \$1,505,050. 1/05-12/08. (Landis Portion \$168,886).

Utilizing Native Plants to Enhance Insect and Weed Biological Control. D.A. Landis and W. Schneider. 2003 NC-SARE \$150,000. 7/04-8/08 (Landis portion \$129,600)

Delivery of Information on Native Plants to Enhance Beneficial Insect Activity in Michigan Farms. R. Isaacs, J. Tuell, A. Fiedler, D. Landis, J. Landis, W. Schneider, N. Rothwell, R. Rant, G. Vogel. Project GREEN 2006. \$9,135. 4/06-3/07. (Landis portion \$4,567 to Anna Fiedler).

Southeast Michigan Headwaters Restoration Collaborative. The Nature Conservancy (D. Landis MSU collaborator). National Fish and Wildlife Foundation, 2005 Great Lakes Watershed Restoration Program. \$75,000 4/1/06-9/20/07 (Landis portion 0, cooperator).

MSU Invasive Species Website. D. Landis. MSU IPM Program \$5,000 3/31/05-8/1/06 (Landis portion 5,000).

Does Intraguild Predation Limit Soybean Aphid Parasitoid Impacts? D. Landis, M. Brewer, A. Costamagna and G. Heimpel. USDA NRI Integrative Biology of Arthropods and Nematodes. \$388,189 3 y requested, \$205,000 for 2 y granted. 1/05-12/06 (Landis portion \$148,650).

Integrating Alternative Approaches to Control Key Pest in Eastern Vineyards. R. Isaacs, D. Landis, J. Wise. USDA PMAP \$138,430. 9/04-8/06. (Landis portion 0).

Natural Control of Soybean Aphid by Parasitoids, Predatory Flies, and Pathogenic Fungi and their Integration into Soybean Crop Management. M. Brewer, T. Noma, D. Landis. MSU GREEN FY 2004 \$75,000. 4/04-3/06. (Landis portion \$0).

Assessing Native Plants to Enhance Sustainable Agriculture. D.A. Landis, A. Fiedler and R. Isaacs. MSU Sustainable Ag. Special Grant 2003. \$55,490. 5/04-4/06. (Landis portion \$55,490).

Integrating New Natural Enemies into Soybean Aphid Biological Control. M.J. Brewer, D.A. Landis, C. DiFonzo. USDA CSREES NC IPM. \$99,997 5/04-4/06 (Landis Portion \$47,429)

Evaluating the Potential for Biological Control of Garlic Mustard in Michigan. D. Landis and D. Schemske. Michigan Department of Natural Resources Wildlife Grants Program. \$48,159. 4/04-9/06. (Landis portion \$48,159).

Interaction of Predators and Parasitoids in Soybean Aphid Biological Control. D.A. Landis, A. Costamagna, M. O'Neal, M. Brewer. USDA-APHIS-PPQ NBCI Cooperative Agreement: 8/03-7/05. \$25,000 (Landis portion \$25,000).

Evaluating the Potential for Biological Control of Garlic Mustard in Michigan. D. Landis and D. Schemske. Michigan Department of Military and Veterans Affairs. \$32,151. 4/03-9/05. (Landis portion \$32,151).

Impact of Purple Loosestrife Biological Control on Wetland Plant Communities. D. Landis. Michigan Department of Natural Resources Wildlife Grants Program. \$49,980. 4/03-9/05. (Landis portion \$49,980).

Do Predation and Host Plant Quality Interact to Regulate Soybean Aphid? D. Landis, K. Thelen, C. DiFonzo, M. O'Neal, A. Costamagna. MSU Sustainable Ag. Special Grant 2003. \$54,000. 5/03-4/05. (Landis portion \$54,000).

Long-Term Ecological Research in Field Crop Ecosystems. NSF DEB Long-Term Studies. \$4.2 M (Landis portion \$25,000)

Evaluating the Potential for Biological Control of Garlic Mustard on two Nature Conservancy Sites as part of a Statewide Program. D. Landis. The Nature Conservancy, Michigan Chapter. \$3,000. 7/03-6/04. (Landis portion \$3,000)

Developing Educational Tools to Facilitate Systems Thinking in Sustainable Agriculture. A. Heggenstaller, M. Liebman, F. Menalled. SARE Graduate Student Research Grants Program. \$9,896. 5/03-4/04. (Landis cooperator).

Garlic Mustard in Michigan Website D.A. Landis, M. Brewer, J.N. Landis, D.C. Sebolt. Michigan Dept. of Agriculture, Pesticide and Plant Pest Management Division. \$2,938 10/02-9/03 (Landis portion \$2,938)

Modeling Soybean Aphid and Natural Enemy Interactions to Improve Biological Control. D.A. Landis, D.R. Prokrym, W. van der Werf, F. Bianchi. USDA NBCI Implementation Grant Program. \$15,000. 7/02-6/03 (Landis portion \$10,000)

Indigenous Predators in Soybean Aphid Biological Control. D.A. Landis, T.B. Fox and A. Costamagna. USDA-APHIS-PPQ NBCI Cooperative Agreement. \$ 25,000. 7/02-6/03. (Landis portion \$25,000)

Assessing Weed Seed Decay by Soil Microorganisms. K.A. Renner, D.A. Landis, D.D. Buhler. USDA CSREES Special Grants Program: Sustainable Agriculture 2002: Ecological Integration of Soil, Plants and Animals. \$59,437. 6/02-5/03 (Landis portion \$29,718)

Is Corn Phenology Causing Crop Rotation's Failure to Manage Western Corn Rootworm? D. Landis, M. O'Neal, J. Miller, C. DiFonzo. USDA-NRI Entomology-Nematology. \$156,000. 9/01-8/03. (Landis portion \$156,000)

Assessing the Relationships Among Cover Crops, Weed Seed Predators and Weed Communities. D.A. Landis, F.D. Menalled, K.A. Renner, D.R. Mutch, L.E. Dyer. USDA CSREES North Central IPM. \$98,898. 4/01-3/03. (Landis portion \$49,449)

Weed Seed Predation and Decay in Cropping Systems that Include Cover Crops. K. Renner, D. Landis, D. Mutch, D. Buhler, F. Menalled. USDA CSREES Special Grants Program: Sustainable Agriculture. \$53,978. 4/01-3/03. (Landis portion \$26,989)

Achieving Sustainable Grape Production in Michigan: Reduced Chemical Inputs by Establishing Thresholds for Key Pests. R. Isaacs, S. Howell, A. Schilder, C. Edson, D. Landis, J. Andresen, G. Van Ee, R. Ledebuhr. MSU GREEN 2000. \$225,000. 3/00-2/03. (Landis portion \$0 cooperator)

Education and Long-Term Monitoring of Purple Loosestrife Biological Control in Michigan: 2001-2002. D. A. Landis and M. Klepinger. Michigan Department of Agriculture, Pesticide and Plant Pest Management Division. \$10,000. 10/01-9/02. (Landis portion \$10,000)

Improving Accuracy and Access to Results of Purple Loosestrife Management in Michigan Wetlands. M. Klepinger and D. Landis. MI Dept. of Natural Resources-Wildlife Division, Natural Heritage Nongame Wildlife Grants program. \$9,413 1/02-12/02. (Landis portion \$0 cooperator)

Biological Control of Soybean Aphid, *Aphis glycines* Matsumura (Homoptera: Aphididae): The Impact of Indigenous Natural Enemies. D.A. Landis, T. Fox, S. Thiem, C. DiFonzo. USDA APHIS Soybean Aphid Biological Control \$45,000. 7/01-3/02.

The Niles Laboratory Partnership: Advancing Biological Control for Michigan's Plant Industries. MSU-GREEN. \$40,000. 4/01-3/02.

Use of Microelectronics to Develop an Advanced Harmonic Radar System for Tracking Insects in Agroecosystems. D. Landis, E. Rothwell, D. Reinhard, L. Kempel, M. O'Neal, J. Miller. MSU GREEN \$35,000. 4/01-3/02.

Integrating Biological, Chemical and Pheromone Control of Obliquebanded Leafroller in Michigan Apple Production Systems. D. Landis, L. Gut, T. Wells-Wilkinson, W. Kauffman. USDA Special Fruit Grant. \$14,000. 4/01-3/02.

