

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

7/00-present	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

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: <i>Enhancing Beneficial Insects with Native Plants</i> . Board Certified Entomologists of Mid-America
2001	Entomology Educational Project Award for <i>Natural Enemies in Your Garden</i> . 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 <i>The Purple Loosestrife Project at Michigan State University</i> . 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

- 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- 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

Ecological Society of America
 Entomological Society of America
 International Organization for Biological Control
 Michigan Entomological Society

INVITED PRESENTATIONS (past five years)

- 102. Ecosystem Services: A Framework for Novel Partnerships in Natural Areas Stewardship. D.A. Landis. Plenary session lead speaker, The Stewardship Network Conference: the Science, Practice, and Art of Restoring Native Ecosystems, East Lansing, MI. Jan. 21-22, 2012.
- 103. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. D.A. Landis. Keynote Lecture. ISU Graduate Program in Sustainable Agriculture 10th Anniversary Celebration and Research Symposium. Ames, IA. April 11, 2012.
- 104. Managing Agricultural Landscapes for Arthropod-Mediated Ecosystem Services. D.A. Landis. VIII Congreso Argentino de Entomología. Plenary Speaker (Conferencia). Bariloche, Argentina. April 17, 2012.
- 105. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. D.A. Landis. Lead speaker. Earth Day Symposium: Linking Biodiversity and Sustainability across Natural and Managed Landscapes. Purdue University. West Lafayette, IN. April 23, 2012.

106. A Debate on the Sustainability of Biomass Production for Energy: the con position. D.A. Landis. Ecological Society of America National Meeting, Portland, OR. August 6, 2012.
107. Insect Biodiversity and Ecosystem Services. KBS LTER All Scientists Meeting. Michigan State University, East Lansing, MI. April 5, 2013.
108. Insect Dynamics: Insect Biodiversity and Ecosystem Services. KBS LTER NSF Site Review. Kellogg Biological Station, Hickory Corners, MI. May 29, 2013.
109. Establishing A Multifunctional Cellulosic Bioenergy Supply Chain For The North Central US: A Landlab Approach. D. Landis, B Dale, R Jackson, N Jordan, and DB Steele. USDA NIFA CAP Reverse Site Visit. Washington, DC. July 17, 2013.
110. Insect Biodiversity and Ecosystem Services in Bioenergy Landscapes: Lessons from a five-year study. Douglas Landis, Benjamin Werling, Rufus Isaacs, Julianna Toole, Ashley Bennett, Claudio Gratton, Timothy Meehan, and Heidi Liere. Entomological Society of America National Meeting. Knoxville, Tennessee November 11-14, 2013.
111. Designing agricultural landscapes for biodiversity services. Douglas A. Landis. Entomological Society of America National Meeting. Knoxville, Tennessee November 11-14, 2013.
112. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. D. Landis. Conservation Biology/Ecology Seminar Series. University of Michigan. Ann Arbor, MI. March 29, 2013.
113. Ecosystem Services: A Framework for Novel Partnerships in Natural Areas Stewardship. D. Landis. Plenary Address, 2013 Conservation Stewards Program Commencement and Volunteer Recognition Gathering. Waterford Township, MI. April 29, 2013.
114. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. D. Landis. Department of Entomology Seminar Series. Michigan State University. East Lansing, MI. September 6, 2013.
115. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. D. Landis. Special Seminar. North Carolina State University, Department of Entomology, Raleigh, NC. October 11, 2013.
116. Perennial Grasslands Increase Multiple Ecosystem Services in Bioenergy Landscapes. D. Landis. P-IE Section Symposium: Interactions between Biological Control and Other Ecosystem Services. Entomological Society of America National Meeting. Austin, TX. November 12, 2013.
117. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. D. Landis. Department of Biological Sciences Seminar Series. Western Michigan University. Kalamazoo, MI. January 10, 2014.
118. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. D. Landis. Student Invited Department of Entomology Seminar Series. Penn State University. State College, PA. January 17, 2014.
119. Biodiversity Synthesis Paper: Science, Process, and Lessons Learned. Great Lakes Bioenergy Research Center Sustainability Retreat, Kellogg Biological Station, Hickory Corners, MI. February 4, 2014.
120. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. D. Landis. Symposium entitled: Ecosystem Services and Landscape Structures: Linking spatial process to biodiversity and ecosystem function in agroecosystems. Kyushu University. Fukuoka, Japan. February 10, 2014.
121. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. D. Landis. KBS K-12 Partnership Workshop. STEM: Environmental Engineering for Sustainability. Kellogg Biological Station, Hickory Corners, MI. April 23, 2014.

122. Perennial Grasslands Enhance Multiple Ecosystem Services in Bioenergy Landscapes. Plenary presentation, Great Lakes Bioenergy Center, 2014 Science Retreat. South Bend, IN May 20, 2014.
123. The Role of Landscape Design in Mitigating Agricultural Intensification. **DA Landis**. Program Symposium: Agricultural Intensification and Insect Communities: Production Trade-off Challenges with 9 Billion on the Horizon. Entomological Society of America National Meeting. Portland, OR. November 16, 2014.
124. Bioenergy and Beyond: Grasslands Support Farmland Biodiversity and Multiple Ecosystem Services. B Werling, **D Landis**, R Isaacs, C Gratton, and TD Meehan. P-IE Section Symposium: Global Grand Challenges and Opportunities in Grassland Entomology. Entomological Society of America National Meeting. Portland, OR. November 16, 2014.
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. Cornell University Entomology Seminar series. Ithaca, NY. April 13, 2016.
132. 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.
133. Designing landscapes for multiple services. DA Landis. XXV International Congress of Entomology. Orlando, Florida September 25-30, 2016.

PAPERS/POSTERS/SEMINARS (past five years)

147. Flowering plant and pollinator response to oak savanna restoration. **Lettow, MC**, LA Brudvig, and DA Landis. The Stewardship Network Annual Meeting, East Lansing, MI. 1/20/2012. (poster)
148. Oak savanna restoration and the pollinator community response. **Lettow, MC**, LA Brudvig, and DA Landis. The Stewardship Network Annual Meeting, East Lansing, MI. 1/20/2012.
149. The Biological Control of Knapweeds in Michigan. **Brendan D Carson**, Doug A Landis, Ernest Delfosse. Stewardship Network Annual Meeting. 1/20/ 2012. (poster)

150. Flowering plant and pollinator response to oak savanna restoration. **Lettow, MC**, LA Brudvig, and DA Landis. Plant Science Graduate Research Symposium, Michigan State University, East Lansing, MI. 4/3/2012 (poster)
151. The Biological Control of Knapweeds in Michigan. **Brendan D Carson**, Doug A Landis, Ernest Delfosse. Plant Science Graduate Student Research Symposium. 4/3/ 2012. (poster)
152. Development and delivery of ecologically-based IPM packages for wheat in Central Asia. **Shahlo Safarzoda**, Nurali Saidov, Anvar Jalilov, Mustapha El-Bouhssini, Megan Kennelly, Doug Landis. 7th International IPM symposium, Memphis, TN, 27/03 /2012 (poster)
153. Flowering plant and pollinator response to oak savanna restoration. **Lettow, MC**, LA Brudvig, and DA Landis. Midwest Society for Ecological Restoration Annual Meeting, University of Michigan, Ann Arbor, MI. 5/4/2012. (poster)
154. The Biological Control of Knapweeds in Michigan. **Brendan D Carson**, Doug A Landis, Ernest Delfosse. Midwest Society for Ecological Restoration Annual Meeting, University of Michigan, Ann Arbor, MI. 5/4/2012. (poster)
155. Measuring yield benefits of biocontrol services in bioenergy landscapes. **Liere, H**, BP Werling, TD Meehan, C Gratton and DA Landis. GLBRC Area 4 retreat, Kellogg Biological Station, Hickory Corners, MI. 5/22/ 2012. (poster)
156. Isolating the role of ants as predators in a Michigan prairie. **DL Graber** and DA Landis. 2012 Kellogg Biological Station REU/URA Symposium. Hickory Corners, MI. 8/3/2012. (poster).
157. Effect of transient coccinellid immigration on aphid suppression. **JM Woltz** and DA Landis. Ecological Society of America National Meeting, Portland, OR. August 7, 2012. (poster)
158. Long term sampling reveals previously unobserved trends in predatory coccinellid populations in an agricultural landscape. **Christie Bahlai** and Doug Landis. NSF LTER All Scientists Meeting, Estes Park, CO. 9/11/2012. (poster)
159. Effect of coccinellid immigration on soybean aphid suppression. **J.M. Woltz** and D.A. Landis. International EcoSummit. Columbus, OH. Oct 1-5, 2012 (poster).
160. Oak savanna restoration in Michigan: Effects on habitat and bee communities. **Mitchell Lettow**, Lars Brudvig and Douglas A. Landis. 39th Annual Natural Areas Conference, in Norfolk Virginia. 10/9/12, 2012 (poster)
161. Insect predation in bioenergy grasslands: Video surveillance implicates a diverse cast of suspects. **Benjamin Werling**, Julia Perrone, Matthew Grieshop, Timothy Meehan, Claudio Gratton, and Douglas Landis. Entomological Society of America National Meeting. Knoxville, Tennessee November 11-14, 2012
162. Landscape and immigration affect soybean aphid biocontrol. **J.M. Woltz** and D. A. Landis. MSU EEBB Graduate Colloquium Series. East Lansing, MI. Jan 16, 2013
163. Biological Control of spotted knapweed in Michigan and conservation on associated pollinators. **Brendan D Carson**, Doug A Landis, Ernest Delfosse. The Stewardship Network, Annual Meeting, Michigan State University, East Lansing, MI. 1/18/2013. (poster)
164. Isolating the role of ants (Hymenoptera: Formicidae) as seed and insect predators in a Michigan prairie. **DL Graber** and DA Landis. The Stewardship Network, Annual Meeting, Michigan State University, East Lansing, MI. 1/18/2013. (poster)

