

## Curriculum Vitae

Notarization. I have read the following and certify that this *curriculum vitae* is a current and accurate statement of my professional record.

Signature:



Date: 1/13/2020

### 1. Personal Information.

#### a. Last Name, First Name, Middle Name, Contact Information

#### **LAMP, WILLIAM OWEN**

Department of Entomology

University of Maryland

College Park, MD 20742

301/405-3959

[lamp@umd.edu](mailto:lamp@umd.edu)

<http://www.clfs.umd.edu/entm/lamp/>

Google Scholar: <http://scholar.google.com/citations?user=9fg4Cf4AAAAJ&hl=en>

#### b. Academic Appointments at the University of Maryland, College Park

Appointment: 80% AGNR-MAES (research), 20% CMNS (instruction)

2016-, Professor, Department of Entomology, University of Maryland, College Park, MD

1991-2016, Associate Professor, Department of Entomology, University of Maryland, College Park, MD

1985-91, Assistant Professor, Department of Entomology, University of Maryland, College Park, MD

#### c. Educational Background

Ph.D., 1980, University of Nebraska-Lincoln (Entomology and Agronomy), "Predispersal seed predation of the Platte thistle and its effect on seed production"

M.S., 1976, Ohio State University (Entomology), "Resource partitioning by two species of stream mayflies (Ephemeroptera: Heptageniidae)"

B.S., 1972, University of Nebraska-Lincoln (Zoology)

#### d. Other Employment

1980-85, Assistant Professional Scientist, Section of Economic Entomology, Illinois Natural History Survey, Champaign, IL

1977-80, Graduate Research Assistant, Department of Agronomy, University of Nebraska, Lincoln, NE

1974-76, Graduate Teaching Assistant, Department of Entomology, Ohio State University, Columbus, OH

### 2. Research, Scholarly and Creative Activities.

#### a. Books

##### i. Books edited.

3. Samac, D., L. Rhodes, and **W.O. Lamp** (eds.). 2015. Compendium of Alfalfa Diseases and Insect Pests. American Phytopathology Association, St. Paul, MN. 138 pp.

2. **Lamp, W.O.**, R. Berberet, L. Higley, and C. Baird (eds.). 2007. Handbook of Forage and Rangeland Insects. Entomological Society of America, Annapolis, MD. 180 pp.

1. Armbrust, E.J., and **W.O. Lamp** (eds.). 1989. Potato Leafhopper *Empoasca fabae* (Harris) (Homoptera: Cicadellidae) Research: Historical and Current Perspectives. Miscellaneous Publications No. 72, Entomological Society of America, Annapolis, MD. 69 pp.

ii. Chapters in books.

15. Sulc, M., **W.O. Lamp**, and G.D. Buntin. 2020. Insect management. In Forages: The Science of Grassland Agriculture, M. Collins, C.J. Nelson, and K.J. Moore (eds.), 7<sup>th</sup> ed., Vol. II. Wiley, NY. (in press)

14. Sulc, M., **W.O. Lamp**, and M. Collins. 2017. Integrated pest management in forages. In Forages: The Science of Grassland Agriculture, M. Collins, C.J. Nelson, and K.J. Moore (eds.), 7<sup>th</sup> ed., Vol. I, p. 253-266. Wiley, NY.

13. **Lamp, W.O.** 2015. Potato leafhopper. In Compendium of Alfalfa Diseases and Insect Pests, D. Samac, L. Rhodes, and W.O. Lamp (eds.), p. 89-90. American Phytopathology Association, St. Paul, MN.

12. Alexander, L.C.†, and **W.O. Lamp**. 2008. Mayfly population density, persistence and genetic structure in fragmented headwater habitats. In International Advances in the Ecology, Zoogeography, and Systematics of Mayflies and Stoneflies, F.R. Hauer, J.A. Stanford, and R.L. Newell (eds.), p. 39-50. University of California Press, Berkeley, CA.

11. **Lamp, W.O.**, and L. Higley. 2007. Integrated pest management. In Handbook of Forage and Rangeland Insects, W. Lamp, R. Berberet, L. Higley, and C. Baird (eds.), p. 28-33. Entomological Society of America, Annapolis, MD.

10. **Lamp, W.O.**, G. Dively, and R. Ochoa. 2007. Mites. In Handbook of Forage and Rangeland Insects, W. Lamp, R. Berberet, L. Higley, and C. Baird (eds.), p. 81-83. Entomological Society of America, Annapolis, MD.

9. **Lamp, W.O.** 2007. Natural enemies of insects. In Handbook of Forage and Rangeland Insects, W. Lamp, R. Berberet, L. Higley, and C. Baird (eds.), p. 129-130. Entomological Society of America, Annapolis, MD.

8. **Lamp, W.O.** 2007. Leafhoppers and planthoppers. In Handbook of Forage and Rangeland Insects, W. Lamp, R. Berberet, L. Higley, and C. Baird (eds.), p. 76-79. Entomological Society of America, Annapolis, MD.

7. **Lamp, W.O.** 2007. Injurious arthropods. In Handbook of Forage and Rangeland Insects, W. Lamp, R. Berberet, L. Higley, and C. Baird (eds.), p. 41-43. Entomological Society of America, Annapolis, MD.

6. Sulc, M., and **W.O. Lamp**. 2007. Insect pest management. In Forages: The Science of Grassland Agriculture, R.F. Barnes, D.A. Miller, and C.J. Nelson (eds.), 6<sup>th</sup> ed., Vol. II, p. 411-424. Iowa State Univ. Press, Ames, IA.

5. Fick, G.W., **W.O. Lamp**, and M. Collins. 2003. Integrated pest management in forages. In Forages: The Science of Grassland Agriculture, R.F. Barnes, D.A. Miller, and C.J. Nelson (eds.), 6<sup>th</sup> ed., Vol. I, p. 295-313. Iowa State Univ. Press, Ames, IA.

4. Fick, G.W., and **W.O. Lamp**. 1995. Integrated pest management in forages. In Forages: The Science of Grassland Agriculture, R.F. Barnes, D.A. Miller, and C.J. Nelson (eds.), 5<sup>th</sup> ed., p. 45-53. Iowa State Univ. Press, Ames, IA.

3. Benrey, B., and **W.O. Lamp**. 1993. Biological control in the management of planthopper populations. In The Ecology, Genetics and Management of Planthoppers, R. Denno and M.F. Claridge (eds.), p. 519-550. Chapman and Hall, NY.

2. **Lamp, W.O.**, and L.M. Smith. 1989. II. Sampling objectives and problems. In Potato Leafhopper *Empoasca*

*fabae* (Harris) (Homoptera: Cicadellidae) Research: Historical and Current Perspectives, E.J. Armbrust and W.O. Lamp (eds.), p. 3-9. Miscellaneous Publications No. 72, Entomological Society of America, Annapolis, MD.

1. **Lamp, W.O.**, K.Y. Yeargan, R.F. Norris, C.G. Summers, and D.G. Gilchrist. 1986. Multiple pest interactions in alfalfa. In CIPM Integrated Pest Management on Major Agricultural Systems, R.E. Frisbie and P.L. Adkisson (eds.), p. 345-364. Texas A & M University Press, College Station, TX.

b. Articles in Referred Journals. (\*undergraduate student, †research technician, ‡graduate student, #postdoctoral researcher)

Recent submissions and status:

Avanesyan<sup>#</sup>, A., H. Sutton, and **W. Lamp**. Choosing an effective molecular approach to diet analysis of insect herbivores: a systematic review. *Journal of Economic Entomology* (submitted 6/27/2020).

Thompson<sup>‡</sup>, M., and **W. Lamp**. Herbivory and soil nitrate modify systemic accumulation of fixed nitrogen in a legume. *Plant & Soil* (submitted 6/26/2020)

Avanesyan<sup>#</sup>, A., N. Illahi<sup>†</sup>, and **W. Lamp**. First detection of ingested DNA of *Vicia faba* from the gut content of potato leafhopper, *Empoasca fabae*, and its potential application. *Journal of Pest Science* (submitted 6/13/2020)

65. Wilson-Ounekeo, R.<sup>‡</sup>, and **W. Lamp**. 2020. Perceptions and responses of residents to the nuisance black fly *Simulium jenningsi* (Diptera: Simuliidae) in the mid-Atlantic United States. *Journal of Medical Entomology* (in press).