Biorational Alternatives to Chlorpyrifos for Management of Onion Maggot in Michigan Onions. E. Grafius, M. Kortier-Davis, D. Landis. MSU-GREEN. \$29,500. 4/01-3/02.

Can Refuges Moderate Disturbance in Annual Crops? D.A. Landis, K.A. Renner and F.D. Menalled. USDA NRICGP Biologically Based Pest Management. \$162,161. 9/99-12/01.

Biological Control of Purple Loosestrife by 4-H Volunteers. Sea Grant ANS Outreach Proposal. \$68,959. Collaborator. 9/99- 8/01.

Documenting Success in Biological Control of Purple Loosestrife in Michigan. . D. A. Landis and M. Klepinger. Michigan Department of Agriculture, Pesticide and Plant Pest Management Division. \$15,000. 10/00-9/01.

Sustainable Agriculture: Ecological Integration of Soil, Plants and Animals. R. Harwood. USDA CSREES Special Grants Program. \$416,297 4/00-3/02 Landis Portion \$60,000.

Developing a Website for the North Central Regional Committee-125, Arthropod Biological Control, USDA NBCI Facilitation Grants Program. \$2,500. 1yr. 2000.

Biological Control of Oblique Banded Leafroller in Michigan Apple Production: Integrating Pheromone Disruption and Novel Insecticides. D. Landis, L. Gut and W. Kauffman. MSU GREEN 2000. \$30,000 1yr.

Western Corn Rootworm in First-Year Corn: Preparing Growers for a New Threat. C. DiFonzo. D.A. Landis, M. O'Neal. MSU GREEN 2000. \$18,200 1 yr.

Biorational Alternatives to Chlorpyrifos for Management of Onion Maggot in Michigan Onions." E.J. Grafius, M. Kortier-Davis and D.A. Landis. MSU GREEN 2000. \$36,000 1yr.

Managing Your Farm to Reduce Weed Infestations. F. Menalled, K. Renner, D. Landis. MSU GREEN 2000. \$6,000 1yr. 2000

Evaluating the Efficacy of Rotated Corn in the Face of Changing Corn Rootworm Behavior. Corn Marketing Program of Michigan. \$7,500. C. DiFonzo, M. O'Neal, D. Landis. 2000.

2000 Biological Control of Purple Loosestrife in Michigan. D.A. Landis and M. Klepinger.

Michigan Department of Natural Resources-Wildlife Division	\$30,000
Michigan Department of Natural Resources-Non-Game Fund	\$10,000
Michigan Department of Agriculture, Pesticide & Plant Pest Manag. Div.	<u>\$15,000</u>
Total FY-00	\$55,000

Biological Control Program Infrastructure within the Center for Integrated Plant Systems. Whalon et al. MSU GREEN proposal to MAES Director's Advisory Team (DAT). Biocontrol portion \$45,000. 1999.

Where do the Weed Seeds Go? Understanding Weed Seed Banks and Weed Seed Predation: An Extension and Education Program. K.A. Renner, F.D. Menalled and D.A. Landis. MSU GREEN Extension/Education Proposal 1998. \$11,611 1 yr.

Biological Control of Oblique Banded Leafroller in Michigan Apple Production: Integrating Pheromone Disruption and Novel Insecticides. D. Landis, L. Gut and W. Kaufman. MSU GREEN Applied Research/Demonstration Proposal 1998. \$30,000 1yr.

Biorational Alternatives to Chlorpyrifos for Management of Onion Maggot in Michigan Onions. E.J. Grafius, M. Kortier-Davis and D.A. Landis. MSU GREEN Applied Research/Demonstration Proposal 1998. \$36,000 1yr.

Western Corn Rootworm in First-Year Corn: Preparing Growers for a New Threat. C. DiFonzo. D.A. Landis, M. O'Neal. MSU GREEN Applied Research/Demonstration Proposal 1998. \$20,000 1 yr.

Rotation-Resistant Corn Rootworms: Thresholds and Movement in Michigan Corn Production. C. DiFonzo, D. Landis and M. O'Neal. Michigan Corn Marketing Program. \$8,500. 1998.

Biological Control in Field Crops: A Short Course for Agricultural Professionals. D.A. Landis and F.D. Menalled. 1998 Field Crop AOE SARE Grant. \$5,000 1 yr.

Building Agroecological Infrastructure: Relationships between Habitat Management, Seed Predation and Weed Community Dynamics. D.A. Landis, K.A. Renner, F.D. Menalled and K. L. Gross. USDA Sustainable Agriculture Special Grant. \$60,000 2 yr. 1998.

Demonstration/Research of Integrated Viticultural Production Strategies for Michigan Grape Growers. Edson et al. Michigan Grape and Wine Industry Council. \$18,348. Collaborator. 1998.

Influence of Perennial Habitats Including High-Value Woody Species on Natural Enemies of Crop Pests. D.A. Landis, F.D. Menalled. Integrated Pest Management Grants Program, North Central Region. \$62,862. 4 yr. 1995-8.

1999 Biological Control of Purple Loosestrife in Michigan. D.A. Landis and M. Klepinger.

MSU Extension	\$10,000
Michigan Agricultural Experiment Station	\$20,000
MSU College of Natural Science, Div. of Science and Math. Educ.	\$2,000
USDA APHIS National Biological Control Institute	\$11,600
Michigan Department of Natural Resources-Wildlife Division	\$30,000
Michigan Department of Natural Resources-Non-Game Fund	\$10,000
Michigan Department of Agriculture, Pesticide & Plant Pest Manag. Div.	<u>\$15,000</u>
Total FY-99	\$98,600

Biological Control Program at Michigan State University:1998. D.A. Landis. MAES, MSUE \$30,000. 1 yr.

Purple Loosestrife Locator Cards. M. Klepinger and D. Landis, MDEQ. \$7,500. 1 yr. 1998.

The Purple Loosestrife Project at Michigan State University: Implementation. D.A. Landis and M. Klepinger. USDA National Biological Control Institute. \$11,700. 1 yr. 1998.

The Purple Loosestrife Project at Michigan State University: Facilitation. M. Klepinger and D.A. Landis. USDA National Biological Control Institute. \$8,700. 1 yr. 1998.

1998 Biological Control of Purple Loosestrife in Michigan. D.A. Landis and M. Klepinger.

MSU Extension	\$10,000
Michigan Agricultural Experiment Station	\$20,000
MSU Department of Entomology	\$9,066
MSU College of Natural Science, Div. of Science and Math. Educ.	\$9,066
Michigan Department of Natural Resources-Wildlife Division	\$30,000
Michigan Department of Natural Resources-Non-Game Fund	\$9,998
Michigan Department of Agriculture, Pesticide & Plant Pest Manag. Div.	<u>\$15,000</u>
Total FY-98	\$103,130

Experiential Learning Using Biological Control of Purple Loosestrife. M. Klepinger and D. Landis. US EPA Environmental Education Program. \$20,500. 1 yr. 1998.

Incorporating Biological Control into Extension IPM Programming: Midwest Biological Control News. D. Mahr, D. Landis, L. Kinkel, S. Mahr, J. Parke, C. Sadoff, R. Wright. Integrated Pest Management Grants Program, North Central Region. \$19,588. 1yr. 1998.

Vegetative Barriers to Increase Biological Pest Control and Prevent Soil Erosion in Agricultural Landscapes. D.A. Landis and L.E. Dyer. Great Lakes Commission, Great Lakes Program for Soil Erosion and Sediment Control. \$14,860. 1 yr. 1997.

Ecological Principals of Habitat Management for Weed and Insect Biological Control. D. Landis, P. Marino, K. Renner and R. Fogg. USDA SARE. \$94,923. 2 yr. 1995-6.

Trichogramma Non-Target Impacts: A Model for Biological Control Risk Assessment. D. Landis and D. Orr. USDA CSRS NRI. \$120,000. 2 yr. 1995-7.