165. Oak savanna restoration methods: effects on habitat, flowering [plants, and pollinators]. **Mitchell Lettow**, Lars Brudvig and Douglas A. Landis. The Stewardship Network, Annual Meeting, Michigan State University, East Lansing, MI. 1/18/2013. (poster)
166. Isolating the role of ants (Hymenoptera: Formicidae) as seed and insect predators in a Michigan prairie. DL Graber and **DA Landis**. Great Lakes Bioenergy Research Center, Sustainability Retreat. Kellogg Biological Station, Hickory Corners, MI. 2/18/2013. (poster)
167. Long term sampling reveals previously unobserved trends in predatory coccinellid populations in an agricultural landscape. **CA Bahlai**, M Colunga-Garcia, SH Gage and DA Landis. Kellogg Biological Station Long Term Ecological Research All Scientists Meeting. East Lansing, MI, 4/4/2013. (poster)
168. Measuring predator avoidance behavior in soybean aphid (*Aphis glycines*). **Grace Hirzel**, DA Landis, and JM Woltz. MSU Undergraduate Research and Arts Forum. E. Lansing, MI. Apr 12, 2013.
169. Relationships between landscape structure, coccinellid activity density and aphid suppression in soybean. **JM Woltz** and DA Landis. Oregon State University Department of Horticulture seminar. Corvallis, OR. Oct 10, 2013.
170. Niche Partitioning in a Community of Aphidophagous Coccinellidae. **C Bahlai**, DA Landis. Entomological Society of America National Meeting. Austin, TX. November 12, 2013.
171. Trophic Cascades in Bioenergy Landscapes. **T Kim**, H Liere, B Werling, TD Meehan, DA Landis, C Gratton. P-IE Section Symposium: Biofuel Cropping Systems: Connecting Beneficial Arthropods, Ecosystem Services, and Landscape Effects. Entomological Society of America National Meeting. Austin, TX. November 12, 2013.
172. Effects of Landscape Composition on the Abundance and Richness of Arthropod Natural Enemies: Examples from Midwest Agriculture. **H Liere**, B Werling, T Kim, DA Landis, C Gratton. Entomological Society of America National Meeting. Austin, TX. November 12, 2013. (poster)
173. 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 Lakes Bioenergy Research Center Sustainability Retreat, Kellogg Biological Station, Hickory Corners, MI. February 4, 2014. (poster)
174. Harvesting and Landscape Effects on Natural Enemy Abundance and Biocontrol in Perennial Grasslands. **TN Kim**, H Liere, TD Meehan, AF Fox, DA Landis and C Gratton. Great Lakes Bioenergy Research Center Sustainability Retreat, Kellogg Biological Station, Hickory Corners, MI. February 4, 2014. (poster)
175. Crowd-Sourcing Ecology: Predicting Plant Attractiveness to Pollinators from Internet Image Searches. **C. Bahlai**, and D. Landis. Annual Meeting of the Ecological Society of America, Sacramento, CA, 9-15 August 2014.
176. Dual regime shifts in dynamics of an invasive predatory ladybug are linked to the invasion and pesticidal control of its aphid prey. **C Bahlai**, W vanderWerf, and DA Landis. Entomological Society of America National Meeting. Portland, OR. November 16, 2014.
177. Harvesting and Landscape Effects on Natural Enemy Abundance and Biocontrol in Perennial Grasslands. **TN Kim**, H Liere, TD Meehan, AF Fox, DA Landis and C Gratton. Entomological Society of America National Meeting. Portland, OR. November 18, 2014. (poster)
178. 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. Entomological Society of America National Meeting. Portland, OR. November 18, 2014. (poster)

179. 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. Great Lakes Fruit, Vegetable and Farm Market EXPO. Grand Rapids, MI. December 9-11, 2014. (poster)
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. 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)

PUBLICATIONS

Citation metrics as of 1/20/2017 Web of Science. N=135 articles, H-index=42, 4 highly cited* (“top 1% of its academic field”), Sum of times cited w/o self-citations=5566, Average citations per article=44.51, Maximum citations per article=1127 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.

10. Lohr, L., O. Hesterman, J. Kells, D. Landis, and D. Mutch. 1992. Methodology for designing and evaluating comparative cropping systems. *J. Farming Systems Research-Extension*. 3:(1) 105-129.
11. Landis, D.A., C.E. Sorenson, and E.D. Cashatt. 1992. Biology of *Clydonopteron sacculana* (Lepidoptera: Pyralidae) in North Carolina with description of the egg stage. *Annals Entomol. Soc. Am.* 85(5): 596-604.
12. Landis, D.A., E. Levine, M.J. Haas, and V. Meints. 1992. Detection of prolonged diapause of Northern corn rootworm (Coleoptera: Chrysomelidae) in Michigan. *Great Lakes Entomologist*. 25(3): 215-222.
13. Maredia, K.M., S.H. Gage, D.A. Landis, and J.M. Scriber. 1992. Habitat utilization patterns by the seven-spotted lady beetle (Coleoptera: Coccinellidae) in a diverse agricultural landscape. *Biological Control*. 2: 159-165.
14. Maredia, K.M., S.H. Gage, D.A. Landis, and T.M. Wirth. 1992. Visual response of *Coccinella septempunctata* (L.), *Hippodamia parenthesis* (Say), (Coleoptera: Coccinellidae), and *Chrysoperla carnea* (Stephens), (Neuroptera: Chrysopidae) to colors. *Biological Control*. 2:253-256.
15. Maredia, K.M., S.H. Gage, D.A. Landis, and T.M. Wirth. 1992. Ecological observations on predatory Coccinellidae (Coleoptera) in southwestern Michigan. *Great Lakes Entomologist*. 25(4):265-270.
16. Morton, C.A., R.G. Harvey, J.J. Kells, D.A. Landis, W.E. Lueschen, and V.A. Fritz. 1993. In-furrow terbufos: reduced field and sweet corn (*Zea mays*) tolerance to nicosulfuron. *Weed Technol.* 7: 934-939.
17. Walker, E., and D. Landis. 1994. Straw Itch Mite, *Pymotes tritici*, Infestation in brome seed related to acute dermatitis in Michigan granary workers. *Great Lakes Entomologist*. 27:125-128.
18. Morton, C.A., R.G. Harvey, J.L. Wedburg, J.J. Kells, D.A. Landis, and W.E. Lueschen. 1994. Influence of corn rootworm insecticides on the response of field corn (*Zea mays*) to nicosulfuron. *Weed Technol.* 8:289-295.
19. Marino, P.C., and D.A. Landis. 1996. Effect of landscape structure on parasitoid diversity and parasitism in agroecosystems. *Ecol. Applic.* 6(1): 276-284.
20. Roda, A.L., D.A. Landis, M.J. Coggins, E. Spandl, and O.B. Hesterman. 1996. Forage grasses decrease alfalfa weevil (Coleoptera: Curculionidae) damage and larval numbers in alfalfa-grass intercrops. *J. Econ. Entomol.* 89(3): 743-750.
21. Dyer, L.E., and D.A. Landis. 1996. Effects of habitat, temperature and sugar availability on longevity of *Eriborus terebrans* (Gravenhorst) (Hymenoptera: Ichneumonidae). *Environ. Entomol.* 25:1192-1201.
22. Orr, D.B., D.A. Landis, D.R. Mutch, G.V. Manley, S.A. Stuby, and R.L. King. 1997. Ground-cover influence on microclimate and *Trichogramma* augmentation in seed corn production. *Environ. Entomol.* 26: 433-438.
23. Orr, D.B., and D.A. Landis. 1997. Oviposition of European corn borer (Lepidoptera: Pyralidae) and impact of natural enemy populations in transgenic versus isogenic corn. *J. Econ. Entomol.* 90: 905-909.
24. Roda, A.L., D.A. Landis, and J.R. Miller. 1997. Contact-induced emigration of potato leafhopper (Homoptera: Cicadellidae) from alfalfa-forage grass mixtures. *Environ. Entomol.* 26: 754-762.
25. Roda, A.L., D.A. Landis, and M.L. Coggins. 1997. Forage grasses elicit adult potato leafhopper (Homoptera: Cicadellidae) emigration from alfalfa-grass mixtures. *Environ. Entomol.* 26: 745-753.