64. Avanesyan<sup>#</sup>, A., and **W. Lamp**. 2020. Use of molecular gut content analysis to decipher the range of food plants of the invasive spotted lanternfly, *Lycorma delicatula*, *Insects* 11, 215.

63. Eckert<sup>‡</sup>, R., H. Halvorson, K. Kuehn, and **W. Lamp**. 2020. Macroinvertebrate community patterns in relation to leaf-associated periphyton under contrasting light and nutrient conditions in headwater streams. *Freshwater Biology* (in press)

62. Avanesyan<sup>#</sup>, A., T. Mangel, and **W. Lamp**. 2019. External morphology and developmental changes of tarsal tips and mouthparts of the invasive spotted lanternfly, *Lycorma delicatula* (Hemiptera: Fulgoridae) *PLoS ONE* 14(12): e0226995.

61. Avanesyan<sup>#</sup>, A., K. Snook, P. Follett, and **W. Lamp**. 2019. Short-term physiological response of a native Hawaiian plant, *Hibiscus arnottianus*, to injury by the exotic leafhopper, *Sophonia orientalis* (Hemiptera: Cicadellidae). *Environmental Entomology* 48: 363-369.

60. Leslie<sup>‡</sup>, A., and **W. Lamp**. 2019. Burrowing macroinvertebrates alter phosphorus dynamics in drainage ditch sediments. *Aquatic Sciences* 81:23 (online).

59. Grant<sup>‡</sup>, J., and **W.O. Lamp**. 2018. Degree day requirements for kudzu bug (Hemiptera: Plataspidae), a pest of soybeans. *Journal of Economic Entomology* 111: 700-706.

58. Grant<sup>‡</sup>, J., and **W.O. Lamp**. 2017. Cold tolerance of *Megacopta cribraria* (Hemiptera: Plataspidae): an invasive pest of soybeans. *Environmental Entomology* 46: 1406-1414.

57. Leslie, A.W.<sup>‡</sup>, and **W.O. Lamp**. 2017. Taxonomic and functional group composition of macroinvertebrate assemblages in agricultural drainage ditches. *Hydrobiologia* 787: 99-110.

56. Spadafora, E.<sup>‡</sup>, A.W. Leslie<sup>‡</sup>, L.E. Culler<sup>‡</sup>, R.F. Smith<sup>‡</sup>, K.W. Staver, and **W.O. Lamp**. 2016. Macroinvertebrate community convergence between natural, rehabilitated, and created wetlands. *Restoration Ecology* 24: 463-470.

55. Tracy, B., K. Albrecht, J. Flores, M. Hall, A. Islam, G. Jones, **W. Lamp**, J. MacAdam, H. Skinner, and C. Teutsch. 2016. Evaluation of alfalfa-tall fescue mixtures across multiple environments. *Crop Science* 56: 2026-2034.
54. Venugopal, P.D. ‡, G.P. Dively, A. Herbert, S. Malone, J. Whalen, and **W.O. Lamp**. 2016. Contrasting role of temperature in structuring regional patterns of invasive and native pestilential stink bugs. *PLoS ONE* 11(2): e0150649.
53. Baker, M.B., P.D. Venugopal‡, and **W.O. Lamp**. 2015. Climate change and phenology: *Empoasca fabae* (Hemiptera: Cicadellidae) migration and severity of impact. *PLoS ONE* 10(5): e0124915.
52. Smith, R.F. ‡, P.D. Venugopal‡, M.E. Baker, and **W.O. Lamp**. 2015. Habitat filtering and adult dispersal determine the taxonomic composition of stream insects in an urbanizing landscape. *Freshwater Biology* 60: 1740-1754.
51. Venugopal, P.D. ‡, G.P. Dively, and **W.O. Lamp**. 2015. Spatiotemporal dynamics of the invasive *Halyomorpha halys* (Hemiptera: Pentatomidae) in and between adjacent corn and soybean fields. *Journal of Economic Entomology* 105: 2231-2241.
50. Culler, L.E. ‡, R.F. Smith‡, and **W.O. Lamp**. 2014. Weak relationships between environmental factors and invertebrate communities in constructed wetlands. *Wetlands* 34: 351-361.
49. Gott, R.C. ‡, Y. Lao, Q. Wang, and **W.O. Lamp**. 2014. Development of a biopolymer nanoparticle-based method of oral toxicity testing in aquatic invertebrates. *Ecotoxicology and Environmental Safety* 104: 226-230.
48. Leslie, A. ‡, C. Sargent, W.E. Steiner, Jr., **W.O. Lamp**, J.M. Swearingen, B.B. Pagac, Jr., G.L. Williams, D.C. Weber, and M.J. Raupp. 2014. A new invasive species in Maryland: the biology and distribution of kudzu bug, *Megacopta cribraria* (Fabricius) (Hemiptera: Plataspidae). *Maryland Entomologist* 6: 2-23. (invited)
47. Venugopal, P.D. ‡, Coffey, P.L., Dively, G.P., and **W.O. Lamp**. 2014. Adjacent habitat influence on stink bug (Hemiptera: Pentatomidae) densities and the associated damage at field corn and soybean edges. *PLoS ONE* 10.1371/journal.pone.0109917
46. Wilson, B. ‡, A.W. Leslie‡, E. Spadafora‡, and **W.O. Lamp**. 2014. Identifying the nuisance black flies (Diptera: Simuliidae) of Washington County, MD. *Maryland Entomologist* 6: 41-48.
45. Carstens, K., J. Anderson, P. Bachman, A. De Schrijver, G. Dively, B. Frederici, M. Hamer, M. Gielkens, P. Jensen, **W. Lamp**, S. Rauschen, G. Ridley, and J. Romeis. 2012. Genetically modified crops and aquatic ecosystems: Considerations for environmental risk assessment and non-target organisms testing. *Transgenic Research* 21: 813–842. (review)
44. DeLay, B. ‡, P. Mamidala, A. Wijeratne, S. Wijeratne, O. Mittipalli, J. Wang, and **W. Lamp**. 2012. Transcriptome analysis of the salivary glands of potato leafhopper, *Empoasca fabae*. *Journal of Insect Physiology* 58: 1626-1634.
43. Leslie, A.W. ‡, R.F. Smith‡, D.E. Ruppert, K. Bejleri, J.M. McGrath, B.A. Needelman, and **W.O. Lamp**. 2012. Environmental factors structuring benthic macroinvertebrate communities of agricultural ditches in Maryland. *Environmental Entomology* 41: 802-812.
42. Alexander, L.C. ‡, D.J. Hawthorne, M.A. Palmer, and **W.O. Lamp**. 2011. Loss of genetic diversity in the North American mayfly *Ephemerella invaria* associated with deforestation of headwater streams. *Freshwater Biology* 56: 1456-1467.