1997 Biological Control of Purple Loosestrife in Michigan. D.A. Landis and M. Klepinger.

MSU Department of Entomology	\$9,066
MSU College of Natural Science, Div. of Science and Math. Educ.	\$15,066
MSU Department of Fisheries and Wildlife, Michigan Sea Grant	\$10,000
MSU Extension	\$10,000
Michigan Agricultural Experiment Station	\$10,000
Michigan Department of Agriculture, Pesticide & Plant Pest Manag. Div.	<u>\$20,000</u>
Total FY-97	\$74,132

Potato/Seed Corn Rotation Systems for Management of Colorado Potato Beetle and Seed Corn Pests. E. Grafius, D. Landis and J. Kells. NCS-3 IPM. \$69,839. 2 yr. 1997

Biological Control Information Delivery to Extension Personnel and Their Clientele. D. Mahr, D. Landis, R. Wright, C. Sadoff. USDA Extension Service. MSU subcontract \$7,200. 3 yr. 1994-6

Alfalfa-Grass Intercrops: A Preventative Pest Management System for Insects and Weeds. O. Hesterman, D. Landis and J. Kells. NCS-3 IPM. \$74,010. 3 yr. 1993-5.

Evaluation of a Biological Control Program for Suppression of European Corn Borer in Midwestern Seed Corn Production. Pioneer Hi-Bred International. \$16,373. 3 yr. (Cooperator) 1993-5.

Investigations on Control of Insects in Field Crops 1995. D. Landis. Industry Support. \$32,000.

Parasitoid Community Ecology in Agricultural Landscapes. D. Landis. FY95 LTER Supplemental Requests, NSF LTER Program. \$5,000. 1 yr.

Investigations on Control of Insects in Field Crops 1994. D. Landis. Industry Support. \$34,750.

Influence of Transgenic Bt Maize on Predation and Parasitism of European Corn Borer. D. Landis and D. Orr. Ciba Seeds. \$10,000. 1 yr. 1993.

Effect of Landscape Structural Complexity on Parasitoid Community Richness and Effectiveness. D. Landis and P. Marino. KBS LTER (NSF) \$5,939. 1 yr. 1993.

Demonstration of Reduced Insecticide Inputs in Field Crops. D. Landis. USDA Saginaw Bay Water Quality Demonstration Project, MI CES Sub-Project. \$5,950. 1993.

A Landscape Ecological Perspective on Insect and Weed Population Regulation in Low-Input and Conventional Systems. D. Landis, K. Gross, R. Fogg. North Central Region LISA Program. \$75,000. 2 yr. 1993-4.

Investigations on Control of Insects in Field Crops 1993. D. Landis. Industry Support. \$27,200.

An Assessment of Episodic Atmospheric Events that Regulate Movement of Economically Important Migratory Pests: A Preventative Pest Management Strategy Using the Potato Leafhopper. NCS-3-IPM. (Cooperator) 3 yr. 1992-5

Evaluation of Grasses and Grass-Legume Mixtures for Sustainable and Efficient Forage Production in Michigan. W. Moline and D. Landis. MSU Agr. Exp. Sta. \$152,700. 3 yr. 1992-5

Development of Systems to Meet Environmental Constraints of Cash Crop Production in the 1990's. MSU Agr. Exp. Sta. (Cooperator) \$161,000. 3 yr. 1992-5

Insect Management in Michigan Field Corn: A Survey of Corn Producers. D. Landis and S. Swinton. 1992.
Michigan Department of Agriculture, Pesticide and Plant Pest Management Division. \$6,000.
Michigan State University, Agricultural and Natural Resources Extension. \$3,000.
Department of Entomology, Michigan State University. \$3,000.
Department of Agricultural Economics, Michigan State University. \$2,000.

Demonstration of Reduced Insecticide Inputs in Field Crops. D. Landis. USDA Saginaw Bay Water Quality Demonstration Project, MI CES Sub-Project. \$6,000. 1992.

Influence of Landscape Structure on Host-Parasitoid Interactions. Pesticide Research Center Enhancement Grant. D. Landis and L. Dyer. \$24,000. 2 yr. 1992-3.

Investigations on Control of Insects in Field Crops 1992. D. Landis. Industry Support. \$46,150.

Application of Spatial Analysis Technology to Assess Effects of Landscape Structural Heterogeneity on Beneficial Insects: An Approach Toward the Design of Pest-Stable Agricultural Systems. D. Landis and S. Gage. Rackham Endowment Fund Invited Proposal. \$51,000. 1991.

Development of a Computer-Enhanced Video Module to Teach Temporal and Spatial Dynamics of Biological Population Processes. MSU Computers in Education Committee. (Cooperator) \$14,688. 1991.

Integrated Pest Management Shortcourse for Agribusiness in Michigan. J. Kells, K. Renner, D. Mutch, D. Landis, P. Hart, R. Wilkenson. MSU AULEG. \$14,250. 1991.

Investigations on Control of Insects in Field Crops 1991. D. Landis. Industry Support. \$31,500.

Portable Electronic Data Logging System for Temperature, Humidity and Soil Moisture Monitoring. Pesticide Research Center Year-End Equipment Grant. D. Landis. \$4,000. 1990.

Investigations on Control of Insects in Field Crops 1990. D. Landis. Industry Support. \$26,500.

Grower-Oriented IPM Fact Sheets. MECP. M. Naglekirk and D. Landis. \$6,270. 1990.

Decision Support Systems for Michigan Field Crops. D. Landis. Integrated Decision Support System (IDSS) Working Group. July 1989-June 1990, \$6,150.

Linking Natural Enemies and Landscape Structure. D. Landis. MSU AURIG, \$7,500. 1989.

Influence of Landscape Structure on the Distribution Abundance and Movement of Insects. S. Gage, D. Landis and D. Haynes. NSF Ecology-1 Panel. \$100,000. 1989-90.

Demonstrating Management of Potato Leafhopper in Forages through Monitoring, Cutting Practices and the Use of Grass/Legume Mixtures. D. Landis. MECP IPM Expert Team. \$29,500. 1989.

Investigations on Control of Insects in Field Crops 1989. D. Landis. Industry Support. \$34,100.

Decision Support Systems for Michigan Field Crops. D. Landis. Integrated Decision Support System (IDSS) Working Group. July 1988-June 1989, \$6,000.

Investigations on Control of Insects in Field Crops 1988. D. Landis. Industry Support. \$16,000.

Submitted but not funded (last 12 months)

Strategic Disturbance for Integrated Monarch/Pollinator Habitat Management. DA Landis, NL Haan. NC IPM Center Critical Issues. \$49,989 3/1/20-2/28/21

Pathways to Sustainability through Novel Big Data Analytics and Participatory Agricultural Systems Science. Basso et al. USDA NIFA Program Area Priority: A9201 – Sustainable Agricultural Systems. \$9,999,993. 2020-2025.

FACULTY MENTORING COMMITTEES

Dr. Marianna Szucs, Chair, MSU Entomology 2018-

Dr. William Wetzel, MSU Entomology 2017-

Dr. Henry Chung, Chair, MSU Entomology 2017-

Dr. Karim Maredia, MSU Entomology 2008-

Dr. Anthony Cognato, MSU Entomology 2010-

Dr. Zsofia Szendrei, MSU Entomology 2010-2016

Dr. Jared Ali, MSU Entomology 2014-2016

VISITING SCIENTISTS

Dr. Wopke van der Werf, University of Wageningen, Wageningen, The Netherlands. August 11-17, 1997

Dr. Amalia Perez Valdez, University of Chapingo, Chapingo, Mexico. June-August 1998

Ms. Karolina Asman, Agricultural University of Sweden, Uppsala, Sweden. January-April 2000

Ms. Dora Carmona, INTA, Argentina. June 16-July 26, 2000

Dr. Paula Westerman, University of Wageningen, Wageningen, The Netherlands. August 13-27, 2000

Dr. Wopke van der Werf, Wageningen University, Wageningen, The Netherlands. July 14-19, 2001

Dr. Wopke van der Werf, Wageningen University, Wageningen, The Netherlands. Dec. 16-20, 2002

Dr. Felix Bianchi, Wageningen University, Wageningen, The Netherlands. August 22-29, 2005

Dr. Wopke van der Werf, Wageningen University, Wageningen, The Netherlands. Mar. 4-11, 2006

Dr. Wopke van der Werf, Wageningen University, Wageningen, The Netherlands. Sept. 23-30, 2007

Ms. Shahlo Safarzoda, Institute of Plant Protection, Dushanbe, Tajikistan, Oct 2010-Aug. 2011.