26. Colunga-Garcia, M., S.H. Gage, and D.A. Landis. 1997. Response of an assemblage of Coccinellidae (Coleoptera) to a diverse agricultural landscape. *Environ. Entomol.* 26: 797-804.
27. Dyer, L.E., and D.A. Landis. 1997. Influence of non-crop habitats on the distribution of *Eriborus terebrans* (Hymenoptera: Ichneumonidae) in cornfields. *Environ. Entomol.* 26: 924-932.
28. Fuller, B.W., M.A. Boetel, D.D. Walgenbach, J.A. Grungler, G.L. Hein, K.J. Jarvi, A.J. Keaster, D.A. Landis, L.J. Meinke, J.D. Oleson, K.R. Ostlie, J.J. Tollefson, J.L. Wedburg, G.E. Wilde, and P.D. Evenson. 1997. Optimization of soil insecticide rates for managing corn rootworm (Coleoptera: Chrysomelidae) larvae in the North Central United States. *J. Econ. Entomol.* 90: 1332-1340.
29. Landis, D.A., and W. van der Werf. 1997. Early-season aphid predation impacts establishment and spread of sugar beet yellows virus in the Netherlands. *Entomophaga* 42: 499-516.
30. Marino, P.C. K.L. Gross, and D.A. Landis. 1997. Post-dispersal weed seed loss in Michigan maize fields. *Agric. Ecosyst. Environ.* 66: 189-96.
31. Garcia-Salazar, C., and D.A. Landis. 1997. Marking *Trichogramma brassicae* Bezdenko (Hymenoptera: Trichogrammatidae) with a fluorescent marker dust and its effect on survival and flight behavior. *J. Econ. Entomol.* 90: 1546-50.
32. Dyer, L.E., and D.A. Landis. 1997. Diurnal behavior of *Eriborus terebrans* (Hymenoptera: Ichneumonidae). *Environ. Entomol.* 26: 1385-1392.
33. Menalled, F.D., P.C. Marino, S.H. Gage, and D.A. Landis. 1999. Does agricultural landscape structure affect parasitism and parasitoid diversity? *Ecological Applications*, 9: 634-641.
34. Menalled, F., J. Lee, and D. Landis. 1999. Manipulating carabid beetle abundance alters prey removal rates in corn fields. *BioControl*. 43: 441-456.
35. Carmona, D., F. Menalled, and D. Landis. 1999. Northern Field Cricket, *Gryllus pennsylvanicus* Burmeister (Orthoptera: Gryllidae): Weed seed predation and within-field activity-density. *J. Econ. Entomol.* 92: 825-29.
36. Sebolt, D.C., and D.A. Landis. 1999. Gypsy moth (*Lymantria dispar* L.) feeding on purple loosestrife (*Lythrum salicaria* L.) in Michigan. *Great Lakes Entomologist*. 32: 75-78.
37. Carmona, D.M., and D.A. Landis. 1999. Influence of refuge habitats and covers crops on seasonal activity-density of ground beetles (Coleoptera: Carabidae) in field crops. *Environ. Entomol.* 28: 1145-53.
38. Landis, D.A., S.D. Wratten & G.M. Gurr. 2000. Habitat Management to Conserve Natural Enemies of Arthropod Pest in Agriculture. *Annual Review Entomology* 45:173-201.
39. Menalled, F., P. Marino, K. Renner, and D. Landis. 2000. Post-dispersal weed seed predation in crop fields as a function of agricultural landscape structure. *Agric. Ecosys. and Environ.* 77:193-207.
40. Kaufman, L.N., and D.A. Landis. 2000. Host-specificity testing of *Galerucella californiensis* L. (Coleoptera: Chrysomelidae) versus Michigan native and ornamental plants. *Biological Control* 18: 157-64.
41. Lee, J.C., F.D. Menalled, and D.A. Landis. 2001. Refuge habitats modify impact of insecticide disturbance on carabid beetle communities. *J. Appl. Ecol.* 38: 472-483

42. Blossey, B., R. Casagrande, L. Tewksbury, D.A. Landis, R. Wiedenmann, and D.R. Ellis. 2001. Non-target feeding of leaf-beetles introduced to control purple loosestrife (*Lythrum salicaria*). *Natural Areas Journal*. 21: 368-377.
43. Menalled, F.D., J.C. Lee, and D.A. Landis. 2001. Herbaceous filter strips in agroecosystems: implications for carabid beetle (Coleoptera: Carabidae) conservation and invertebrate weed seed predation. *Great Lakes Entomol.* 34: 77-91.
44. O'Neal, M.E., C.D. DiFonzo, and D. A. Landis. 2002. Western corn rootworm (Coleoptera: Chrysomelidae) feeding on corn and soybean leaves is influenced by corn phenology. *Environ. Entomol.* 31: 285-292.
45. Sebolt, D.C., and D.A. Landis. 2002. Neonate *Galerucella californiensis* (Coleoptera: Chrysomelidae) Behavior on Purple Loosestrife (*Lythrum salicaria*) contributes to predator avoidance. *Environ. Entomol.* 31: 880-886.
46. O'Neal, M.E., D. A. Landis, and R. Isaacs. 2002. An inexpensive, accurate method for measuring leaf area and defoliation through digital image analysis. *J. Econ. Entomol.* 95: 1190-94.
47. Menalled, F.D., A.C. Costamagna, P.C. Marino, and D.A. Landis. 2003. Temporal variation in the response of parasitoids to agricultural landscape structure. *Agric. Ecosyst. Environ.* 96: 29-35.
48. Landis, D.A., D.C. Sebolt, M.J. Haas, and M. Klepinger. 2003. Establishment and impact of *Galerucella californiensis* L. (Coleoptera: Chrysomelidae) on *Lythrum salicaria* L. and associated plant communities in Michigan. *Biological Control*. 28:78-91.
49. O'Neal, M.E., C.D. DiFonzo, D. A. Landis, and D. Meek. 2002. Monitoring *Diabrotica virgifera virgifera* (LeConte) in Michigan soybean fields and subsequent adult emergence in rotated and continuous cornfields. *Great Lakes Entomologist*. 35: 173-181. (appeared fall 2003)
50. Rutledge, C.E., R.J. O'Neil, T.B. Fox, and D.A. Landis. 2004. Soybean aphid predators and their use in IPM. *Annals Ent. Soc. Am.* 97: 240-248.
51. O'Neal, M.E., D.A. Landis, J.R. Miller, and C.D. DiFonzo. 2004. Corn phenology influences *Diabrotica virgifera virgifera* (LeConte) emigration and visitation to soybean. *Environ. Entomol.* 33: 35-44.
52. Menalled, F.D., D.A. Landis, and L.E. Dyer. 2004. Research and extension supporting ecologically based IPM systems. *Journal of Crop Improvement* 11 (1/2): 153-174.
53. Costamagna, A.C., and D.A. Landis. 2004. Effect of Food Resources on Adult *Glyptapanteles militaris* and *Meteorus communis* (Hymenoptera: Braconidae), Parasitoids of *Pseudaletia unipuncta* (Lepidoptera: Noctuidae). *Environ. Entomol.* 128-137.
54. Sebolt, D.C., and D. A. Landis. 2004. Arthropod Predators of *Galerucella californiensis* L. (Coleoptera: Chrysomelidae): An assessment of biotic interference. *Environ. Entomol.* 33: 356-361.
55. Landis, D.A., T.B. Fox, A.C. Costamagna. 2004. Impact of multicolored Asian lady beetle as a biological control agent. *The American Entomologist*. 50: 153-54.
56. Fox, T.B., D.A. Landis, F. F. Cardoso, C.D. DiFonzo. 2004. Predators suppress *Aphis glycines* Matsumura population growth in soybean. *Environ. Entomol.* 33: 608-618.
57. Costamagna, A.C., F.D. Menalled and D.A. Landis. 2004. Host density influences parasitism of the armyworm *Pseudaletia unipuncta* in agricultural landscapes. *Basic and Applied Ecology*. 5: 337-355.