41. **Lamp, W.O.**, D. Miranda\*, L.E. Culler‡, and L.C. Alexander‡. 2011. Host suitability and gas exchange response of grapevines to potato leafhopper (Hemiptera: Cicadellidae). *Journal of Economic Entomology* 104: 1316-1322.
40. Jensen, P.D. #, G.P. Dively, C.M. Swan, and **W.O. Lamp**. 2010. Exposure and non-target effects of transgenic Bt corn debris in streams. *Environmental Entomology* 39: 707-714.
39. Alexander, L.C. ‡, M. Delion\*, D.J. Hawthorne, **W.O. Lamp**, and D.H. Funk. 2009. Mitochondrial lineages and DNA barcoding of closely related species in the mayfly genus *Ephemerella* (Ephemeroptera: Ephemerellidae). *Journal of the North American Benthological Society* 28: 584-595.
38. Culler, L. ‡, and **W.O. Lamp**. 2009. Selective predation by larval *Agabus* (Coleoptera: Dytiscidae) on mosquitoes: support for conservation-based mosquito suppression in constructed wetlands. *Freshwater Biology* 54: 2003-2014.
37. Smith, R.F. ‡, L.C. Alexander‡, and **W.O. Lamp**. 2009. Dispersal by terrestrial stages of stream insects in urban watersheds: a synthesis of current knowledge. *Journal of the North American Benthological Society* 28: 1022-1037. (invited review)
36. Swan, C., P. Jensen#, G. Dively, and **W. Lamp**. 2009. Processing of transgenic crop residues in stream ecosystems. *Journal of Applied Ecology* 46: 1304-1313.
35. Diabate, A., R.K. Dabire, K. Heidenberger, J. Crawford, **W. Lamp**, L. Culler‡, and T. Lehmann. 2008. Evidence for divergent selection between the molecular forms of *Anopheles gambiae*: Role of predation. *BMC Evolutionary Biology* 8: 5.
34. Smith, R.F.‡, and **W.O. Lamp**. 2008. Comparison of insect communities between adjacent headwater and main-stem streams in urban and rural watersheds. *Journal of the North American Benthological Society* 27: 161-175.
33. **Lamp, W.O.**, L.C. Alexander‡, and M. Nguyen\*. 2007. Physiological response of glandular-haired alfalfa to potato leafhopper (Hemiptera: Cicadellidae) injury. *Environmental Entomology* 36: 195-203.
32. Pirone, C.L. \*, L.C. Alexander‡, and **W.O. Lamp**. 2005. Patterns of starch accumulation in alfalfa subsequent to potato leafhopper (Homoptera: Cicadellidae) injury. *Environmental Entomology* 34: 199-204.
31. **Lamp, W.O.**, G.R. Nielsen#, C. Fuentes‡, and B. Quebedeaux. 2004. Feeding site preference of potato leafhopper (Homoptera: Cicadellidae) on alfalfa and its effect on photosynthesis. *Journal of Agricultural and Urban Entomology* 21: 25-38.
30. **Lamp, W.O.**, G.R. Nielsen#, B. Quebedeaux, and Z. Wang. 2001. Potato leafhopper (Homoptera: Cicadellidae) injury disrupts basal transport of 14C-labelled photoassimilates in alfalfa. *Journal of Economic Entomology* 94: 93-97.
29. Lovinger, A. \*, D. Liewehr†, and **W.O. Lamp**. 2000. Glandular trichomes on alfalfa impede searching behavior of the potato leafhopper parasitoid. *Biological Control* 18:187-192.
28. Nielsen, G.R. #, C. Fuentes‡, B. Quebedeaux, Z. Wang, and **W.O. Lamp**. 1999. Alfalfa physiological response to potato leafhopper injury depends on leafhopper and alfalfa developmental stage. *Entomological experimentalis et applicata* 90:247-255.
27. Hardin, M.R., B. Benrey, M. Coll, **W. Lamp**, G. Roderick, and P. Barbosa. 1995. Arthropod pest resurgence: An overview of potential mechanisms. *Crop Protection* 14: 3-18. (review)

26. Beuselinck, P.R., J.H. Bouton, **W.O. Lamp**, A.G. Matches, M.H. McCaslin, C.J. Nelson, L.H. Rhodes, C.C. Sheaffer, and J.J. Volenec. 1994. Improving legume persistence in forage crop systems. *Journal of Production Agriculture* 7: 311-322. (review)
25. **Lamp, W.O.**, D. Liewehr<sup>†</sup>, C. Fuentes<sup>‡</sup>, and G.P. Dively. 1994. First report of the blue alfalfa aphid (Homoptera: Aphididae) in Maryland: Natural enemies and biotype. *Journal of Kansas Entomological Society* 67: 129-132.
24. **Lamp, W.O.**, G.R. Nielsen<sup>#</sup>, and S.D. Danielson. 1994. Patterns among host plants of potato leafhopper, *Empoasca fabae* (Homoptera: Cicadellidae). *Journal of Kansas Entomological Society* 67: 354-368.
23. Smith, L.M., **W.O. Lamp**, and E.J. Armbrust. 1994. Behavioral and reproductive response of caged *Empoasca fabae* (Homoptera: Cicadellidae) to vegetation density of a host legume and a non-host grass. *Journal of Entomological Science* 29: 66-81.
22. **Lamp, W.O.**, and L. Zhao<sup>†</sup>. 1993. Prediction and manipulation of movement by polyphagous, highly mobile pests. *Journal of Agricultural Entomology* 10: 267-281.
21. Smith, L.M., **W.O. Lamp**, and E.J. Armbrust. 1992. Potato leafhopper (Homoptera: Cicadellidae) utilization of alfalfa as a host: The role of non-host stimuli. *Journal of Entomological Science* 27: 56-64.
20. **Lamp, W.O.**, G.R. Nielsen<sup>#</sup>, and G.P. Dively. 1991. Insect pest-induced losses in alfalfa: Patterns in Maryland and implications for management. *Journal of Economic Entomology* 84: 610-618.
19. **Lamp, W.O.** 1991. Reduced *Empoasca fabae* (Homoptera: Cicadellidae) density in oat-alfalfa intercrop systems. *Environmental Entomology* 20: 118-126.
18. Nielsen, G.R. <sup>#</sup>, **W.O. Lamp**, and G.W. Stutte. 1990. Potato leafhopper (Homoptera: Cicadellidae) feeding disruption of phloem translocation in alfalfa. *Journal of Economic Entomology* 83: 807-813.
17. Ranne, E.L. <sup>†</sup>, and **W.O. Lamp**. 1990. Measurement of the ovipositional potential of potato leafhopper, *Empoasca fabae*: A comparison of feral and culture populations. *Journal of the Kansas Entomological Society* 63: 420-426.
16. **Lamp, W.O.**, and C. Fuentes<sup>‡</sup>. 1989. History of subsection Cd: Behavior and ecology. *Bulletin of the Entomological Society of America* 35: 125-128. (invited review)
15. **Lamp, W.O.**, M.J. Morris, and E.J. Armbrust. 1989. *Empoasca* (Homoptera: Cicadellidae) abundance and species composition in habitats proximate to alfalfa. *Environmental Entomology* 18: 423-428.
14. Oloumi Sadeghi, H., L.R. Zavaleta, G. Kapusta, **W.O. Lamp**, and E.J. Armbrust. 1989. Effects of potato leafhopper (Homoptera: Cicadellidae) and weed control on alfalfa yield and quality. *Journal of Economic Entomology* 82: 923-931.
13. Oloumi Sadeghi, H., L.R. Zavaleta, **W.O. Lamp**, E.J. Armbrust, and G. Kapusta. 1987. Interactions of the potato leafhopper (Homoptera: Cicadellidae) with weeds in an alfalfa ecosystem. *Environmental Entomology* 16: 1175-1180.
12. **Lamp, W.O.**, S.J. Roberts, E.J. Armbrust, and K.L. Steffey. 1985. Impact of insecticide applications at various alfalfa growth stages on potato leafhopper abundance and damage. *Journal of Economic Entomology* 78: 1393-1398.
11. Barney, R.J., **W.O. Lamp**, E.J. Armbrust, and G. Kapusta. 1984. The insect predator community and its response to weed management in spring planted alfalfa. *Protection Ecology* 8: 23-33.
10. **Lamp, W.O.**, R.J. Barney, E.J. Armbrust, and G. Kapusta. 1984. Selective weed control in spring planted

alfalfa: Effect on leafhoppers and planthoppers (Homoptera: Auchenorrhyncha) with emphasis on potato leafhopper. *Environmental Entomology* 13: 207-213.

9. **Lamp, W.O.**, M.J. Morris, and E.J. Armbrust. 1984. Suitability of common weed species as host plants for potato leafhopper, *Empoasca fabae*. *Entomologia experimentalis et applicata* 36: 125-131.

8. Rensner, P.E., **W.O. Lamp**, R.J. Barney, and E.J. Armbrust. 1983. Feeding tests of *Nabis roseipennis* (Hemiptera: Nabidae) on potato leafhopper, *Empoasca fabae* (Homoptera: Cicadellidae), and their migration into spring planted alfalfa. *Journal of Kansas Entomological Society* 56: 446-450.

7. **Lamp, W.O.**, and M.K. McCarty. 1982. Observations of *Corythucha distincta* (Hemiptera: Tingidae) on Platte thistle in Nebraska. *Journal of Kansas Entomological Society* 55: 34-36.

6. **Lamp, W.O.**, and M.K. McCarty. 1982. Predispersal seed predation of a native thistle, *Cirsium canescens*. *Environmental Entomology* 11: 847-851.