Dr. Leslie Firbank, University of Leeds, Leeds, UK. August 12-14, 2012

Dr. Wopke van der Werf, Wageningen University, Wageningen, The Netherlands. Oct. 22-28, 2012

Dr. Wopke van der Werf, Wageningen University, Wageningen, The Netherlands. Jan. 1-9, 2014

Dr. Teja Tschardt, Georg-August University, Göttingen, Germany. April 13-17, 2015

Dr. Sheikh Shamiul Haque, Bangladesh Rice Research Institute, Bangladesh. Sept. 24-Oct. 12, 2018.
Dr. Md Panna Ali, Bangladesh Rice Research Institute, Bangladesh. Sept. 24-Oct. 12, 2018.
Dr. Allan Hruska, Food and Agriculture Organization of the United Nations. Rome, Italy. Oct 11, 2018.
Dr. Jaime Reyes Hernandez University of Guadalajara, Mexico. July 10, 2019
Dr. Sheikh Shamiul Haque, Bangladesh Rice Research Institute, Bangladesh. November 19-26, 2019.
Dr. Md Panna Ali, Bangladesh Rice Research Institute, Bangladesh. November 19-26, 2019.
Conrad Vispo, Hawthorne Valley Farm, On-farm Ecologist, November 10, 2021

POST-DOCTORALS

Current

Nathan Haan, GLBRC

Former Post-docs and current employment

Ya-Jun (Angie) Zhang (joint with Rufus Isaacs) unknown
Ezequiel González, Faculty of Environmental Sciences, Czech University of Life Sciences Prague
William Wills, Assistant Professor, Department of Biology, DePauw University, Greencastle, IN.
Christine Bahali, Assistant Professor, Dept. of Biological Sciences, Kent State University, Kent, OH
Aaron Fox, Assistant Professor, Urban & Community Agriculture. California State Polytechnic University, Pomona
Nurali Saidov, In-country Project Coordinator of Nutrition-Sensitive Vegetable Technologies. AVRDC - The World Vegetable Center, Dushanbe, Tajikistan
Ben Werling, MSU Extension, Vegetable Crop Educator, Ottawa Co. MI
Anna Fielder, Director of Land & Water Conservation. Midcoast Conservancy, ME
Robert Ahern, Director for Agricultural Health and Food Safety Programs with the Inter-American Institute for Cooperation on Agriculture (IICA). San Jose, Costa Rica.
Mary Gardiner, Associate Professor, The Ohio State University, Wooster, OH
Jianqing Ding, Director, Key Laboratory of Aquatic Botany and Watershed Ecology, Wuhan Botanical Garden, Chinese Academy of Sciences, Wuhan, China
Adam Davis, (joint with Karen Renner, Doug Buhler) Professor and Head, Department of Crop Sciences, University of Illinois at Champaign-Urbana IL
Mindy Hoffman, (joint with Karen Renner) self-employed, Ohio.
Fabian Menalled, Professor, Montana State University. Bozeman, MT.
Carlos Garcia-Salazar, Small-Fruit District Agent, Michigan State University Extension. Ottawa Co. MI
Larry Dyer, Sustainable agriculture consultant, ISLAND Farmer Residency Program
David Orr, Extension Specialist & Associate Professor, North Carolina State University, Raleigh, NC.
Paul Marino, Associate Professor & Head, Department of Biology, Memorial University. St. John's, Newfoundland
Karim Maredia, Professor, Dept. of Entomology, &Inst. of Intl. Agric., Michigan State University. E. Lansing, MI.
Richard Cowles, Agricultural Scientist, Connecticut Agricultural Experiment Station. New Haven, CT.
Bruce Giebink, MSEA Education Coordinator, University of Minnesota. St Paul, MN.

STUDENT ADVISEMENT

(Symbols following names indicate students receiving significant fellowships including: *University Distinguished Fellowship, #Plant Sciences Fellowship, ^Pioneer Fellowship, @Barnet Rosenberg Fellowship, +Mott Fellowship, %EPA-STAR, !Fulbright Fellowship, @USDA Pre-doctoral Fellowship)

Current Students

Kara Dobson, PhD Advisory Committee, Fisheries and Wildlife

Toby Santamaria, PhD Advisory Committee, Plant Biology

Brianna Alred, MS Advisory Committee, Entomology

Ben Iuliano, PhD Advisory Committee External Member, University of Wisconsin-Madison, WI

Ciara Hovis, PhD Advisory Committee, Fisheries and Wildlife

Allison Zahorec, PhD, Major Advisor, Entomology

Aaron Sexton, PhD Advisory Committee External Member, University of Louisville, KY

Nicole Wonderlin, PhD Advisory Committee, Entomology

Christopher Warneke, PhD Advisory Committee, Plant Biology

Current Students = 8

Past (Year Graduated) and current employment for Major Advisees

Kayleigh Huari, MS Advisory Committee, Entomology (2020)
Zach Luther, MS Advisory Committee, Agricultural, Food, and Resource Economics (2020)
Logan Appenfeller, MS Advisory Committee, Entomology (2020)
Gabriela Quinlan, PhD Advisory Committee, Entomology (2020)
Sean Sultaire, PhD Advisory Committee, Fisheries and Wildlife (2020)
Andrew Myers, PhD, Major Advisor, Entomology, (2019) Post-doc, MSU Plant Biology
Sara Herman, PhD, Major Advisor, Entomology (#@) (2019) Asst. Professor of Entomology, Penn State University
Margie Lund, PhD Advisory Committee, Entomology (2019)
Dan Gibson, MS, Major Advisor, Entomology (2018) Restoration technician, Wisconsin
Paul Charland, MS, Major Advisor, Entomology (2018) Biologist UFSWS, East Lansing, MI
Adam Ingrao, PhD Advisory Committee, Entomology (2018)
Marissa Schuh, MS, Major Advisor, Entomology (2016) MSU Extension, Vegetable Crop Educator, Lenawee Co. MI
Jerney Jubenville, MS Advisory Committee, Entomology (2015)
Emily May, MS Advisory Committee, Entomology (2015)
Alex Smith, MS Committee, Co-recruited with R. Isaacs. Received degree from PSMS under S. Snapp (*)
Shahlo Safarzoda, MS, Major Advisor (2014) National Project Manager of rainwater harvesting for greenhouse irrigation and improved vegetable production in Zerafshan Valley/Tajikistan, Deutsche Welthungerhilfe (World Hunger Aid), Tajikistan
Brendan Carson, MS Major Advisor (2013) Ecology Research Associate at Loyola University Chicago
Mitch Lettow, MS Major Advisor (2013) Stewardship Team Leader, Southwest Michigan Land Conservancy. Galesburg, MI
Nate Walton, PhD Advisory Committee, Entomology (2013)
Brett Blaauw, PhD Advisory Committee, Entomology (2013)
Nikhil Sankara Jaikumar, PhD Advisory Committee, Crop and Soil Science (2013)
Jessica Megan Woltz, PhD Major Advisor, Entomology (*^) Assistant Professor of Biology at Lindenwood University, St Charles MO.
Chris Hamm, PhD Co-Major Advisor, Entomology (#) (2012) Data Scientist, Monsanto, Woodland, CA
Anna Fiedler, PhD Major Advisor, Entomology (2010) Director of Land & Water Conservation. Midcoast Conservancy, ME (@+)
Jeff Evans, PhD Major Advisor, Entomology (2009) Post-doc USDA ARS (%)
Nate Walton, MS Advisory Committee, Entomology (2009)
Thomas Alwin, MS Advisory Committee, Fisheries and Wildlife (2009)
Mary Gardiner, PhD Major Advisor, Entomology (2008) Professor, The Ohio State University (^)
Eduardo Esiptia Malgon, IPM MS Advisory Committee, Entomology
Julianna Tuell, PhD Advisory Committee, Entomology (2007)
Wei Zhang, PhD Advisory Committee, Agricultural Engineering (2007)
Toshi Yoshida, PhD Advisory Committee, Plant Biology (withdrew 2007)
Paul Jenkins, MS Advisory Committee, Entomology (2006)
Smruti Damani, PhD Advisory Committee, Fisheries and Wildlife (withdrew 2006)
Barbara Barton, PhD Major Advisor, Entomology (withdrew 2007)
Evandro deSilva, PhD Univ. of Michigan, Dept. of Natural Resources (2006)
Shaun Langley, MS Advisory Committee, Entomology (2006)
Jeff Evans, MS Major Advisor, Entomology (2006) (#)
Anna Fiedler, MS Major Advisor, Entomology (2006) (#)
Alejandro Costamagna, PhD Major Advisor, Entomology (2006) Associate Professor, University of Manitoba (!)
Merritt Gilliland, PhD Dept of Zoology (2006)
Richard Smith, PhD Advisory Committee, Plant Biology
Tristram Gibbons, NSF REU Program, Kellogg Biological Station, LTER
Emily Carlson, IPM MS Advisory Committee, Entomology