58. Wilkinson, T.K., D.A. Landis, L.J. Gut. 2004. Parasitism of Obliquebanded Leafroller, *Choristoneura rosaceana* (Harris) (Lepidoptera: Tortricidae), in Commercially Managed Michigan Apple Orchards. *J. Econ. Entomol.* 97: 1524-1530.
59. O'Neal, M.E., E.L. Zontek, Z. Szendrei, D.A. Landis and R. Isaacs. 2005. Ground predator abundance affects prey removal in highbush blueberry (*Vaccinium corymbosum*) fields and can be altered by aisle ground covers. *BioControl.* 50:205-222.
60. O'Neal, M.E., D. A. Landis, E. Rothwell, L. Kempel, and D. Reinhard. 2005. Tracking Insects with Harmonic Radar: a Case-Study with Carabids in Annual Crop Habitat. *The American Entomologist.* 50: 212-218.
61. Fox, T.B., D.A. Landis, F.F. Cardoso and C.D. DiFonzo. 2005. Impact of predation on establishment of the soybean aphid *Aphis glycines* Matsumura in soybean, *Glycine max* L. *BioControl.* 50:545-563.
62. Landis, D.A., F.D. Menalled, F.D., A.C. Costamagna, and T.K. Wilkinson. 2005. Manipulating plant resources to enhance beneficial arthropods in agricultural landscapes. *Weed Sci.* 53: 902-908
63. Costamagna, A.C., and D.A. Landis. 2006. Predators exert top-down control of soybean aphid across a gradient of agricultural management systems. *Ecol. Applic.* 16: 1619-28.
64. Marino, P.C, D.A. Landis, B.A. Hawkins. 2006. Conserving parasitoid assemblages of North American pest Lepidoptera: what alternate host food plant relationships tell us about agricultural landscapes. *Biological Control.* 37: 173-185.
65. Davis, A.S., D.A. Landis, V. Nuzzo, B. Blossey, E. Gerber and H.L. Hinz. 2006. Demographic models inform selection of biocontrol agents for garlic mustard. *Ecol. Applic.* 16: 2399-2410.
66. Swinton, S.M., F. Lupi, G.P. Robertson and D.A. Landis. 2006. Ecosystem services from agriculture: Looking beyond the usual suspects. *Am. J of Agric. Econ.* 88(5): 1160-1166.
67. Costamagna, A.C., D.A. Landis and C.D. DiFonzo. 2007. Suppression of soybean aphid by generalist predators results in a trophic cascade in soybeans. *Ecol. Applic.* 17: 441-451
68. Gardiner, M.M., and D.A. Landis. 2007. Impact of intraguild predation by *Harmonia axyridis* (Coleoptera: Coccinellidae) on *Aphis glycines* (Hemiptera: Aphididae) biological control in cage studies. *Biological Control.* 40:386-395.
69. Fiedler, A. K., and D. A. Landis. 2007. Attractiveness of Michigan native plants to arthropod natural enemies and herbivores. *Environ. Entomol.* 36 (4): 751-765.
70. Fiedler, A. K., and D. A. Landis. 2007. Plant characteristics associated with natural enemy abundance at Michigan native plants. *Environ. Entomol.* 36 (4): 878-886.
71. Costamagna, A.C., and D.A. Landis. 2007. Quantifying predation on soybean aphid through direct field observations. *Biological Control.* 42:16-24.
72. Costamagna, A.C., W. van der Werf, F.J.J.A. Bianchi, and D.A. Landis. 2007. An exponential growth model with decreasing *r* captures bottom-up effects on the population growth *Aphis glycines* Matsumura (Hemiptera: Aphididae). *Agr. and For. Entomol.* 9:297-305.
73. Evans, J.A., and D.A. Landis. 2007. Pre-release monitoring of *Alliaria petiolata* (garlic mustard) invasions and the impacts of extant natural enemies in southern Michigan forests. *Biological Control.* 42:300-315.

74. White, S.S., K.A. Renner, F.D. Menalled and D.A. Landis. 2007. Feeding Preferences of Weed Seed Predators and Effect on Weed Emergence. *Weed Sci.* 55:606–612.
75. Jonsson, M., S.D. Wratten, D.A. Landis and G.M. Gurr. 2008. Recent advances in conservation biological control of arthropods by arthropods. *Biological Control.* 45:172-175.
76. Fiedler, A.K., D.A. Landis and S. Wratten. 2008. Maximizing ecosystem services from conservation biological control: the role of habitat management. *Biological Control.* 45:254-271.
77. Costamagna, A.C., D.A. Landis and M.J. Brewer. 2008. The role of natural enemy guilds in *Aphis glycines* suppression. *Biological Control.* 45:368-379.
78. Tuell, J.K., A. K. Fiedler, D.A. Landis, and R. Isaacs. 2008. Visitation by wild and managed bees (Hymenoptera: Apoidea) to Eastern U.S. native plants for use in conservation programs. *Environ. Entomol.* 37:707–718.
79. Chacón, J.M, D.A. Landis and G.E. 2008. Heimpel. Potential for biotic interference of a classical biological control agent of the soybean aphid. *Biological Control* 46:216-225.
80. Landis, D.A., M.M. Gardiner, W. van der Werf, and S.M. Swinton. 2008. Increasing corn for biofuel production reduces biocontrol services in agricultural landscapes. *PNAS.* 105: 20552-20557; *published online before print December 15, 2008, doi:10.1073/pnas.0804951106*
81. Saidov N.SH., Landis D.A. 2008. Evaluation of flowering plants to attract natural enemies in Tajikistan. *Journal of Biological Sciences of Academy of Science of Tajikistan*, November 2008, Vol. 5:19-28. (in Russian).
82. Isaacs, R., J. Tuell, A. Fiedler, M. Gardiner and D. Landis. 2009. Maximizing arthropod-mediated ecosystem services in agricultural landscapes: the role of native plants. *Frontiers in Ecology and the Environment.* 7: 196-203. published on-line 26 August, 2008 DOI: 10.1890/080035
83. *Gardiner, M.M., D.A. Landis, C. Gratton, C.D. DiFonzo, M. O’Neal, J.M. Chacon, M.T. Wayo, N.P. Schmidt, E.E. Mueller and G.E. Heimpel. 2009. Landscape diversity enhances the biological control of an introduced crop pest in the north-central U.S. *Ecol. Applic.* 19:143-154.
84. Gardiner, M.M., D.A. Landis, C. Gratton, N. Schmidt, M. O’Neal, E. Mueller, J. Chacon, G.E. Heimpel, and C.D. Difonzo. 2009. Landscape composition mediates exotic and native coccinellid community structure. *Diversity and Distributions.* 15:554-564.
85. Hamm, C.A., D. Aggarwal, and D.A. Landis. 2010. Evaluating the Impact of Non-Lethal DNA Sampling on two Butterflies, *Vanessa cardui* and *Satyroides eurydice*. *J Insect Conservation* 14:11–18. DOI 10.1007/s10841-009-9219-0
86. Landis, D.A. & B. P. Werling. 2010. Arthropods and Biofuel Production Systems in North America. *Insect Science.* 17:1–17, DOI 10.1111/j.1744-7917.2009.01310.x
87. Gardiner, M, J Tuell, R Isaacs, J Gibbs, J Ascher and DA Landis. 2010. Implications of three model biofuel crops for beneficial arthropods in agricultural landscapes. *BioEnergy Research.* 3:6–19. DOI 10.1007/s12155-009-9065-7
88. Heimpel, G.E., L.E. Frelich, D.A. Landis., K.R. Hopper , K.Hoelmer , Z.Sezen, M.K. Asplen, K. Wu. 2010. European buckthorn and Asian soybean aphid as part of an extensive invasional meltdown in North America. *Biological Invasions.* 12:2913–2931. DOI 10.1007/s10530-010-9736-5