5. McCarty, M.K., and **W.O. Lamp**. 1982. Effect of a weevil, *Rhinocyllus conicus*, on musk thistle seed production. *Weed Science* 30: 136-140.

4. **Lamp, W.O.**, and N.W. Britt. 1981. Resource partitioning by two species of stream mayflies (Ephemeroptera: Heptageniidae). *Great Lakes Entomologist* 13: 151-157.

3. **Lamp, W.O.**, and M.K. McCarty. 1981. Biology of predispersal seed predators of the Platte thistle, *Cirsium canescens*. *Journal of Kansas Entomological Society* 55: 305-326.

2. **Lamp, W.O.**, and M.K. McCarty. 1981. Biology and ecology of the Platte thistle (*Cirsium canescens*). *Weed Science* 29: 686-692.

1. **Lamp, W.O.**, and T.O. Holtzer. 1980. Distribution of overwintering chinch bugs, *Blissus leucopterus leucopterus* (Hemiptera: Lygaeidae). *Journal of Kansas Entomological Society* 53: 320-324.

### c. Monographs, Reports and Extension Publications.

Wilson, R., and W. Lamp. 2015. Black flies, or “gnats”, in nuisance swarms in western Maryland. University of Maryland Agronomy News 6(4): 5-6.

Grant, J., A. Leslie, and W. Lamp. 2014. Kudzu bug, a potential soybean pest, survives the harsh winter. University of Maryland Agronomy News 5(4) 1-2.

Leslie, A., and W.O. Lamp. 2013. The invasive kudzu bug reaches Maryland. University of Maryland Extension Agronomy News 4(5) 1-2.

O’Leary, C., B. DeLay, and W. Lamp. 2012. Brown marmorated stink bug incidence in Maryland vineyards, 2012. Report to the USDA-SCRI Grape Working Group. 7 pp.

Lamp, W.O. 2010. Risk assessment of transgenic corn debris on non-target arthropods in agricultural streams. ISB News Report, July 2010, Virginia Polytechnic Institute and State University. p. 5-8.

Lamp, W.O., and S.E. Lombardi. 2009. Wetland macroinvertebrates at the Jackson Lane Preserve during 2008. Report to The Nature Conservancy.

Lombardi, S.E., and W.O. Lamp. 2009. Effect of Eastern Mudminnows (*Umbra pygmaea*) in Delmarva Temporary Wetlands on the Macroinvertebrate Community. BCRF Report to The Nature Conservancy.

Haube, M., and W. Lamp. 2006. Ecological Monitoring of the Jackson Lane Wetland Restoration Site. Final Report to The Nature Conservancy, #01-04-MDFO.

- Haube, M., and W. Lamp. 2005. Ecological Monitoring of the Jackson Lane Wetland Restoration Site. Interim Report to The Nature Conservancy, #01-04-MDFO.
- Lamp, W.O., M. Haube, and B. Howard. 2004. Aquatic insects of Harpers Ferry National Historical Park: Assessing environmental associations and ecological vulnerability. National Park Service Report, PMIS #80728.
- Soli, A., and W.O. Lamp. 2004. Pesticide and fertilizer contamination of streams adjacent to golf courses and the response of the benthic macroinvertebrate community. USGA Turfgrass and Environmental Research Online 3: 1-18.
- Lamp, W.O. 2003. Development of Pest Management Strategies for Forage Alfalfa Persistence. University of Maryland Integrated Pest Management 2002 Progress Report.
- Schwartzman, E., L. Moffatt, and W. Lamp. 2002. Impact of vegetation structure and hydrology on the aquatic macroinvertebrate communities of Delmarva Bays. Report to The Nature Conservancy, Biodiversity Conservation Research Fund.
- Lamp, W.O. 2001. Applied insect ecology, forage integrated pest management, biomonitoring and aquatic ecology. University of Maryland Integrated Pest Management 2001 Progress Report, p. 6.
- Soli, A., and W.O. Lamp. 2001. Pesticide and fertilizer contamination of streams adjacent to golf courses and the response of the benthic macroinvertebrate community. Proceedings of the IX International Turfgrass Research Conference, p. 77-97.
- Lamp, W.O., G. Nielsen, L. Alexander, and B. Quebedeaux. 2000. Potato leafhopper disruption of alfalfa physiology. University of Maryland Integrated Pest Management 1999-2000 Progress Report, p. 4.
- Soli, A., and W.O. Lamp. 2000. Impact of golf course management practices on stream ecology. University of Maryland Integrated Pest Management 1999-2000 Progress Report, p. 28.
- Lamp, W.O. 1999. Pesticides and nutrients in surface waters associated with golf courses and their effects on benthic macroinvertebrates. The USGA 1999 Turfgrass and Environmental Research Summary pgs. 55-56.
- Lamp, W.O., B. Marose, and W. Musser. 1999. Evaluation of new glandular-haired alfalfa varieties for potato leafhopper resistance. Integrated Pest Management 1998-1999 Progress Report, p. 34.
- Lamp, W.O. 1998. Pesticides and nutrients in surface waters associated with golf courses and their effects on benthic macroinvertebrates. The USGA 1998 Turfgrass and Environmental Research Summary pgs. 66-68.
- Nielsen, G.R., and W.O. Lamp. 1989. What's eating your alfalfa? Hoard's Dairyman 134: 535.
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- Lamp, W.O., E.J. Armbrust, and G. Kapusta. 1985. Interactions between weeds and leafhoppers in alfalfa. 1985 Illinois Custom Spray Operators Training School Manual. p. 85-89.
- Armbrust, E.J., and W.O. Lamp. 1983. Computers aid in fight. Natural History Survey Reports No. 223.
- Lamp, W.O. 1982. Biological control of musk thistle in Illinois. Natural History Survey Reports No. 222.
- McCarty, M.K., W.O. Lamp, A.R. Martin, and F.W. Roeth. 1981. Introduced weevil helps control musk thistle. Nebraska Farm, Ranch, and Home Quarterly 28: 14-16.



Lamp, W.O., and M.K. McCarty. 1979. A preliminary study of seed predators of Platte thistle in the Nebraska sandhills. *Transactions of Nebraska Academy of Sciences* 7: 71-74.

d. Book Reviews, Other Articles, Notes.

Lamp, W.O. 2014. Aquatic Entomology. *Limnology and Oceanography Bulletin* 23: 56-57.

Palmer, M.A., J. Brooks, L.C. Alexander, and W.O. Lamp. 2000. Restoring Life in Running Waters: Better Biological Monitoring. *Restoration Ecology* 8: 210.

Lamp, W.O. 1992. Insect Pest Management. *Bulletin of Entomological Research* 82: 557-558.

Lamp, W.O. 1990. Plant Stress-Insect Interactions. *Proceedings of the Entomological Society of Washington* 92: 361-362.

e. Talks, Abstracts and Other Professional Papers Presented.

i. Invited talks.

58. 3/19, invited speaker, “Beneficial Biodiversity Associated with Agricultural Drainage Ditches on the Delmarva Peninsula”, DELMARVA Cooperative Seed Grant Program Summit, Newark, DE.

57. 11/18, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: Invertebrate Community Structure and Plant Debris Processing“, as part of the symposium, “Aquatic Entomology Without Borders”, Entomological Society of America, Vancouver, BC.

56. 10/18, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of Risk Assessment”, West Virginia University, Morgantown, WV.

55. 4/18, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of Risk Assessment”, University of Maryland – Eastern Shore, Princess Anne, MD.

54. 11/17, invited speaker, “Life Associated with Agricultural Drainage Ditches: Linking Biodiversity to Ecosystem Services”, as part of the symposium “Lighting the Candle: Innovative Approaches for Illuminating Earth’s Biodiversity”, Entomological Society of America, Denver, CO.

53. 5/17, invited speaker, “Risk Assessment for Plant Incorporated Insecticidal Products on Non-Target Aquatic Invertebrates”, Project Director’s meeting, USDA-BRAG Program.

52. 1/17, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of Risk Assessment”, Department of Entomology, Purdue University, West Lafayette, IN.

51. 10/16, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of Risk Assessment”, Department of Entomology, Rutgers University, New Brunswick, NJ.

50. 9/16, invited speaker, “Bt Maize and Streams: Risk of Exposure and Hazard to Aquatic Insects”, as part of the symposium “Aquatic Entomology Around the World”, International Congress of Entomology, Orlando, FL, USA.