Natalia Botera-Garces, PhD Advisory Committee, Entomology
 Tyler Fox, MS Major Advisor, Entomology USDA APHIS, Detroit
 Tammy Wells, MS Major Advisor, Entomology Research Technician, Dept. of Horticulture, MSU
 Matthew O'Neal, PhD Major Advisor, Entomology Professor, Iowa State University
 Alejandro Costamagna, MS Major Advisor, Entomology
 Nathan Cottrell, MS Advisory Committee, Entomology
 Brian McCornack, MS Advisory Committee, Entomology
 Tim Dietz, MS Advisory Committee, Crop and Soil Science
 Diana McKenzie, MS. Advisory Committee, Entomology
 Diego Marcello Jans, IPM MS Advisory Committee, Entomology
 Young-Ki Jo, MS Advisory Committee, Entomology
 Chris Sebolt, MS. Major Advisor, Entomology 1st LT, US Army Reserves Medical Service Corps Ret.
 Sherry White, MS Advisory Committee, Crop and Soil Science
 Jana Lee, MS. Major Advisor, Entomology Research Entomologist USDA-ARS Corvallis, Oregon
 Angela Miller, MS Advisory Committee, Entomology
 Palasuberniam Kaliannan, MS Advisory Committee, Entomology
 Leonard Francke, MS Advisory Committee, Entomology
 Melanie Kaeb, MS Advisory Committee, Entomology
 Sheila Ebert, MS Advisory Committee, Entomology
 Dora Carmona, MS Major Advisor, Entomology, Agricultural Zoologist Univ. of Mar Del Plata & INTA Balcarce, Argentina
 Anila Ickhlas, MS, Advisory Committee, Entomology
 Ho How Leng, MS, Advisory Committee, Entomology
 Michael Smolow, NSF HSHSP Program
 Lyle Buss, MS, Advisory Committee, Entomology
 Manuel Colunga, PhD Advisory Committee, Entomology
 Brent Tharp, MS Advisory Committee, Crop and Soil Science.
 Amy Roda, MS. Major Advisor, Entomology Entomologist, USDA-APHIS-PPQ-CPHST Miami, FL
 Eric Spandel, Ph D. Advisory Committee, Crop and Soil Science.
 Roberta Chase, Aug 1995, NSF REU Program, Kellogg Biological Station, LTER
 Jeffery Stachler, MS Advisory Committee, Crop and Soil Science (1995)
 Lawrence Dyer, PhD Major Advisor, Entomology (1995) Ecological Agriculture Consulting, Petoskey, MI
 Idris Bin Idris, PhD Advisory Committee, Entomology (1995)
 Allen Pyle, MS Advisory Committee, Entomology (1995)
 Eric Spandel, MS Advisory Committee, Crop and Soil Science (1993)
 Jim Jasinski, MS Advisory Committee, Entomology (1992)
 Margi Coggins, MS, Major Professor, Entomology (1991) Nurse-Midwife Mount Auburn, MA
 John Wise, MS, Advisory Committee, Entomology (1990)
 Barry Brothers, MS Advisory Committee, Crop and Soil Science (1991)
 Jay Schmidt, MS Advisory Committee, Crop and Soil Science (1991)
 Jianjun (Carl) Chen, MS Advisory Committee, Entomology/Nematology (1989)
 Phillipos Ionnadis, Special Project, Sugar Beet Insect Extension (1989)
 D. Vincent Chiuswa, MS Advisory Committee, Agricultural Entomology (1988)

Total Students and Post-Doctoral Research Associates Advised =115

SYMPOSIA/MEETINGS ORGANIZED (past five years)

30. Supporting Beneficial Insects with Flowering Plants. NC SARE Insectary Plant project field day. August 2, 2016, Clarksville Research Center. Lead organizer. 120 attendees.
31. Michigan Monarch and Wild Pollinator Planning Summit. [multi-agency planning summit to address Michigan contributions to White House pollinator goals]. September 21-22, 2016. East Lansing, MI. Member of organizing committee. 75 attendees.

32. Igniting Next Generation Science on Habitat and Landscape Management to Enhance Pest Suppression and Pollination. Entomological Society of America, 2017 National Meeting, P-IE Section Symposium. DA Landis, C Gratton, K Poveda, FJA Bianchi, MM Gardiner. 100 attendees.
33. Monarch butterfly (*Danaus plexippus*) conservation in the north central states: Challenges and opportunities. Entomological Society of America North Central Branch Meeting, Madison WI. Mar. 21, 2018. DA Landis, S Bradbury. 50 attendees
34. Guiding Principles for Biodiversity-Friendly Agricultural Landscapes. Session 6.5.1-2. Landscape 2021: Diversity for Resilient and Sustainable Agriculture. Online conference organized by Leibniz Centre for Agricultural Landscape Research (ZALF), Berlin, Germany. September 20-22, 2021. Convenors: Douglas Landis, Michigan State University, Claudia Bethwell and Maria Busse, Leibniz Centre for Agricultural Landscape Research (ZALF), Germany. 55 attendees.

MSU COURSES TAUGHT

ENT 401 Special Project. "Stored-Grain Insect Management." D.V. Chiuswa. 1988
 ENT 425 "Agricultural Entomology." Field Crops Entomology Laboratory Sections. Annually 1989-92
 ENT 812 "Landscape Ecology with Special Reference to Insects." With S. H. Gage, Sp. 1990
 ENT 812 "Environmental Aspects of Enhanced Biological Control." Sp. 1994
 ENT 890 "Biological Control." Sp. 1997
 ENT 848 "Biological Control." Sp. 1999, 2001, 2003, 2005, 2007, 2009, 2011, 2013, 2017
 ENT 890 "Nature and Practice of Science" 2018, 2019

MSU GUEST LECTURES PRESENTED (since 1998)

BOT/ZOL/ENT 485 Tropical Ecology. "Biological Control in the Tropics." 1998-07.

CSS 294 International Agriculture Topics Seminar. "Designing Agricultural Landscapes for Multiple Ecosystem Services." 2019, 2020

CSS 442 Agricultural Ecology. "Landscape Structure and Insect-Mediated Ecosystem Services." 2011-14, 2016
 CSS 442 Agricultural Ecology. "Designing Agricultural Landscapes for Multiple Ecosystem Services." 2017, 2018, 2019, 2020, 2021

CSS/BSE/FOR 467 Bioenergy Feedstock Production. "Designing Agricultural Landscapes for Multiple Ecosystem Services." 2018, 2019, 2020

CSS 488 Integrated Cropping Systems. "Soybean Aphid: A New Key Pest Changes Everything." 2004-05

CSS 893 Methods in Soil and Plant Ecology for Sustainable Systems. "Assessing Arthropod Mediated Ecosystem Services." 2008

ENT 844 Insect Ecology, Evolution and Conservation.
 "Population Growth and Regulation." 2002, 2004, 2006, 2008
 "Invasive Species Ecology." 2002, 2004, 2006, 2008, 2010
 "Conservation Ecology for Natural Enemies." 2002, 2004, 2006, 2008, 2010

ENT 848 Biological Control. "Designing Agricultural Landscapes for Pest Suppression and other Ecosystem Services." 2019, 2021

ENT 890/ PLB802/ FW 893. Invasive Species Ecology Policy and Management. “Biological Control of Purple Loosestrife.” 2006

FOR 412 Wildland Fire. “Fire Dependent Communities of the Jackson Interlobate Region”. 2007

FW412/417 Wetland Ecology and Management. “Biological Control of Purple Loosestrife.” 2005, 2007

FW 443 Restoration Ecology.

“Biological Control of Purple Loosestrife in Michigan: A Case Study.” 2012, 2014, 2015

“Restoration at the MSU MacCreedy Reserve” 2012

FW 840 Landscape Ecology. “Designing Landscapes to Enhance Ecosystem Services.” 2007, 2021

HRT 251 Organic Farming Principles and Practices. Title: Enhancing Beneficial Insects with Native Plants. 2007

ZOL/PLB 355 & 355L KBS Summer Ecology. “Oak Savanna and Prairie Fen Restoration at the MSU MacCreedy Reserve. 2007, 2008

FOR 491 Fire Ecology and Management. Field day talks at the MSU MacCreedy Reserve

“Natural history of Jackson Interlobate Region and the MacCreedy Reserve.