89. Jonsson, M., S.D. Wratten, D.A. Landis, J-ML. Tompkins and R. Cullen. 2010. Habitat manipulation to mitigate the impacts of invasive arthropod pests. *Biological Invasions*. 12:2933–2945 DOI 10.1007/s10530-010-9737-4
90. Ahern, R.G., D.A. Landis, A.A. Reznicek, and D.W. Schemske. 2010. Spread of exotic plants in the landscape: the role of time, biological traits, and history of invasiveness. *Biological Invasions*. 12: 3157-3169. DOI 10.1007/s10530-010-9707-x
91. Saidov N.Sh., A.U. Jalilov, D.A. Landis, A. Fiedler, V.K. Nazirov, T. Mirzoev, S. Karimjanov, 2010. Introduction the flowering plants in agricultural landscapes for increasing of efficiency of natural enemies. *Bulletin of the Academy of agricultural sciences of the Republic of Tajikistan*, 8 p., *In press* (in Russian).
92. Costamagna, AC. BP McCornack, DW Ragsdale, and DA Landis. 2010. Development and Validation of Node-Based Sample Units for Estimating Soybean Aphid (Hemiptera: Aphididae) Densities in Field Cage Experiments. *J. Econ. Entomol.* 10:1483-1492; DOI: 10.1603/EC10012
93. Gardiner, MM, DA Landis, C Gratton, N Schmidt; M O'Neal, E Mueller; J Chacon; GE Heimpel. 2010. Landscape composition influences the activity density of Carabidae and Arachnida in soybean fields. *Biological Control*. 55:11-19. [doi:10.1016/j.biocontrol.2010.06.008](https://doi.org/10.1016/j.biocontrol.2010.06.008)
94. *Ragsdale, D.W., D.A. Landis, J. Brodeur, G.E. Heimpel, N. Desneux. 2011. Ecology and Management of the Soybean Aphid in North America. *Annual Review of Entomology* 56: 375-99. DOI: 10.1146/annurev-ento-120709-144755
95. Werling, B, TD Meehan, B Robertson, C Gratton, D Landis. 2011. Biocontrol potential varies with changes in biofuel-crop plant communities and landscape perennality. *Global Change Biology-Bioenergy*. 59: 304-312. doi: 10.1111/j.1757-1707.2011.01092.x
96. Costamagna, A.C., D.A. Landis. 2011. Lack of strong refuges allows top-down control of soybean aphid by generalist natural enemies. *Biological Control*. 57:184-192.
97. D.A. Landis, A.K. Fiedler, C.A. Hamm, D.L. Cuthrell, E.H. Schools, D.R. Pearsall, M.E. Herbert and P.J. Doran. 2011. Insect conservation in prairie fen: addressing the challenge of global change. *J. Insect Conservation*. 16:131-142. DOI 10.1007/s10841-011-9398-3
98. Fiedler, A.K. and D.A. Landis and M. Arduser. 2011. Rapid shift in pollinator communities following invasive species removal. *Restoration Ecology*. 20: 593-602. doi: 10.1111/j.1526-100X.2011.00820.x.
99. Meehan, TD, BP. Werling, DA. Landis and C. Gratton. 2011. Agricultural landscape simplification and insecticide use in the Midwestern U.S. *PNAS*. 108: 11500-1505. doi/10.1073/pnas.1100751108
100. Werling, B, TD Meehan, C. Gratton, DA Landis. 2011. Influence of habitat and landscape perennality on insect natural enemies in three candidate biofuel crops. *Biological Control* 59: 301-312. doi:10.1016/j.biocontrol.2011.06.014
101. Gardiner, M.M., M.E. O'Neal, and D.A. Landis. 2011. Intraguild predation and native lady beetle decline. *PLoS ONE*. 6(9): e23576. doi:10.1371/journal.pone.0023576.
102. Fiedler, A.K., and D.A. Landis. 2012. Biotic and abiotic conditions in Michigan prairie fen invaded by glossy buckthorn (*Frangula alnus*). *Natural Areas Journal*. 32: 41-53. **IF = 0.789**
103. Robertson B.A. C. Porter, D.A. Landis and D.W. Schemske. 2012. Agroenergy crops influence the diversity, biomass, and guild structure of terrestrial arthropod communities. *BioEnergy Research*. 5:179–188 DOI 10.1007/s12155-011-9161-3. **IF = 3.56**

104. Knapp AK, MD Smith, SE Hobbie, SL Collins, TJ Fahey, GJA Hansen, DA Landis, KJ La Pierre, JM Melillo, TR Seastadt, GR Shaver, JR Webster. 2012. Past, present and future roles of long-term experiments in the LTER network. *BioScience* 62(4) 377-389. **IF = 4.621**
105. *Tschardtke, T, Jason M. Tylianakis, Tatyana A. Rand, Raphael K. Didham, Lenore Fahrig, Péter Batáry, Janne Bengtsson, Yann Clough, Thomas O. Crist, Carsten F. Dormann, Robert M. Ewers, Jochen Fründ, Robert D. Holt, Andrea Holzschuh, Alexandra M. Klein, David Kleijn, Claire Kremen, Doug A. Landis, William Laurance, David Lindenmayer, Christoph Scherber, Navjot Sodhi, Ingolf Steffan-Dewenter, Carsten Thies, Wim H. van der Putten and Catrin Westphal. 2012. Landscape moderation of biodiversity patterns and processes - eight hypotheses. *Biol. Rev.* 87:661–685. doi:10.1111/j.1469-185X.2011.00216.x. **IF = 9.067** [an F1000 Prime recommended article <http://f1000.com/prime/717963653>]
106. Evans, J.A., Davis, A.S., Raghu, S., A. Ragavendran, D.A. Landis and D.W. Schemske. 2012. The importance of space, time and stochasticity to the demography and management of *Alliaria petiolata*. *Ecological Applications*. 22(5):1497-1511. **IF = 5.1**
107. Woltz, MJ, R Isaacs, DA Landis. 2012. Landscape structure and habitat management differentially influence insect natural enemies in an agricultural landscape. *Agriculture Ecosystems and Environment*. 152:40-49. doi:10.1016/j.agee.2012.02.008. **IF = 3.969**
108. Meehan, TD, BP. Werling, DA. Landis and C Gratton. 2012. Pest-Suppression Potential of Midwestern Landscapes under Contrasting Bioenergy Scenarios. *PLoS ONE*. 7(7):e41728. doi:10.1371/journal.pone.0041728. **IF = 4.09**
109. Grieshop, Matthew J., Ben Werling, Krista Buehrer, Julia Perrone, Rufus Isaacs, Doug Landis. 2012. Big brother is watching: studying insect predation in the age of digital surveillance. *American Entomologist*. 58:172-182. **IF = na**
110. Robertson, B.A., R.A. Rice, T.S. Sillett, B.A. Babcock, C.A. Ribic, B.A. Babcock, D.A. Landis, J.R. Herkert, R.J. Fletcher, Jr., J.J. Fontaine, P.J. Doran, and D.W. Schemske. 2012. Are agrofuels a conservation threat or opportunity for grassland birds in the United States? *The Condor*. 114:679–688. **IF = 1.118**
111. Robertson, B.A., Landis, D.A., Sillett, T.S., Loomis, E.L. & Rice, R. 2013. Perennial agroenergy feedstocks as a new source of en route habitat for spring migratory birds. *BioEnergy Research*. 6:311-320. DOI 10.1007/s12155-012-9258-3. **IF = 3.56**
112. Hamm, CA, BL Williams, DA Landis. 2013. Natural history and conservation status of the endangered Mitchell's Satyr butterfly: an update and expansion of our knowledge regarding *Neonympha mitchellii mitchellii* French 1889. *Journal of the Lepidopterists' Society*. 67(1) 15-28. **IF = 0.27**
113. Woltz, J.M. and D.A. Landis. 2013. Coccinellid immigration to infested host patches influences suppression of *Aphis glycines* in soybean. *Biological Control*. 64:330-337. **IF = 2.178**
114. Hamm, C.A., V. Rademacher, D.A. Landis, and B.L. Williams. 2013. Conservation genetics and the implication for recovery of the endangered Mitchell's satyr butterfly, *Neonympha mitchellii mitchellii*. *Journal of Heredity*. 105: 19-27. **IF=2.438**
115. Jordan, N., C. Williams, L. Schulte Moore, D. Pitt, C. Schively-Slotterback, R. Jackson, D. Landis, D. Mulla, D. Becker, M. Rickenbach, B. Dale, C. Helmers, and B. Bringi. 2013. *Landlabs: A New Approach to Creating Agricultural Enterprises That Meet the Triple Bottom Line*. *Journal of Higher Education Outreach and Engagement*. 17:175-200. <http://openjournals.libs.uga.edu/index.php/jheoe/article/view/1098/705> **IF=na**