49. 4/16, invited speaker for Lund Week, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of Risk Assessment”, Department of Entomology, University of Georgia, Athens, GA. (student invitation for annual event)

48. 3/16, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of Risk Assessment”, Chesapeake Bay Laboratory, Solomons, MD.

47. 10/15, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of

Risk Assessment”, Department of Biology, College of the Holy Cross, Worcester, MA.

46. 2/15, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of Risk Assessment”, Department of Horticultural and Crop Sciences, The Ohio State University, Columbus, OH.

45. 1/15, invited speaker, “Climate Change and Your Farm”, Future Harvest/CASA Conference, University of Maryland, College Park, MD.

44. 2/14, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of Risk Assessment”, Department of Plant and Soil Science, University of Vermont, Burlington, VT.

43. 12/13, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of Risk Assessment”, Department of Entomology, University of Maryland, College Park, MD.

42. 4/13, invited speaker, “Ecosystem Services Provided by Invertebrates in Wetlands”, Ecosystem Services Symposium, Wye Research and Education Center, MD.

41. 3/13, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of Risk Assessment”, Department of Entomology, University of Delaware.

40. 8/12, invited speaker, “Risk Assessment of GE Maize Debris on Stream-Inhabiting Arthropods,” as part of the symposium, “The Effects of GM Crops on Non-Target Organisms,” International Congress of Entomology, Daegu, South Korea.

39. 6/12, invited speaker, “Non-Target Effects of Transgenic Corn Debris in Streams: The Changing Picture of Risk Assessment”, University of Cincinnati, Cincinnati, OH.

38. 11/11, invited speaker, “Who Cares if Aquatic Insects are in Agricultural Ditches?“, as part of the symposium, “Getting Wet and Making Friends: Aquatic Entomology’s Role outside Academia”, Entomological Society of America Meeting, Reno, NV.

37. 10/09, invited speaker, “Risk Assessment of Transgenic Corn Debris on Non-Target Arthropods in Agricultural Streams”, Department of Entomology, University of Maryland, College Park, MD.

36. 4/09, invited speaker, “New Views on an Old Pest: Plant Tolerance to Feeding Injury by Potato Leafhopper”, Department of Entomology, Ohio State University, Wooster, OH.

35. 11/08, invited speaker, “Deployment of Bt Corn in Our Environment: Assessment of Exposure and Risk to Aquatic Insects”, as part of the “Aquatic Insects” Symposium, Entomological Society of America Meeting, Reno, NV.

34. 4/08, invited speaker, “Risk Assessment of Transgenic Corn Debris on Non-Target Arthropods in Agricultural Streams”, USDA, Appalachian Fruit Research Station, Kearneysville, WV.

33. 3/08, invited speaker, “Risk Assessment of Transgenic Corn Debris on Non-Target Arthropods in Agricultural Streams”, as part of the “Hot topics in Entomology” Symposium, Eastern Branch, Entomological Society of America Meeting, Syracuse, NY.

32. 11/06, invited speaker, “Potato Leafhopper and the Persistence of Forage Alfalfa”, Department of Entomology, Kansas State University, Manhattan, KS.

31. 11/05, invited speaker, “Insect Pest Management and the Persistence of Forage Alfalfa”, Crop Management School, Ocean City, MD.

30. 11/05, invited speaker, “Risk Assessment Methodology for Plant Incorporated Insecticidal Products on Non-Target Aquatic Organisms”, as part of the “Symposium for Agricultural Biotechnology Risk Analysis Research”,

USDA-APHIS, Riverdale, MD.

29. 10/05, invited speaker, "Integration" as part of the conference, "Tolerance of *Medicago* Legumes to Biotic Stresses: Integrating Genomic Function with Plant Response to Pests", Ardmore, OK.

28. 5/05, invited speaker, "Potato Leafhopper and its Injury: The Initiation of Hopperburn in Legumes", International Rice Research Institute, Philippines.

27. 4/04, invited speaker, "Aquatic Insects of Harpers Ferry National Historical Park", National Park Service Capital Region Meeting, Washington, DC.

26. 2/04, invited speaker, "Potato Leafhopper and the Persistence of Forage Alfalfa", Department of Entomology, University of Nebraska, Lincoln, NE.

25. 3/03, invited speaker, "Potato Leafhopper as a Pest of Alfalfa", Illinois Natural History Survey, Champaign, IL.

24. 3/03, invited speaker, "Out of sight, out of mind: *Anagrus*, potato leafhopper, and glandular trichomes", as part of symposium, "The Effects of Crop Plants on the Third Trophic Level", North Central Branch Entomological Society of America Meeting, Madison, WI.

23. 2/03, invited seminar speaker, "Conservation of Stream-Inhabiting Insects: Ecosystems, Populations, and Genes", Maryland Entomological Society Meeting, Baltimore, MD.

22. 4/01, invited seminar speaker, "Human Impacts on Freshwater Ecosystems: Lessons from Macroinvertebrates", Department of Biological Resource Engineering, University of Maryland, College Park, MD.

21. 3/00, invited symposium speaker, "Research Opportunities for Golf Courses and the Environment", University of Wisconsin, Madison, WI.

20. 10/97, invited speaker, University of Missouri, Columbia, MO.

19. 6/97, invited keynote speaker, "Pest Management: Entomology", XVIII International Grassland Congress, Winnipeg, Canada.

18. 3/96, invited speaker, "Insect Management in Alfalfa: New Concepts in Biological Control", as part of the 26th National Alfalfa Symposium, East Lansing, MI.

17. 3/95, invited speaker, "Long-Range Migration and Local Dispersal of the Potato Leafhopper," as part of symposium, "Migration and Dispersal: How Insect Movement and Local Landscapes Influence Biodiversity and Pest Management," North Central Branch Entomological Society of America, Lexington, KY.

16. 11/94, invited speaker, University of Delaware, Department of Entomology, Newark, DE.

15. 4/94, invited panelist, "Forage Crop IPM", National IPM Symposium/Workshop, Las Vegas, NV.

14. 11/92, invited speaker, "Insect Pest Management in Relation to Stand Persistence", as part of symposium, "Strategies for Improving Stand Longevity of Forage Legumes", Agronomy Society of America Meeting, Minneapolis, MN.

13. 12/91, invited symposium speaker, "Migration and Dispersal of Arthropods: Biological and Environmental Determinants", Entomological Society of America Meeting, Reno, NV.

12. 2/91, invited speaker, Purdue University, Department of Entomology, West Lafayette, IN.

11. 11/90, invited speaker, University of Wisconsin, Department of Entomology, Madison, WI.

10. 10/90, invited speaker, Illinois Natural History Survey, Champaign, IL.
9. 10/90, invited speaker, University of Missouri, Department of Entomology, Columbia, MO.
8. 8/90, invited symposium speaker, "Host Generalist, Habitat Specialist Leafhoppers: Ecological Characteristics and Management Implications", as part of symposium, "Plant Habitat, Host and Tissue Selection by Leafhoppers and Planthoppers: Implications for Development of Resistant Crops", 7th International Auchenorrhyncha Congress, Wooster, OH.
7. 3/88, invited speaker, "Pest Impact on Alfalfa Potential." National Alfalfa Symposium, St. Joseph, MO.
6. 4/87, invited speaker, "Potato Leafhopper/Weed Interaction in Alfalfa: Mechanisms and Economic Impact," Pest Science Society of Washington Meeting, Beltsville, MD.
5. 10/86, invited symposium speaker, "Multiple Pest Interactions, Management Decisions, and Crop Protection," as part of symposium, "IPM: Where do we go from here? Eastern Branch Entomological Society of America Meeting, Philadelphia, PA.
4. 12/85, invited symposium speaker, "Potato Leafhopper Research: Historical and Current Perspectives," Entomological Society of America Meeting, Hollywood, FL.
3. 10/85, invited symposium speaker, "Multiple Pest Interactions in Alfalfa", Consortium for Integrated Pest Management National Symposium, Washington, DC.
2. 3/84, invited symposium speaker, "Insect/Weed Interactions: Research and Implications," North Central Branch Entomological Society of America Meeting, Wichita, KS.
1. 3/81, invited symposium speaker, "Prospects and Problems in Biological Control," North Central Branch Entomological Society of America Meeting, Columbus, OH.