“Fire Effects on Pollinator Habitat and Community Composition”

2019, 2021

Total = 70

IN-SERVICE TRAINING AND SHORT COURSES (past five years)

52. Using Beneficial Natural Enemies to Control Pests in Your Garden or Home Landscape. DA Landis, D Gibson, L Rowe, J Perrone Master Gardener College Workshop, June 23, 2017. (3h lecture and lab)
53. Global Innovation: Forging your network and funding your research. MSU Academy for Global Engagement, Campus Convening, University Distinguished Professor panel discussion. April 20, 2018.
54. Ecosystem Services in a Changing Climate Workshop. Sept. 24 – Oct. 12, 2018. Michigan State University, East Lansing, Michigan, co-hosted by MSU Entomology and the MSU South Asia Partnership.
55. Ecosystem Services in a Changing Climate: Workshop on Ecological Modelling. November 19-26, 2019. Michigan State University, East Lansing, Michigan, co-hosted by MSU Entomology and the MSU South Asia Partnership.

EXTENSION/OUTREACH PRESENTATIONS (past five years)

153. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. **DA Landis**. Merry Lea Environmental Learning Center of Goshen College, Agroecology Summer Intensive course (Landis Lab visit). July 16, 2014.
154. Screening Native Plants for Attractiveness to Beneficial Insects. **DA Landis**. Clarksville Research Station Field Day. June 16, 2015
155. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. **DA Landis**. Merry Lea Environmental Learning Center of Goshen College, Agroecology Summer Intensive course (Landis Lab visit). July 8, 2015.
156. Enhancing Beneficial Insects with Native Plants. **DA Landis**. The MSU Organic Farmer Training Program. July 15, 2015

157. Prairie Fen and Oak Savanna Restoration at the MSU MacCreedy Reserve. **DA Landis**. Field trip presentations for The Stewardship Network, Grand Raisin Cluster at the MSU MacCreedy Reserve. July 18, 2015.
158. Screening Native Plants for Attractiveness to Beneficial Insects. **DA Landis**. Northwest Michigan Horticultural Research Station Field Day. Sept. 17, 2015.
159. Screening Native Plants for Attractiveness to Beneficial Insects. **DA Landis**. Clarksville Research Station Field Day. June 22, 2015.
160. Supporting Beneficial Insects with Native Plants: New Research and Application Opportunities. **Douglas A. Landis**, Rufus Isaacs, Daniel Gibson, Logan Rowe. 29th Annual Wildflower Conference. Wildflower Association of Michigan. March 7, 2016. East Lansing, MI
161. Supporting Beneficial Insects with Native Plants: New Research and Application Opportunities. **Douglas A. Landis**, Rufus Isaacs, Daniel Gibson, Logan Rowe. American Farmland Trust Pollinator Payments for Ecosystem Services meeting. March 22, 2016. Traverse City, MI
162. Designing Agricultural Landscapes for Multiple Ecosystem Services. **DA Landis**. Merry Lea Environmental Learning Center of Goshen College, Agroecology Summer Intensive course (Landis hosted visit to KBS LTER). July 27, 2016.
163. Understanding monarch butterfly declines and conservation opportunities. **Myers, A T**, CA Bahlai, DA Landis. Jackson Sierra Club, MI, January 12, 2017.
164. Biological Control of Invasive Plants: Procedures Future Prospects. **DA Landis**. River City Wild Ones. April 17, 2017. Grand Rapids, MI.
165. Designing Agricultural Landscapes for Multiple Ecosystem Services. **DA Landis**. Merry Lea Environmental Learning Center of Goshen College, Agroecology Summer Intensive course (Landis hosted visit to KBS LTER). July 12, 2017.
166. Michigan's Monarch and Wild Pollinator Strategy: Why it's important, what it needs to be successful. **DA Landis**. Michigan Farm Bureau, Natural and Environmental Resources Advisory Committee. August 16, 2017. Lansing, MI.
167. Designing Landscapes for Biodiversity and Ecosystem Services. **DA Landis**. Eco-resource and Ecosystem Restoration Workshop, MSU Visiting International Professional Program. August 10, 2017. (2h workshop)
168. Designing Agricultural Landscapes for Multiple Ecosystem Services. **DA Landis**. North Central Extension Agriculture and Natural Resources Academy, Sustainable Cropping Systems Workshop. Sept. 14, 2017. KBS, Hickory Corners, MI (1.5h lecture and field visit)
169. Monarch conservation in agroecosystems. **Myers, Andrew T**, CA Bahlai, DA Landis. Sustainable Ag Field Day for 4H & Informal Educators. Kellogg Biological Station LTER. September 26, 2017.
170. Designing Landscapes for Biodiversity and Ecosystem Services. **DA Landis**. Xinjiang Ecology Workshop, MSU Visiting International Professional Program. October 5, 2017. (2.5h workshop)
171. Monarch and Pollinator Conservation Research. **DA Landis**. General Motors Lansing Delta Township Sustainability Team. January 24, 2018.

172. Can We Manage Rights of Way to Enhance Monarch Butterfly and Pollinator Habitat? **DA Landis**. Webinar for University of Illinois-Chicago, Energy Resources Center, Rights of Way as Habitat Working Group. June 27, 2018.
173. Introduction to the KBS Long Term Ecological Research Main Cropping System Experiment (BCSE). **DA Landis**. MSU Sustainable Michigan Endowed Project field tour. August 17, 2018.
174. Overview of the Great Lake Bioenergy Research Center (GLBRC) Bioenergy Cropping Systems Experiment (BCSE). **DA Landis**. MSU Sustainable Michigan Endowed Project field tour. August 17, 2018.
175. Selecting Native Plants for Pollinators and Natural Enemies. L Rowe, D Gibson, R Isaacs, **DA Landis**. Pollinator Partnership, Monarch and Native Pollinator Habitat Management and Technical Training Workshop for Working Lands. Merry Lea Environmental Center of Goshen College, Albion, IN October 3, 2018.
176. Enhancing Monarch Butterfly and Pollinator Habitat. **DA Landis**, N Haan, A Myers. Pollinator Partnership, Monarch and Native Pollinator Habitat Management and Technical Training Workshop for Working Lands. Merry Lea Environmental Center of Goshen College, Albion, IN October 3, 2018.
177. Insectary Plants to Enhance Beneficial Insects. L. Rowe, D. Gibson, **Douglas Landis**, Rufus Isaacs. 16th Annual Michigan Family Farms Conference. Kalamazoo, MI. February, 10, 2019. Recorded and distributed by NC SARE via YouTube <https://www.youtube.com/watch?v=Pf276d9u-A0>
178. Managing Habitats to Enhance Monarch Butterfly Populations. Michigan Association of Conservation Districts Summer Conference. **DA Landis**, N Haan, A Myers, S Hermann. Bay City MI, June 3, 2019.
179. Insects and Global Change: Can We Maintain Diversity and Ecosystem Services? **DA Landis**. Red Cedar Wild Ones. East Lansing MI. June 5, 2019.
180. Managing Habitats to Enhance Monarch Oviposition & Survival. **Douglas Landis**, Nate Haan, Andrew Myers, Sara Hermann. Mid-America Monarch Conservation Strategy, State Agency Technical Staff and Partners Workshop. Aug. 6-7, 2019. Powder Valley Nature Center, Kirkwood, MO. (invited research update)
181. Monarch butterflies and vegetation management. **N.L. Haan**, D.A. Landis. Pesticide Applicators Clinic, Michigan State University. November 27, 2019.
182. **Haan, N.L.** and D.A. Landis. Monarchs, milkweed, and grassland disturbance. Monarch Joint Venture Webinar. March 21, 2021.
183. Prairie strips and environmental benefits. **DA Landis**. MiSTRIPS Field Day-A Prairie Strips Event. Hasenick Brothers Farm, Springport, MI. August 16, 2021
184. Monarchs, milkweeds, and grassland disturbance. **DA Landis**. Rotary Club of Goshen, IN. August 27, 2021

CONSULTING

World Wildlife Fund, Great Lakes Agricultural Pollution Prevention Project. Development of a Stakeholder-Based Plan to Reduce the use of Agricultural Chemicals in the Great Lakes Basin. Jan 29-30, 1994. Ann Arbor, MI.