116. Bahlai, C.A., M. Colunga-Garcia, S.H. Gage, and D.A. Landis. 2013. Long term community dynamics of aphidophagous coccinellids in response to repeated invasion in a diverse agricultural landscape. *PLOS One*. DOI: 10.1371/journal.pone.0083407. **IF=4.09**
117. Woltz, J.M., D.A. Landis. 2014. Comparison of sampling methods of *Aphis glycines* predators across the diel cycle. *J. Applied Entomology*. 138: 475-84. DOI: 10.1111/jen.12106 **IF=1.56**
118. Robertson, G.P., K.L. Gross, S.K. Hamilton, D.A. Landis, T.M. Schmidt, S.S. Snapp, and S.M. Swinton. 2014. Farming for ecosystem services: An ecological approach to production agriculture. *BioScience* 64: 404-15. DOI: [10.1093/biosci/biu037](https://doi.org/10.1093/biosci/biu037) **IF=4.621**
119. *Werling, B.P., T.L. Dickson, R. Isaacs, H. Gaines, C. Gratton, K.L. Gross, H. Liere, C.M. Malmstrom, T.D. Meehan, L. Ruan, B.A. Robertson, G.P. Robertson, T.M. Schmidt, A.C. Schrottenboer, T.K. Teal, J.K. Wilson, and D.A. Landis. 2014. Perennial grasslands enhance biodiversity and multiple ecosystem services in bioenergy landscapes. *PNAS* 111: 41652-1657. DOI: 10.1073/pnas.1309492111. **IF= 9.737**
120. Woltz, J.M., D.A. Landis. 2014. Coccinellid response to landscape composition and configuration. *Agricultural and Forest Entomology*. 16: 341-349. DOI: 10.1111/afe.12064 **IF= 1.556**
121. Lettow, M.C., L.A. Brudvig, C.A. Bahlai, D.A. Landis. 2014. Oak savanna management strategies and their differential effects on vegetative structure, understory light, and flowering fobs. *Forest Ecology and Management* 329: 89-98. DOI: 10.1016/j.foreco.2014.06.019 **IF= 2.776**
122. Bahlai, C.A., M. Colunga-Garcia, S.H. Gage, and D.A. Landis. 2014. The role of exotic species in the decline of native ladybeetle populations: evidence from long-term monitoring. *Biological Invasions*. 17: 1005-1024. DOI: 10.1007/s10530-014-0772-4 **IF= 2.51**
123. Carson, B.D., D.A. Landis. 2014. Establishment, impacts, and current range of spotted knapweed (*Centaurea stoebe* ssp. *micranthos*) biological control insects in Michigan. *Great Lakes Entomologist* 47: 129-148. **IF=na**
124. Carson, B.D., D.A. Landis. 2014. Phenology and dispersal of *Larinus minutus* Gyllenhal and *Larinus obtusus* Gyllenhal (Coleoptera: Curculionidae), two biological control agents of *Centaurea stoebe* ssp. *micranthos* (spotted knapweed) in Michigan. *Biological Control* 79: 84-91. **IF= 1.917**
125. Safarzoda, S., C.A. Bahlai, A.F. Fox, D. A. Landis. 2014. The role of natural enemy foraging guilds in controlling cereal aphids in Michigan wheat. *PLOS One*. DOI: 10.1371/journal.pone.0114230 **IF= 3.534**
126. Liere, H., T.N. Kim, B.P. Werling, T.D. Meehan, D.A. Landis, C. Gratton. 2015. Trophic cascades in agricultural landscapes: indirect effects of landscape composition on crop yield. *Ecological Applications*. *Ecological Applications* 25: 652-661. <http://dx.doi.org/10.1890/14-0570.1> **IF=3.815**
127. Bahlai, C.A., W. van der Werf, M. O'Neal, L. Hemerik, and D.A. Landis. 2015. Shifts in dynamic regime of an invasive lady beetle are linked to the invasion and insecticidal management of its prey. *Ecological Applications* 25: 1807-1818. <http://dx.doi.org/10.1890/14-2022.1> **IF=4.126**
128. Rusch, Adrien, Rebecca Chaplin-Kramer, Mary Gardiner, Violetta Hawro, John Holland, Douglas Landis, Carsten Thies, Teja Tschardtke, Wolfgang Weisser, Camilla Winqvist, Megan Woltz, Riccardo Bommarco. 2016. Agricultural landscape complexity enhances natural pest control: a quantitative synthesis. *Agriculture Ecosystems and Environment* 221:198-204.16 **IF=3.402**
129. Geertsema, W., W.A.H. Rossing, D.A. Landis, F.J.J.A. Bianchi, P.C.J. van Rijn, J.H.J. Schaminée, T. Tschardtke, W. van der Werf. 2016. Actionable knowledge for ecological intensification of agriculture. *Frontiers in Ecology and the Environment*. 14(4): 209-216, doi:10.1002/fee.1258 **IF=7.441**

130. Evans, JA, RA Lankau, AS Davis, S Raghu, DA Landis. 2016. Soil-mediated eco-evolutionary feedbacks in the invasive plant *Alliaria petiolata*. *Functional Ecology* 30:1053-1061. DOI: 10.1111/1365-2435.12685 **IF=4.82**
131. Prasanna Venkatesh Sampath, Hua-Sheng Liao, Zachary Kristopher Curtis, Matthew E. Herbert Patrick J. Doran, Christopher A. May, Douglas A. Landis, Shu-Guang Li. 2016. Understanding fen hydrology across multiple scales. *Hydrological Processes* 30:3390-3407. DOI: 10.1002/hyp.10865 **IF=2.768**
132. Carson, B.D., C. A Bahlai, J. Gibbs, D. A Landis. 2016. Flowering phenology influences bee community dynamics in old fields dominated by the invasive plant *Centaurea stoebe*. *Basic and Applied Ecology* 17(6):497-507 [doi:10.1016/j.baae.2016.04.004](https://doi.org/10.1016/j.baae.2016.04.004) **IF=1.942**
133. Bahlai, C.A., D.A. Landis. 2016. Predicting plant attractiveness to pollinators with passive crowdsourcing. *Royal Society Open Science*. DOI: 10.1098/rsos.150677 (*RSOS does not use Impact factors but rather reports article-specific metrics daily*)
134. Landis, D.A., N. Saidov, A. Jaliov, M. El Bouhssini, M. Kennally, C. Bahlai, J. Landis, K. Maredia. 2016. Demonstration of an integrated pest management program for wheat in Tajikistan. *Journal of Integrated Pest Management*. 7(1):1-9. doi: 10.1093/jipm/pmw010 **IF=na**
135. Fox, Aaron, Tania N Kim, Christine A Bahlai, J. Megan Woltz, Claudio Gratton, Douglas A Landis. 2016. Cover crops have neutral effects on predator communities and biological control services in annual cellulosic bioenergy cropping systems. *Agriculture Ecosystems and Environment* 232:101-109. **IF=3.564**
136. Landis, D.A. 2017. Designing agricultural landscapes for biodiversity-based ecosystem services. *Basic and Applied Ecology, Invited View*. 18: 1-12. <http://dx.doi.org/10.1016/j.baae.2016.07.005> **IF 1.836**
137. Gurr, GM, SD Wratten, DA Landis, M You. 2017. Habitat Management to Suppress Pest Populations: Progress and Prospects. *Annual Review of Entomology*. 62: 91-109. DOI: 10.1146/annurev-ento-031616-035050 **IF=13.534**
138. Hermann SL, and D.A. Landis. 2017. Scaling-up our understanding of non-consumptive effects in insect systems. *Current Opinion in Insect Science*. 20: 54-60. <http://doi.org/10.1016/j.cois.2017.03.010> **IF=2.719**
139. Kim, T.N., A.F. Fox, B.D. Wills, T.D. Meehan, D.A. Landis, C. Gratton. 2017. Harvesting biofuel grasslands has weak effects on natural enemy diversity and no effects on biocontrol services. *J. of Applied Ecology*. Accepted Jan. 20, 2017 doi: 10.1111/1365-2664.12901 **IF=5.196**
140. Landis, DA., C. Gratton, RD Jackson, KL Gross, DS Duncan, C Liang, TD Meehan, BA Robertson, TM Schmidt, KA Stahlheber, JM Tiedje, BP Werling. 2017. Biomass crop effects on biodiversity and ecosystem services in the North Central US. *Biomass and Bioenergy: Special Issue on Using the Ecosystem Services approach to assess biofuel sustainability*. In Press (corrected proof) <http://dx.doi.org/10.1016/j.biombioe.2017.02.003> **IF=3.249**

Submitted:

Perović, David J., Gámez-Virués, Sagrario, Douglas A. Landis, Felix Wäckers, Nico Desneux, Stephen D. Wratten, Min-Sheng You, Geoff M. Gurr. Managing biological control services through multi-trophic trait interactions: review and guidelines for implementation at the local and landscape scale. *Biological Reviews*. Submitted 9.23.2016.

Lettow, M.C., L.A. Brudvig, C.A. Bahlai, J. Gibbs, R. Jean, D.A. Landis. Bee community responses to a gradient of oak savanna restoration. *Restoration Ecology*. Revision submitted 12.12.16

Noriega, JA, J. Hortal, FM Francisco M. Azcárate, MP Berg, N Bonada, MJI Briones, I Del Toro, D Goulson, S Ibanez, DA Landis, M Moretti, SG. Potts, E. Slade, JC Stout, MD Ulyshen, FL Wackers, BA Woodcock, and AMC Santos. Research trend in ecosystem services provided by insects. *Basic and Applied Ecology*. Submitted 3/3/2017.

Kim, TN, S Bartel, BD. Wills, DA. Landis, and C Gratton. Disturbance differentially affects alpha and beta diversity of ants in mixed prairie-grasslands. *Diversity and Distributions*. Submitted 3/22/2017

In Preparation:

Schuh, M. and D.A. Landis. Effect of Switchgrass Ecotype and Cultivar on Establishment, Feeding, and Development of Fall Armyworm (Lepidoptera: Noctuidae). *Journal of Economic Entomology*. In Prep.

Schuh, M. and D.A. Landis. Influence of switchgrass cultivar, ecotype, and planted stand diversity on insect communities and biological control services. In Prep.

Perović, David J., Sagrario Gámez-Virués, Niko Balkenhol, Nicolas Desneux, Michael J. Furlong, Geoff M. Gurr, Douglas A. Landis, Santiago Saura, Jason M. Schmidt, Andrea Sciarretta, Pascuale Trematerra, Teja Tschamtko, Catrin Westphal, Minsheng You, Myron P. Zalucki. Managing biodiversity and ecosystem services in agriculture at the landscape-scale: addressing the unanswered questions.