ii. Non-refereed presentations (presented by WL only, last 10 years)

- Lamp, W.O., R. Kaji, C. Regan, A. Post, and G. Dively. 2016. Degradation of Cry proteins and ecological processing of post-harvest Bt and non-Bt corn debris in an agricultural stream. Eastern Branch Meeting of the Entomological Society of America, Philadelphia, PA.
- Lamp, W.O., R. Eckert, A. Leslie, and G. Dively. 2015. Lack of evidence for non-target effects of Bt corn on stream insects. Eastern Branch Meeting of the Entomological Society of America, Rehobeth, DE.
- DeLay, B., and W. Lamp. 2014. Symbiont-insect interaction in a novel association: Decreased wound response to a leafhopper. National Meeting of the Entomological Society of America, Portland, OR.
- Lamp, W.O., and B.D. DeLay. 2013. Interactive effects of elevated atmospheric CO<sub>2</sub> level and leafhopper injury on host gas exchange rates. Entomological Society of America, Austin, TX.
- Lamp, W.O., G. P. Dively, and C.M. Swan. 2012. Non-target effects of transgenic corn debris in streams: The changing picture of risk assessment. Entomological Society of America, Knoxville, TN.
- Lamp, W.O., and B.D. DeLay. 2012. Plant physiological disruption preceding hopperburn by a leafhopper. International Congress of Entomology, Daegu, South Korea.
- Lamp, W.O., and E. Sancomb. 2012. Potato leafhopper affects nitrogen subsidies in a tall fescue/alfalfa forage mixture. Entomological Society of America, Knoxville, TN.
- Lamp, W.O., and E. Sancomb. 2012. Nitrogen subsidies and yields in a grass/legume mixture: effect of potato leafhopper, *Empoasca fabae*. Eastern Branch Meeting of the Entomological Society of America, Hartford, CN.

Lamp, W.O. 2011. Potato leafhopper (*Empoasca fabae*) interferes with nitrogen fixation by alfalfa. National Meeting of the Entomological Society of America, Reno, NV.

Lamp, W.O., S.H. Berg, G.P. Dively, and C.M. Swan. 2010. Adverse effects of transgenic corn debris on stream arthropods: Tissue-mediated effects versus Bt protein. National Meeting of the Entomological Society of America, San Diego, CA.

Lamp, W.O., A. Leslie, and R. Smith. 2010. Ecological function and bioassessment of agricultural ditches on the Delmarva Peninsula. National Water Conference, Hilton Head, SC.

Lamp, W.O., and B.W. DeLay. 2009. Saliva of potato leafhopper (*Empoasca fabae*) affects the physiological response of legumes. National Meeting of the Entomological Society of America, Indianapolis, IN.

Lamp, W.O., P.D. Jensen, C.M. Swan, and G.P. Dively. 2008. Examination of risk to non-target arthropods from transgenic corn tissue in agricultural streams. National Meeting of the North American Benthological Society, Salt Lake City, UT.

Lamp, W.O. 2007. Injury of introduced versus native legumes from potato leafhopper: Tolerance through coevolution? National Meeting of the Entomological Society of America, San Diego, CA.

Lamp, W.O., and N. Sonekan. 2007. Response of a native and introduced legume to feeding injury of the native potato leafhopper. Eastern Branch, Entomological Society of America Meeting, Harrisburg, PA.

### iii. Non-refereed conference proceedings

Tracy, B., K. Albrecht, J. Flores, M. Hall, A. Islam, G. Jones, W. Lamp, J. MacAdam, H. Skinner, and C. Teutsch. 2013. Forage yield, weed suppression and fertilizer nitrogen replacement value (FNRV) of alfalfa-tall fescue mixtures. *Grassland Science in Europe* 18: 192-194.

Lamp, W.O. 1999. Potato leafhopper. In *Proceedings of the Farmer/Scientist Conference for Alternatives to Insecticides for Managing Vegetable Insects*, p. 35-38.

Lamp, W.O. 1998. Protection of forage crops from insect pests: Problems and solutions in relation to stand persistence. In *Proceedings of the XVIII International Grassland Congress, Winnipeg, Canada, Vol III*, p. 257-262.

Lamp, W.O., G.P. Dively, and M. Embrey. 1998. Development of alfalfa-oat intercrop systems and refinement of action thresholds for potato leafhopper in alfalfa. *Proceedings of the 34th Northeast Invitational Field Crops Insect Conference*.

Lamp, W.O. 1997. Workshop 3: Developing and delivering IPM programs for forage crop producers. In *Proceedings of the 3rd National IPM Symposium/Workshop*. p. 192-193.

Lamp, W.O. 1996. Insect management in alfalfa: New concepts in biological control. In *Proceedings of the 26th National Alfalfa Symposium*, p. 128-134.

Lamp, W.O. 1993. Migration and dispersal of arthropods: Introduction to the Symposium Proceedings. *Journal of Agricultural Entomology* 10: 217-218.

Lamp, W.O., and L. Zhao. 1993. Response of *Empoasca fabae* to diversification of alfalfa with varying densities of oats. *Proceedings of the 8th Auchenorrhyncha Congress*, p. 74-76.

Lamp, W.O. 1989. Reduced potato leafhopper abundance in oat-alfalfa intercrop systems. *Proceedings of the 26th Northeast Regional Invitational Field Crops Insect Conference*.

Lamp, W.O., and G.R. Nielsen. 1988. Pest impact on alfalfa potential. In Proceedings of the 1988 National Alfalfa Symposium, J. Henning (ed.) p. 48-57.

#### iv. Symposia/meetings organized

3/19, symposium organizer, “Novel plant-insect associations: Interactions between exotic and native species”, Eastern Branch Entomological Society of America, Blacksburg, VA.

11/14, symposium organizer, “Novel plant-insect associations: Implications of the lack of coevolution”, Entomological Society of America, Portland, OR.

3/14, symposium organizer, “Fascinating insects, and the lessons they provide”, Eastern Branch, Entomological Society of America, Williamsburg, VA.

3/06, symposium organizer, “Discoveries Below the Water Surface: Insects in Freshwater Habitats”, Eastern Branch Meeting, Entomological Society of America, Charlottesville, VA.

10/05, meeting organizer, “Tolerance of Medicago Legumes to Biotic Stresses: Integrating Genomic Function with Plant Response to Pests”, Ardmore, OK.

#### f. Films, CDs, Photographs, Webpages, etc.

2013-present, Leslie, A.#, R. Wilson#, and W. Lamp, “Maryland Black Fly Survey”, [www.mdblackfly.com](http://www.mdblackfly.com).

2013-present, Leslie, A.#, J. Grant#, and W. Lamp, “Maryland Kudzu Bug Survey”, [www.mdkudzubug.org](http://www.mdkudzubug.org).

#### i. Contracts and Grants.

Submitted:

68. 2020-2023, USDA-SARE Novel Approaches Program, W. Lamp as lead PI with S. Zebelo and D. Owens as co-PIs, “Managing Agricultural Drainage Ditches for Conservation Biological Control on the Delmarva Peninsula”, \$197,728. The purpose of this grant is to develop ditch management practices to enhance natural enemies that will provide conservation biological control in adjacent crop fields.

67. 2020-2021, Maryland Agricultural Experiment Station, W. Lamp as lead PI with D. Hawthorne and A. Avanesyan as co-PIs, “Identification of host plant use by the invasive spotted lanternfly (*Lycorma delicatula*) using next-gen DNA sequencing technology”, \$29,928. The purpose of this grant is to expand molecular techniques for determination of host plant use by nymphs and adults of the spotted lanternfly.

66. 2018-2020, Maryland Department of Agriculture Block Grant Program through USDA, W. Lamp as PI, “The invasive spotted lanternfly, *Lycorma delicatula*, and its specialty crop host plants: insect host usage at each developmental stage”, \$37,831. The purpose of this grant is to explore host usage to tarsal morphology, and to use molecular techniques to confirm host plant usage.

65. 2018-2019, Maryland Agricultural Experiment Station McIntire-Stennis Grant Program, W. Lamp as lead PI with A. Avanesyan as co-PI, “Stylet morphology of the invasive spotted lanternfly: Implications for host tree–associations and potential tree damage”, \$30,000. The purpose of this grant is to describe and quantify mouthpart morphology of the lanternfly as it relates to penetrating bark on potential woody host plants.