World Wildlife Fund, Integrating Regional Policy with Implementation Strategies for Pesticide Reduction in the Great Lakes Basin. March 29-31, 1994. The Johnson Foundation, Wingspread Conference Center, Racine, WI.

Great Lakes Soil and Water Quality, roundtable discussion to formulate a response to the National Academy of Science, National Research Council, Board on Agriculture, Committee on Long-Range Soil and Water

Conservation Report entitled: "Soil and Water Quality: An Agenda for Agriculture." November 14-15, 1994. Chicago, IL.

Joint United Nations Environmental Program (UNEP) – Scientific Committee on Problems of the Environment (SCOPE) meeting to prepare UNEP's 2003 Global Environmental Outlook (GEO) statement. Paris, France. Oct. 18-19, 2003.

US Government Accountability Office (GAO) study on biofuel sustainability. Jan. 2009

PROFESSIONAL SERVICE

Peer Reviewer:

- Proposals
- Agricultural Utilization Research Institute, 1996, 1998 (2)
 - FWF Austrian Science Fund 2021
 - Bowling Green State Univ., Faculty Grants Program, 1996
 - International Foundation for Science, 2000
 - Kentucky State University, Evans-Allen fund proposal 2008
 - Legislative Council on Minnesota Natural Resources, Biological Control, 1994
 - Leopold Center for Sustainable Agriculture, 1994, 1995, 2008
 - MSU AURIG, 1996 (2)
 - National Biological Control Institute, 1995
 - National Science Foundation, 2003, 2005, 2011
 - National Science & Engineering Research Council of Canada, 2009, 2010
 - NRICGP Integrative Biology: Arthropods, Nematodes 2004 (2), 2005 (2)
 - NRICGP Entomology/Nematology, 1994, 1995, 1996, 1997, 2003 (2)
 - NRICGP Biological Control, 1994, 1995, 1996,
 - NRICGP Biologically-Based Pest Management 1997, 1998 (2), 1999 (3), 2000 Panel member (71 proposals considered), 2001 Panel member (67 proposals considered), 2002 (1)
 - NRICGP Ecosystems, 1996
 - Southern Regional IPM Panel Member 1998 (41 proposals considered)
 - University of Wisconsin Hatch Proposal 2012
 - USDA Competitive Grants, 1991
 - USDA Small Business Innovation Research, 1998
 - New Zealand Centres of Excellence Fund (2006)
 - VolkswagenStiftung German-Israeli research initiative (2008)
 - University of Wisconsin, External reviewer for a Hatch Proposal (2012)
 - Austrian Science Fund (2014)
 - Netherlands National Research Council (NWO) Council for Earth and Life Sciences (ALW) (2014)
 - Swiss National Science Foundation 2015
 - Natural Environment Research Council, UK Research and Innovation 2019
 - The National Research and Development Agency (ANID) of the Ministry of Science, Technology, Knowledge and Innovation of Chile, FONDECYT National Projects Competition 2021
 - FWF Der Wissenschaftsfonds, Austrian Science Fund, Joint Projects application 2021
- Journals
- Agroforestry Systems, 1997
 - Agriculture, Ecosystems and Environment, 2017, 2019, 2021
 - Agriculture and Human Values, 1996
 - American Entomologist, 1998 (2)
 - American Midland Naturalist, 2000
 - Annals of the Entomological Society of America, 2003
 - Australian Journal of Experimental Agriculture, 2005
 - Basic and Applied Ecology, 2005, 2007, 2008, 2009 (2), 2010, 2011, 2014, 2017, 2018, 2019 (2)

BioControl Associate Editor 2002 (8), 2003 (11), 2004 (13), 2005 (9)
BioControl (Ad hoc.) 2008, 2017
Biological Control, 1994, 1995 (3), 1996 (2), 1998 (2), 1999, 2001 (2), 2003, 2004 (2), 2005, 2006 (2), 2010, 2011
Biological Conservation 2015
Biological Reviews 2012
Biocontrol Science and Technology, 2004
BioScience, 2007, 2009
Bulletin of Insectology, 2008
Cities and the Environment, 2008
Diversity and Distributions 2016
Ecography, 2002, 2004, 2006, 2011
Ecology, 1999, 2008, 2011, 2012
Ecology Letters, 2004, 2018
Ecological Applications, 2004, 2005, 2008, 2016, 2019, 2020
Ecological Entomology, 1998, 2000, 2003 (2), 2005
Environmental Entomology, 1989, 1990, 1992, 1993 (2), 1994, 1995, 1997 (2), 1999, 2001, 2002, 2003, 2004, 2007, 2008, 2009 (2), 2014
Environmental Research Letters 2016, 2017(2), 2018
Entomologia Experimentalis et Applicata, 1998, 1999, 2003, 2004 (2), 2007, 2009, 2010, 2015, 2017, 2018, 2019
Field Crops Research, 1990
Forest Ecology and Management, 2003
Frontiers in Ecology and the Environment, 2004, 2007
Frontiers in Ecology and Evolution, 2019 (3), 2020
Functional Ecology 2018
Global Change Biology 2021
Global Ecology and Biogeography 2018
HortScience, 1988
International Journal of Ecology and Environmental Sciences, 2003
Journal of Agricultural Entomology, 1990
Journal of Agroforestry Systems, 1996
Journal of Animal Ecology, 2019
Journal of Applied Ecology, 2005, 2009 (2), 2010 (13), 2011 (10), 2012 (4), 2016, 2019
Journal of Applied Entomology, 2008, 2009
Journal of Chemical Ecology, 1992
Journal of Economic Entomology, 1991, 1995 (3), 1997, 1998, 2000, 2001, 2002, 2003
Journal of Entomological Science, 1997
Journal of Fish and Wildlife Management 2015
Journal of Insect Behavior, 1998, 2003, 2004
Journal of Integrated Pest Management 2014
Landscape Ecology, 2011, 2016, 2018, 2020
Nature Communications 2015
Nature Scientific Reports 2016
Nature Ecology and Evolution 2016, 2017
Oecologia, 2004, 2009
Oikos 2011
Pest Management Science, 2007, 2009
PLoS One, 2013, 2018, 2019, 2020
Proceedings of the National Academy of Sciences USA, 2013, 2017 (2), 2018, 2021
Proceedings of the Royal Society of London B (2015)
The Great Lakes Entomologist, 1993, 1994, 1995, 1997, 1998 (2), 1999, 2001 (2), 2003, 2005
The Canadian Entomologist, 1988, 2007
Trends in Ecology and Evolution, 2011
Weed Science, 2008
Wetlands, 2003

Books

- Chapter peer review for Ecological Engineering for Pest Management: advances in habitat manipulation for arthropods (2003)
- Chapter peer review for Ecology of Predator-Prey Interactions (2003)
- Chapter peer review for Plant Provided Food and Plant-Carnivore Mutualism. Cambridge University Press. (2003)
- Chapter peer review for Biological Control: Measures of Success, Kluwer (2000)
- USDA ARS Manuscript Peer Review, 2000
- USDA SARE Sustainable Agriculture Network publications, 1998, 2003
- Insect Ecology an Ecosystem Approach 2nd ed. 2005
- Chapter peer review for Biodiversity and Pest Management. Wiley Blackwell. (2011)
- Chapter peer review for Innovations in Collaborative Modeling. MSU Press (2016)
- Book Review of Heimpel and Mills Biological Control: Ecology and Applications. Cambridge Univ. Press (2017)
- Chapter peer review for Ann Hajek's Natural Enemies: An Introduction to Biological Control. 2nd Ed. Cambridge University Press (2017)

External Tenure and Promotion Peer Reviews; year and (number if more than one)

2000, 2001, 2002(3), 2003(2), 2004(4), 2006(2), 2009(2), 2011(2), 2012(6), 2013, 2014(2), 2015, 2017(2), 2018(2), 2019, 2021