Veen, G.F. (Ciska), E. R. Jasper Wubs, Richard Bardgett, Edmundo Barrios, Mark Bradford, Sabrina Carvalho, Gerlinde De Deyn, Franciska de Vries, Ken Giller, David Kleijn, Douglas Landis, Walter Rossing, Maarten Schrama, Johan Six, Paul Struik, Stijn van Gils, Han Wiskerke, Wim H. van der Putten, Louise E. M. Vet. Explicit consideration of spatio-temporal scales of above-belowground interactions can optimize sustainable agriculture.

Book Chapters and Entries

1. Landis, D.A. 1994. Arthropod sampling in agricultural landscapes: ecological considerations. pp. 15-31. *In*. L. P. Pedigo and G. D. Buntin (eds.) *Handbook of Sampling Methods for Arthropod Pests in Agriculture*. CRC Press.
2. Landis, D.A. and F.D. Menalled. 1998. Ecological considerations in conservation of parasitoids in agricultural landscapes. pp. 101-121. *In*: P. Barbosa (ed.) *Conservation Biological Control*. Academic Press, San Diego, CA.
3. Landis, D. and P. Marino. 1999. Landscape structure and extra-field processes: impact on management of pests and beneficials. pp. 79-104. *In*. J. Ruberson, (ed.) *Handbook of Pest Management*. Marcel Dekker Inc., NY.
4. Landis, D.A. and P.C. Marino. 1999. Conserving parasitoid communities of native pests: implications for landscape structure. pp. 38-51. *In*. L. Charlet and G. Brewer (eds.) *Biological Control of Native or Indigenous Pests*. Proc. Thomas Say Publications in Entomology. Entomological Society of America. Lanham, Maryland.
5. Landis, D.A. 1999. Ichneumon wasps. pp. 127-28. *In*. Steffey et. al (eds.) *Handbook of Corn Insects*. Entomological Society of America.
6. Haas, M.J. and D.A. Landis. 1999. Corn-silk beetle. p. 68. *In*. Steffey et. al (eds.) *Handbook of Corn Insects*. Entomological Society of America.

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.
9. Marino, P.C. and D.A. Landis. 2000. Parasitoid community structure: implications for biological control in agricultural landscapes. pp. 181-91. *In*. B. Ekbom (ed.). Interchanges of Insects between Agricultural and Surrounding Habitats. Kluwer Academic Publishers, Dordrecht, The Netherlands.
10. Landis, D.A., F.D. Menalled, J.C. Lee, D.M. Carmona, and A. Perez-Valdez. 2000. Habitat modification to enhance biological control in IPM. pp. 226-239. *In*. Kennedy, G. G. and T. B. Sutton, eds. Emerging technologies for integrated pest management: concepts, research, and implementation. APS Press. St. Paul.
11. Landis, D.A. 2002. Conservation of biological controls. pp. 139-140. *In* D. Pimentel, ed. Encyclopedia of Pest Management. Marcel Dekker, New York.
12. Landis, D.A., and D.A. Neher. 2002. Ecological role of pests. pp. 218-220. *In* D. Pimentel, ed. Encyclopedia of Pest Management. Marcel Dekker, New York.
13. Lee, J.C., and D.A. Landis. 2002. Non-crop habitat management for carabid beetles. pp. 279-303. *In* J. Holland, ed. The Agroecology of Carabid Beetles, Intercept, Andover, UK.
14. O'Neil, R.J., J.S. Yaninek, D.A. Landis and D.B. Orr. 2003. Biological control in the international arena, pp. 19-30. *In* K. Maredia and D. Dakouo eds. Integrated Pest Management in the Global Arena. CABI.
15. Menalled, F.D., and D.A. Landis. 2004. Conservation of ground beetles in annual crops. p. 159-161 *In* J. Capinera (ed) Encyclopedia of Entomology Vol 1. Kluwer Academic Publishers. Dordrecht, The Netherlands.
16. Menalled, F.D., J.M. Alvarez and D.A. Landis. 2004. Molecular techniques and habitat manipulation approaches for parasitoid conservation in annual cropping systems. pp. 101-115 *In* G. Gurr & S. Wratten eds. Ecological Engineering for Pest Management. CSIRO Publishing Australia.
17. Wilkinson, T.K., and D.A. Landis. 2005. Habitat diversification in biological control: the role of plant resources. Pp. 305-325 *In* F.L. Wäckers, P.C.J. van Rijn & J. Bruin eds. Plant Provided Food and Plant-Carnivore Mutualism. Cambridge University Press. Cambridge, UK.
18. Gardiner, M.M., A.K. Fiedler, A.C. Costamagna, and D.A. Landis. 2009. Integrating Conservation Biological Control into IPM Systems. pp. 151-162 *In* E. Radcliffe, W. Hutchison, R. Cancelado eds. Integrated Pest Management: concepts, tactics, strategies and case studies. Cambridge University Press. Cambridge, UK.
19. Davis A.S., and D.A. Landis. 2011. Agriculture. p. 7-11 *In* D. Simberloff and M. Rejmanek eds. Encyclopedia of Invasive Introduced Species. Univ. of California Press.
20. Saidov, N. SH., A.U. Jalilov D. Landis, A. Fiedler, V.K. Nazarov, T. K Mirzoev, S. Karimjonov. 2011. Using Flowering Plants in Agro Landscapes to Increase Efficiency of IPM in Cotton. Pp. 106-115. *In* Agriculture Development Prospects and Concerns, Sixth edition. Academy of Agricultural Science; Institute of Farming. Dushanbe, Tajikistan. (in Russian).

21. Woltz, J.M., B.P. Werling and D.A. Landis. 2012. Natural Enemies and Insect Outbreaks in Agriculture: A Landscape Perspective. p. 355-370. *In* P Barbosa, J Schultz and D Letourneau eds. *Insect Outbreaks*. 355-370.
22. Landis, D.A., M.M. Gardiner, J. Tompkins. 2012. Using native plant species to diversify agriculture. Chapter 17 pp276-292. *In* G.M. Gurr, S.D. Wratten and W.E. Snyder (eds.) *Biodiversity and Insect Pests*. Wiley Blackwell. *Invited chapter*
23. Robertson, G. P., Hamilton, S. K., Gross, K. L., Landis, D. A., Snapp, S. S., Swinton, S. M., & Schmidt, T. 2015. Farming for ecosystem services: An ecological approach to production agriculture. Chapter 2 pp44-75. *In* S. K. Hamilton, J. E. Doll, & G. P. Robertson (eds.). *The ecology of agricultural landscapes: long-term research on the path to sustainability*. United Kingdom: Oxford Press.
24. Landis, D.A. and S.H. Gage. 2015 Arthropod biodiversity and pest suppression in agricultural landscapes. Chapter 8 pp 257-288. *In* Hamilton, S.K., J.E. Doll, and G.P. Robertson (eds.). *The ecology of agricultural landscapes: long-term research on the path to sustainability*. United Kingdom: Oxford Press.
25. Maredia, K., G. Bird, D. Landis, F. Zalom, J. Landis, M. Kennelly, M. El-Bouhssini, N. Saidov, M. Aitmatov. 2016. Ecologically-based Integrated Pest Management Programs for Food Security Crops in Central Asia. pp. 154-172. *In* Freedman and Neuzil. *Environmental Crises in Central Asia: From Steppes to Seas, from Deserts to Glaciers*. Routledge. 224 pp.

Agricultural Experiment Station Research Reports

1. Landis, D. and S. Swinton. 1994. Corn Insect Management in Michigan: Results of a 1992 Field Corn Grower Survey. Research Report 537, Michigan Agricultural Experiment Station, Michigan State University. E. Lansing. 24 pp.
2. Landis, D.A. and M.J. Haas. 1996. Potential arthropod targets for biological control in the North Central United States. Research Report, Michigan Agricultural Experiment Station, Michigan State University. E. Lansing. RR-546. 12 pp.

Published Proceedings, Reviews and Abstracts (past five years)

47. Becker, R.L., E.J.S. Katovich, H.L. Hinz, E. Gerber, D.W. Ragsdale, R.C. Venette, D. McDougall, R. Reardon, L.C. Van Riper, L.C. Skinner, B. Blossey, and D.A. Landis. 2012. The garlic mustard (*Alliaria petiolata*) case, what makes a good biological control target: the intersection of science, perspectives, policy and regulation. Proceedings of the XIII International Symposium on Biological Control of Weeds. Sept. 11-16, 2011, Hawaii.
48. Saidov, N. SH., A.U. Jalilov, T. K Mirzoev, D. Landis. 2011. Ecological Approaches to Pest Management in Tajikistan. Pp. 124-127. *In* Proceedings of the Fourth International Scientific Conference on Ecological Characteristics of Biological Diversity. October 2011, Kulob, Tajikistan. (in Russian).
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>
50. Becker, R.L., E.J.S. Katovich, H.L. Hinz, E. Gerber, D.W. Ragsdale, R.C. Venette, D.N. McDougall, R. Reardon, L.C. Van Riper, L.C. Skinner, and D.A. Landis. 2013. The Garlic Mustard (*Alliaria petiolata*) Case, What Makes a Good Biological Control Target. The Intersection of Science, Perspectives, Policy and Regulation. pp. 332-339 *In* Proc. XIII International Symposium on Biological Control of Weeds (ISBCW).