64. 2018-19, USDA-SARE Graduate Student Program, Morgan Thompson as lead PI and W. Lamp as advisor, “Evaluating the effect of potato leafhopper (Hemiptera: Cicadellidae) feeding on biological nitrogen fixation in alfalfa”, \$8,804. The purpose of this grant is to understand the effect of potato leafhopper feeding injury on rates of nitrogen fixation in alfalfa.

63. 2018-20, USDA-SARE Graduate Student Program, Dylan Kutz as lead PI and W. Lamp as advisor, “Movement of spiders from drainage ditches to agricultural fields to enhance conservation biocontrol”, \$13,684. The purpose of this grant is to determine if agricultural drainage ditches could be a source of beneficial spiders as predators for insect pests in soybeans.

62. 2017-20, USDA-Alfalfa and Forage Research Program, lead PD with Mark Sulc and James Jasinski (Ohio State University) and Yong-Lak Park and Tom Griggs (West Virginia University) as co-PDs, “Proximal and remote sensing of alfalfa canopies for early detection of insect stress and rapid integrated pest management decision-making”, \$289,993. The purpose of this grant is to develop proximal (handheld) and remote (UAVs) sensors of alfalfa canopies for rapid decision-making concerning leafhopper injury.

61. 2017-2018, Delmarva Seed Grant Program, Maryland Agricultural Experiment Station, lead PI with Simon Zebelo (UMES) and Megan O’Rourke (Virginia Tech), “Biodiversity of Delmarva Agricultural Drainage Ditches: Towards Ecological Intensification by Arthropods”, \$29,944. The purpose of this grant is to describe spatial and temporal dynamics of beneficial and injurious arthropods that occur in association with agricultural drainage ditches.

60. 2016-2019, USDA-ARS, sole PD, “Using invertebrate ecology and isotope tracers to inform wetland-stream connectivity on the Delmarva Peninsula”, \$53,990. The purpose of this grant is to demonstrate biological connectivity between wetlands and streams within the same landscape using the ecology of invertebrates, and using isotope tracers as indicators of movement.

59. 2016-2017, Maryland Soybean Board, co-PD with Jessica Grant<sup>#</sup> as lead PD, “Developmental Phenology of Kudzu Bugs and its Degree-Day Requirements for Colonization of Soybeans in Maryland”, \$5,276. The purpose of this grant is to validate temperature requirements for the newly invasive kudzu bug for Maryland conditions.

58. 2015-2017, USDA-Northeast Sustainable Agriculture Research and Education Program, co-PD with Jessica Grant<sup>#</sup> as lead PD, “Cold Tolerance of the Invasive Kudzu Bug and its Potential Impact on Soybean Production in the Northeastern US”, \$14,423. The purpose of this grant is to understand the overwintering limitations of the kudzu bug, a new invasive pest of soybeans, and to prepare for its management as its range extends into the northeastern US.

57. 2015-2019, USDA-Alfalfa and Forage Research Program, lead PD with Mark Sulc (Ohio State Univ.) and Kenneth Albrecht (Univ. of Wisconsin) as co-PDs, “Potato Leafhopper Threshold Revised for Alfalfa Host Resistance and Alfalfa-Grass Mixtures”, \$215,000. The purpose of this grant is to determine economic loss relationships for potato leafhopper in alfalfa cropping systems, to examine the effect of the leafhopper on nitrogen fixation, and to extend new information on economic thresholds.

56. 2015-2016, Maryland Soybean Board, co-PD with Jessica Grant<sup>#</sup> as lead PD, “Overwintering Survival of Kudzu Bugs and its Degree-Day Requirements for Colonization of Soybeans in Maryland”, \$6,550. The purpose of this grant is to determine cold tolerance and temperature requirements for the newly invasive kudzu bug for Maryland conditions.

55. 2015-2016, Maryland Agricultural Experiment Station Competitive Grant Competition, sole PD, “Modeling Adult Distribution of Nuisance Black Flies (Diptera: Simuliidae) and Determination of Larval Habitat”, \$30,000. The purpose of this grant is to provide an understanding of the black fly nuisance problem in western Maryland, and to develop a strategy for management.

54. 2015-2016, Maryland Agricultural Experiment Station Competitive Grant Competition, co-PD with David Hawthorne as lead PD, “Development of a Novel Molecular Biomarker Suite in the Freshwater Amphipod *Hyaella azteca* for Ecological Risk Assessment”, \$30,000. The purpose of this grant is to use genomic techniques to evaluate stress genes in this model species of amphipod used for ecotoxicology towards the goal of providing sensitive tools for freshwater risk assessment.

53. 2014-2016, (renewal) USDA-NIFA-Small Crop Research Initiative, one of 54 co-PIs with Tracy Leskey as lead PD, “Biology, Distribution and Pest Status of the Brown Marmorated Stink Bug (BMSB) in Agronomic, Fruit and

Vegetable Crops, and Urban Areas”, \$68,844 for WL. The purpose of this grant is to develop IPM practices for the stink bug in small crops; we focus on the functional role of salivary symbionts.

52. 2014-2017, USDA Biotechnology Risk Assessment Program, Lead PI with Galen Dively, Qin Wang, and Cerruti Hooks, “Risk Assessment for Plant Incorporated Insecticidal Products on Non-Target Aquatic Organisms and Communities”, \$499,996 (\$244,933 for WL). The purpose of this grant is to examine risk to non-target stream organisms from Bt corn debris.

51. 2014-2015, Maryland Soybean Board, sole PD, “Continued Detection of the Kudzu Bug and its Biology/Damage in Maryland Soybeans”, \$11,500 for WL. The purpose of this grant is to survey for a new invasive soybean pest and to prepare educational materials for producers.

50. 2013-2014, Extension Integrated Pest Management Coordination Program, USDA, WL co-PD with 8 others, C. Hooks as lead PD, “Increasing the Impact of Maryland’s Statewide IPM Program through Multi-Disciplinary Partnerships”, \$10,375 for WL. The purpose of this grant is to increase the adaptation of IPM practices through the Maryland Extension Program.

49. 2013-2014, Maryland Soybean Board, sole PD, “Detection and Preparation for the Invasive Soybean Pest, the Kudzu Bug”, \$12,215 for WL. The purpose of this grant is to survey for a new invasive soybean pest and to prepare educational materials for producers.

48. 2013-2014, USDA-SARE-Graduate Student Grant, D. Venugopal as Graduate Investigator and WL as Faculty Sponsor. “Spatial Pattern of Infestation Risk and Management of the Invasive Brown Marmorated Stink Bug in Soybeans”, \$14,957. The purpose of this grant is to use the spatial pattern of the invasive stink bug to determine risk and management.

47. 2012-2013, MAES Grant Program, sole PD, “Interaction of Increasing Atmospheric CO<sub>2</sub> and Sap-Feeding Insect Injury on the Physiological Response of a Legume”, \$30,000. The purpose of this grant is to measure the response of plants grown at elevated CO<sub>2</sub> levels to sap-feeding insect injury.

46. 2011-2014, USDA-NIFA-Small Crop Research Initiative, one of 54 co-PIs with Tracy Leskey as lead PD, “Biology, Distribution and Pest Status of the Brown Marmorated Stink Bug (BMSB) in Agronomic, Fruit and Vegetable Crops, and Urban Areas”, \$35,768 for WL. The purpose of this grant is to develop IPM practices for the stink bug in small crops.

45. 9/1/2010-8/30/2011, USDA-AFRI-Climate Change Program, “Toward a Tall Fescue CAP: A Model Forage System for the Carbon Economy and Changing Climate”, \$50,000. Planning grant, co-PI with Charles West, Alan Franzluebbbers, Ben Tracy, Marc Sulc, and Paul Beck.

44. 9/1/2010-8/31/2011, MAES Grant Program, “Molecular Characterization of Plant-Insect Interactions among Potato Leafhopper, its Salivary Symbionts, and Alfalfa”, \$30,000. Co-PI with Jian Wang (Entomology) and Jianhua Hsu (PLSC).