INTERNATIONAL

- International Organization for Biological Control, Nearctic Region Secretary/Treasurer (1995-96)
- International Organization for Biological Control, Nearctic Region Board Member at Large, (2004-6)
- External Examiner, PhD Thesis, Lincoln University, New Zealand (2006)
- External Examiner, PhD Thesis, University of Sydney, Australia (2008)
- International Organization for Biological Control of Arthropods and Weeds. President Elect (2009-10)
- External Examiner, PhD Thesis, Lincoln University, New Zealand (2010)
- External Examiner, PhD Thesis, Charles Sturt University, Australia (2010)
- International Organization for Biological Control of Arthropods and Weeds. President (2011-12)
- PhD Thesis Opponent, Swedish Agricultural University (SLU) Uppsala, Sweden (2011)
- International Organization for Biological Control of Arthropods and Weeds. Past-President (2013-14)
- External Examiner, PhD Thesis, University of Adelaide, Australia (2015)
- PhD Dissertation Examiner, Monash University, Melbourne, Australia (2015)
- PhD Proposal Examiner, PE&RC of Wageningen University, The Netherlands (2019)
- PhD Dissertation Examiner, University of Queensland, Brisbane, Australia (2020)

NATIONAL

- USDA Extension Service, IPM Program. Strategic Planning. Jan 17-18, 1994. San Antonio. TX.
- Member, C. V. Riley Award Committee, NCB-ESA (1995-96)
- Chair, C.V. Riley Award Committee, NCB-ESA (1996-97)
- USDA SARE Ecological Farming System Design Team. Nov. 7-8, 1998. Las Vegas, NV.
- ESA's EF Henry and Sylvia Richardson Research Grant Committee (2003)
- Review USDA TAG petitions 2005, 2007
- Report to National Research Council, Committee on Strategic Planning for the Florida Citrus Industry: "Potential of landscape management for medium and long-term control of psyllid in citrus." (2009)

REGIONAL

- NCR-125 Arthropod Biological Control Regional Committee. 1989-07.
- NCR 46 Corn Rootworm Technical Committee, Secretary/Treasurer (1991)

NCR 46 Corn Rootworm Technical Committee, Chairperson Elect (1992)
NCR 125 Biological Control of Pest Arthropods, Secretary/Treasurer (1992)
NCR 46 Corn Rootworm Technical Committee, Chair (1993)
NCR 125 Biological Control of Pest Arthropods, Chair (1994)
Midwest Biological Control News, Field Crops Editor, Monthly Newsletter with Distribution of ca. 2,000 in 11 North Central States. 1994-00
NC-205 Ecology and Management of European Corn Borer and other Stalk-Boring Lepidoptera. 1996-02.
USDA Niles Partnership Steering Committee. 1999-02.
NCR 125 Arthropod Biological Control, Chair-elect 2004
Reviewed Ottawa National Forest Invasive Species Control Project 2004
NCERA-125 Arthropod Biological Control Regional Committee 2004-5 (Secretary 2004, Chair 2005)
NC 1025 Monarch Butterfly (*Danaus plexippus*) Conservation. Committee member 2016-

UNIVERSITY

MSU CES, Crop Advisory Team (CAT) Member, Field Crops. 1988-96.
MECP, Michigan Energy Conservation Program, IPM Expert Team Member. 1988-91.
AIMS, Agricultural Integrated Management Software. Core Member. 1989-91.
Agricultural Industry Committee, Field Crops. 1988-92.
MSU AES Type of Farming Team, Cash-Grain, Cash-Crop Committee. 1990-91.
Forage Commodity Committee, (Crop and Soil Science Standing Committee). 1990-95.
MSU ANR Week Conference on Sustainable Agriculture, Advisory Committee. 1990.
MSU AES Forage Research Task Force Member. 1990-92.
MSU AES/CES IPM Task Force Team Member. 1990-94
MSU CES, Sustainable Agriculture, Field Crops Education Development Team Member. 1991-92.
MSUE, Field Crops Area of Expertise Team 1995-present
C.S. Mott Graduate Fellowship in Sustainable Agriculture, Selection Committee. 1991-95.
1st Annual MSAN Research Symposium on Sustainable Agriculture, Poster Judge 2000
CANR Strategic Initiative, Working Group Co-Chair, 2001-02
CANR/CVM Michigan Governor-elect Granholm's Briefing Document "Michigan's Opportunities and Challenges," Invasive Species Team 2003
CANR/CNS Review Team, Kellogg Biological Station, 2003
Production and Food Systems Ecology, Program Development Committee 2003-04
MSU Museum Invasive Species Exhibit Development Committee 2004
MSU Invasive Species Initiative Coordinator 2004-
Peer Review of USDA Special Grant for MAES 2005
KBS/Crop Soil Science, Soils and Cropping Systems Ecologist Search Committee 2004-05
KBS Research and Graduate Program Retreat (invited external faculty participant) 2007
CANR Promotion and Tenure Committee (2007-09)
VPGRS Strategic Partnership Grant Chair Energy and Environment Panel Chair 2009-10, ad hoc reviewer 2011
KBS Agronomic User Committee 2009-11
CANR delegation to PURPAN, Toulouse, France. October 2014
MSU Clarksville Research Center, Faculty Advisory Committee. 2017-
CANR Graduate Committee 2017-2020
University Committee on Graduate Studies 2017-19
• Academic Research Policy subcommittee 2017-19
MSU University Distinguished Professors Advisory Committee 2019-2023
KBS LTER Science Coordinator Search Committee 2019-20
EEB Faculty Awards Committee 2020-

DEPARTMENTAL

Coach MSU Dept. Entomology, Linnaean Games Team 1989-1994.
-North Central Branch Champions, 1989.
-Second Place, National Competition, 1990.
MSU Dept. Entomology, Awards Committee. 1990.

Chair, MSU Dept. Entomology, IPM Strategic Planning Committee, 1991-92.
Editor, MSU Dept. Entomology, IPM Report, 1992.
MSU Dept. Entomology, IPM Exhibit, Ag. Expo, 1992.
Department Chairs Advisory Committee, Dec. 1992-94.
Faculty Advisor, Dept. Entomology Graduate Student Debate Team. 1994.
Hutson Grant Reviews 1995-2004.
Acting Chair, MSU Dept. of Entomology, 4/17 - 6/2/95.
Chair, Pest-Management Curriculum Review Committee 1997.
Academic Dishonesty Hearings, Panel Member (1) and Chair (1) 1998.
Graduate Student Committee 1998-01.
Faculty Organizer/Coach, Dept. Entomology Graduate Student Debate Team. 1999.
Visioning Committee. Co-Chair 2001.
Vision Transition Committee. Chair 2002.
Chair, Graduate Student Committee 2002-2010
Merger Response Writing Team. 2003.
Seminar Series Organizer. Fall 2003, Spring 2004.
Strategic Planning Committee 2004
Facility Planning Committee 2005-06
Entomology Chairpersons Advisory Committee 2010-2012
CANR Mentoring (task force) 2011
CANR Scholarship (task force) 2011
Entomology Department Advisory Committee 2013
Interim Chairperson May 2013-July 2014
Quantitative Insect Ecologist search committee 2015
Biocontrol Search Committee, Chair 2016-17
Graduate Committee, member 2016/19, Chair 2018-19
Prepared Beal Award Nomination 2017
Department Advisory Committee 2018-21
Department Bylaws Ad hoc Committee 2018

Other:

North Aurelius Science Day, Presentation on insects to 250 2nd-5th grade students. 3/1999
Farm Bureau Rural Education Day, MSU Pavilion, E. Lansing, MI. 4/1999.
Judge, 4-H State Award in Entomology. 6/99
Mason Girl Scouts Nature Daze. Presentation on insects to 200 K-6th grade students. 6/2000
North Aurelius Science Day, Presentation on insects to 250 1st-5th grade students. 3/2003
Member, Camp Friedenswald Natural Resources Task Force (NRTF) 2003-
-Drafted Invasive Species Management Plan for NRTF 2004
-Obtained MDNR Landowner Incentive Program grant for invasive species management 2005-7
Michigan Stewardship Network, Steering Committee, Education Sub-committee 2005-7
Coach, Mason Middle School Science Olympiad. 2005-6
Michigan Stewardship Network, Board President 2007-1)
Advised Lansing City Council subcommittee on parks naturalization. 2011-2012
Advised Ingham County Parks Department on grassland restoration. 2017
Michigan Monarch and Wild Pollinator Steering Committee. 2016-
Research Subcommittee Chair 2017-18