Sept. 11-16, 2011. Waikoloa, Hawaii. Wu, Yun; Johnson, Tracy; Sing, Sharlene; Raghu, S.; Wheeler, Greg; Pratt, Paul; Warner, Keith; Center, Ted; Goolsby, John; and Reardon, Richard, Editors. USDA Forest Service, FHTET-2012-07. January 2013. 536 p. <http://www.invasive.org/publications/xiisymposium/>

Extension Bulletins (past five years)

58. Werling, B.P. D. Pennington, and D.A. Landis. 2012. Biodiversity Services and Bioenergy Landscapes. MSU Extension Bulletin E-3164. 12pp.

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. Landis DA, Schemske DW, Dale BE, Gratton C, Hamilton SK, Izaurrealde RC, et al. Sustainability Guidelines for Future Biofuel Crops. GLBRC A4 White Paper. 2016. 7pp. <https://lter.kbs.msu.edu/pub/3574>

Program Coverage (past five years)

95. Enlist Beneficial Insects for Natural Pest Control. Mother Earth News April/May 2012 p. 30-37. <http://www.motherearthnews.com/organic-gardening/natural-pest-control-beneficial-insects-zm0z12amzhir.aspx>
96. Radio interview on purple loosestrife biological control. Michigan Radio, The Environment Report. May 5, 2012. <http://environmentreport.org/>
97. [More to biofuel production than yield](#) ScienceDaily, Science News, WSYM-TV, MSU Today, and other sources. 01/13/2014
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>

GRANT SUPPORT Total awarded 1988- present \$33,991,769 with \$8,171,446 assigned to Landis

Pending

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. 2017-2011. (Landis one of 64 Senior/Key Personnel).

Current

Isaacs, R., Landis, D., Gibbs, J., Milbrath, M., Gut, L.J., Szendrei, Z. and Wilson, J. (2016) Enhancing Great Lakes landscapes for healthy pollinators. USDA-NIFA. \$999,882. 2/1/17-1/31/20. (Landis Portion \$94,961).

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).

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, GTL 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)

		T.4.4 Team	Landis
Actual award by year	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, T.M. Schmidt. NSF DEB-Ecological Biology Cluster. \$5,640,000. 12/11-11/17. (Landis Portion \$310,200).

Completed

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, T.M. 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 GREENE 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 GREENEEN 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 GREENEEN 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 GREENEEN 2000. \$36,000 1yr.

Managing Your Farm to Reduce Weed Infestations. F. Menalled, K. Renner, D. Landis. MSU GREENEEN 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 GREENEEN 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 GREENEEN 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 GREENEEN 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 GREENEEN 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 GREENEEN 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)

Expanding Biomass Feedstock Production, Resource Conservation, and Rural Vitality in the North Central US. Jordan, NR, Jackson, RD, Baye TM, Gratton, CC, Johnson, A, Landis, DA, Slotterback, CS. Expanding Biomass Feedstock Production, Resource Conservation, and Rural Vitality in the North Central US. USDA AFRI Sustainable Biomass CAP \$14,604,947 5/2017-4/2022. (MSU total request \$1,643,178).

Designing optimal habitats to enhance monarch butterfly and pollinator conservation in the North-Central Region. DA Landis, R Isaacs, J Landis. NC SARE Research and Education pre-proposal. \$200,000 10/1/2017-9/30/2020.

Developing Highly Productive Monarch Butterfly Habitats for Michigan's Agricultural Landscapes. D. Landis, B. Wills, A. Myers. Project GREEN \$79,541. 5/1/2016-6/30/2018

FACULTY MENTORING COMMITTEES

Dr William Wetzel, MSU Entomology 2017-

Dr. Henry Chung, 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

POST-DOCTORALS

Current

Ya-Jun (Angie) Zhang (joint with Rufus Isaacs) MSU Pollinator Initiative
Ezequiel González, Co-advise with Dr. Graciela Valladares Universidad Nacional de Córdoba, Córdoba, Argentina
William Wills, GLBRC, and NSF LTER

Former Post-docs and current employment

Christine Bahali, Post-doc. MSU Integrative Biology
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, Executive Director, Sheepscot Wellspring Land Alliance, Liberty, 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, Research Scientist and Program Leader, Invasion Ecology and Biological Control Lab. Wuhan Botanical Garden, China
Adam Davis, (joint with Karen Renner, Doug Buhler) Research Scientist, USDA ARS, Champaign-Urbana IL
Mindy Hoffman, (joint with Karen Renner) self-employed, Ohio.
Fabian Menalled, Associate 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)

Current Students

Gabriela Quinlan, PhD Advisory Committee, Entomology
Nicole Wonderlin, PhD Advisory Committee, Entomology
Sean Sultaire, PhD Advisory Committee, Fisheries and Wildlife
Christopher Warneke, PhD Advisory Committee, Plant Biology
Andrew Myers, PhD, Major Advisor, Entomology
Sara Herman, PhD, Major Advisor, Entomology (#)
Margie Lund, PhD Advisory Committee, Entomology
Paul Charland, MS, Major Advisor, Entomology
Adam Ingrao, PhD Advisory Committee, Entomology

Current Students = 9

Past (Year Graduated) and current employment for Major Advisees

Marissa Schuh, MS, Major Advisor, Entomology (2016) MSU Extension, Vegetable Crop Educator, Lenawee Co. MI
Jermei 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
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) Postdoctoral Researcher, University of Kansas
Anna Fiedler, PhD Major Advisor, Entomology (2010) Exec. Dir. Sheepscot Wellspring Land Alliance, Liberty, ME (@+)
Jeff Evans, PhD Major Advisor, Entomology (2009) Post-doc USAID ARS (%)
Nate Walton, MS Advisory Committee, Entomology (2009)
Thomas Alwin, MS Advisory Committee, Fisheries and Wildlife (2009)
Mary Gardiner, PhD Major Advisor, Entomology (2008) Assistant 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) Assistant 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 Associate 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
 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)
 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-Doctorals Advised =103

SYMPOSIA/MEETINGS ORGANIZED (past five years)

29. Bioenergy and Biodiversity: Oxymoron or Opportunity? B.A. Robertson and D.A. Landis. Ecological Society of America National Meeting, Portland, OR. August 7, 2012
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.

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

MSU GUEST LECTURES PRESENTED (since 1998)

- BOT/ZOL/ENT 485 Tropical Ecology. "Biological Control in the Tropics." 1998-07.
CSS 442 Agricultural Ecology. "Landscape Structure and Insect-Mediated Ecosystem Services." 2011-14, 2016
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 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
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

Total = 61

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

51. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. D.A. Landis. Sustainable Agriculture Short Course, Michigan State University. June 19, 2013

EXTENSION/OUTREACH PRESENTATIONS (past five years)

148. Fire in Oak Savanna Systems. **D.A. Landis**. Mid-Michigan Cluster of The Stewardship Network, Fireside Chat. Lake Lansing North Park. March 7, 2012.
149. Update on Spotted Knapweed Biocontrol. **D.A. Landis**. Northwest Michigan Horticultural Research Center Open House August 23, 2012.
150. Update on Spotted Knapweed Biocontrol. **D.A. Landis**. Michigan Commercial Beekeepers Annual Meeting, Mesick, MI July 19, 2013.
151. Redesigning Agricultural Landscapes for Multiple Ecosystem Services. **DA Landis**. Merry Lea Environmental Learning Center of Goshen College, Agroecology Summer Intensive course (Landis Lab visit). June 28, 2013.
152. Knapweed and Thistle Seed Head Feeding Insects in Michigan. **DA Landis** and BD Carson. US Fish and Wildlife Service, Pitcher's Thistle Recovery Team Meeting. February 27, 2013.
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. Biological Control of Invasive Plants: Procedures Future Prospects. River City Wild Ones. April 17, 2017. Grand Rapids, MI

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:

Grants Agricultural Utilization Research Institute, 1996, 1998 (2)
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

Journals Agroforestry Systems, 1997
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
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
Ecological Applications, 2004, 2005, 2008, 2016
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
Entomologia Experimentalis et Applicata, 1998, 1999, 2003, 2004 (2), 2007, 2009, 2010, 2015, 2017
Field Crops Research, 1990
Forest Ecology and Management, 2003
Frontiers in Ecology and the Environment, 2004, 2007
HortScience, 1988
International Journal of Ecology and Environmental Sciences, 2003
Journal of Agricultural Entomology, 1990
Journal of Agroforestry Systems, 1996
Journal of Applied Ecology, 2005, 2009 (2), 2010 (13), 2011 (10), 2012 (4), 2016
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
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
Proceedings of the National Academy of Sciences USA, 201, 2017
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)

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

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)

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-

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 2016/17

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