43. 10/1/2009-9/30/2012, USDA Biotechnology Risk Assessment Program, “Risk Assessment Methodology for Plant Incorporated Insecticidal Products on Non-Target Aquatic Organisms”, \$399,702. Lead PI with Galen Dively and Chris Swan (UMBC).

42. 6/1/2008-5/31/2009, The Nature Conservancy, “Wetland Macroinvertebrates at the Jackson Lane Preserve during 2008”, \$5,000.

41. 7/1/2007-6/30/2008, Maryland Agricultural Experiment Station, “Bioassessment of Ecological Function of Agricultural Ditches on the Delmarva Peninsula”, \$25,000.

40. 5/1/2007-4/30/2008, The Nature Conservancy, “Impact of the Eastern Mudminnow on the Macroinvertebrate Community of Created Wetlands”, \$2,730.



39. 8/1/2005-7/31/2008, USDA Biotechnology Risk Assessment Program, “Risk Assessment Methodology for Plant Incorporated Insecticidal Products on Non-Target Aquatic Organisms”, \$399,727. Lead PI with Galen Dively and Chris Swan (UMBC).
38. 8/1/2005-7/30/2006, USDA NRI Genetic Processes and Mechanisms of Crop Plants, “Conference Proposal: Tolerance of *Medicago* Legumes to Biotic Stresses: Integrating Genomic Function with Plant Response to Pests”, \$5,000. Lead PI with Jeffrey Volenec (Purdue) and Landon Rhodes (Ohio State).
37. 7/1/2005-6/30/2006, University of Maryland, General Research Board, “Identification of Host Tolerance to Leafhopper Injury in a Model Plant for Genomics Research”, \$3,500.
36. 7/15/2005-7/14/2008, The Maryland Center for Agro-Ecology, “Restoration of Former Wetlands on a Caroline County Farm: Nutrient Reduction and Biotic Habitat Development”, \$184,093. Lead PI with Kenneth Staver and Douglas Samson.
35. 12/19/2004-6/19/2005, University of Maryland Office of International Programs, “Plant Response to Injury by Planthopper and Leafhopper Pests: Variation in Tolerance among Cultivars”, \$2,070.
34. 9/29/2003-12/31/2004, The Nature Conservancy, “Ecological Monitoring of the Jackson Lane Wetland Restoration Site”, \$20,947.
33. 6/30/2003-5/30/2004, The Nature Conservancy, “Monitoring Plan for the Jackson Lane Wetland Restoration”, \$3,200.
32. 5/1/2003-4/30/2004, The Nature Conservancy, “Encroachment of Woody Cover in the Delmarva Bays: Impact on Macroinvertebrate Community Structure”, \$4,000.
31. 4/1/2003-3/31/2004, US Geological Survey, “Response of Macroinvertebrates to Road Salt Runoff in Headwater Streams”, \$34,000.
30. 5/1/2002-4/30/2004, National Park Service, Department of the Interior, “Aquatic Insects of Harpers Ferry National Historical Park: Assessing Environmental Associations and Ecological Vulnerability”, \$22,264.
29. 7/1/2002-9/30/2003, US Environmental Protection Agency, “Linking Biodiversity and Urbanization in the Middle Patuxent Environmental Area: Environmental Lessons for an East Coast Community”, \$14,240.
28. 5/1/2001-4/30/2002, The Nature Conservancy, “The Impact of Vegetation Structure and Seasonal Hydrology on the Aquatic Macroinvertebrate Communities of the Delmarva Bays”, \$4,000. Lead PI with E. Schwartzman (Maryland) and L. Moffatt (Maryland).
27. 6/26/00-6/26/01, Middle Patuxent Environmental Association, “Stream Macroinvertebrates of the Middle Patuxent Environmental Area”, \$2,500.
26. 4/1/00-3/31/01, US Geological Survey, “Structural and Functional Assessments for Evaluating Elevated Nutrient Levels in Maryland Streams”, \$29,856.
25. 11/1/98-10/30/01, USDA-National Research Initiative, “Plant Physiological Disruption Induced by a Sap-Feeding Insect”, \$150,000. Lead PI with J. Volenec (Purdue), B. Quebedeaux (Maryland).
24. 8/1/98-7/31/00, The Nature Conservancy, “Baseline Biohydrological Study of Two Coastal Plain Watersheds in Maryland”, \$21,562.
23. 7/1/98-6/30/01, USDA-CSREES Northeast Regional Integrated Pest Management Program, “Evaluation and Implementation of Glandular-Haired Alfalfa for Pest Management”, \$95,000. Lead PI with B. Marose (Maryland), W. Musser (Maryland), A. Hower (Penn State), D. Calvin (Penn State), M. Hall (Penn State).

22. 2/1/98-1/31/00, National Fish and Wildlife Foundation/USGA, Wildlife Links Program, "Pesticides and Nutrients in Surface Waters Associated with Golf Courses and their Effects on Benthic Macroinvertebrates", \$55,000. Lead PI with A. Soli (Maryland), J. Nelson (Maryland).
21. 7/97-6/99, Maryland Agricultural Experiment Station Grant Program, "Alfalfa Response to Leafhopper Injury: Physiological Mechanisms and Economic Thresholds", \$50,000. Lead PI with B. Quebedeaux, L. Vough, G. Dively (Maryland).
20. 10/95-9/96, USDA-CSRS National IPM Implementation Program, "Improving Forage Legume Persistence through Ecologically-Based Pest Management", \$20,000. Lead PI with B. Marose (Maryland).
19. 10/95-9/96, National Biological Control Institute, "A Multimedia Presentation of Biological Control for Extension Education", \$9,740. Lead PI with G. Dively and D. Liewehr (Entomology).
18. 7/95-6/97, Maryland Cooperative Extension Service Grant Program, "A Multimedia Presentation of Biological Control for Extension Education", \$19,700. Lead PI with G. Dively (PI, Entomology), A. McLaughlin (MCES), C. O'Connell (MCES), M. Godfrey (MCES), C. McDaniel (CSC), B. Paleg (MCES).
17. 7/95-6/96, University of Maryland General Research Board, "Overwintering Ecology of *Anagrus nigriventris*, a Natural Enemy of a Leafhopper Pest", \$2,000.
16. 7/95-6/96, Maryland Agricultural Experiment Station Grant Program, "Biological Control of a Leafhopper Pest: Conservation of an Egg Parasitoid", \$14,595.
15. 1/94-12/96, Maryland Grain Board Grant Program, "Hessian Fly Outbreaks in Wheat: Role of Cover Crops", \$12,480. Lead PI with G. Dively (Entomology).
14. 7/93-6/94, Maryland Agricultural Experiment Station Grant Program, "Genotypic Diversity within Alfalfa Populations: Selection of Insect Host Resistance during Establishment", \$22,000.
13. 5/93-4/94, Maryland Soybean Board Grant Program, "Leafhopper Induced Losses to Maryland Soybeans", \$2,990. Lead PI with G. Dively (Entomology), and W. Kenworthy (Agronomy).
12. 4/93-3/96, USDA-CSRS Integrated Pest Management Special Grant Program, "Development of Alfalfa-Oat Intercrop Systems to Reduce Leafhopper Impact", \$125,000. Lead PI with E. Lichtenberg (Agric. Res. Economics), L. Vough (Agronomy), D. Sammons (Agronomy), and G. Dively (Entomology).
11. 7/92-6/93, University of Maryland Graduate Research Board Research Support Award, "Transstadial Transmission of *Erynia radicans*, A Disease-Producing Pathogen of a Common Leafhopper Pest", \$3,300.
10. 2/92-1/94, USDA Low Input Sustainable Agriculture Grant Program, "Alternative Management of Leafhopper Pests in Integrated Farming Systems: Demonstration of Biological and Cultural Controls", \$62,400. Lead PI with E. Lichtenberg (Agric. Res. Economics), G. Dively (Entomology), Maryland Organic Food and Farming Association, and Chesapeake Bay Foundation.
9. 10/90-9/94, USAID Program in Science and Technology Cooperation, "Management of Maize Stalk Borers in Kenya: The Interaction of Genotypic and Crop Species Diversity", \$144,000. Lead PI with D. Sammons (Agronomy).
8. 7/89-6/92, USDA-CSRS Forage Integrated Pest Management Special Grant Program, "Alfalfa/Grass Companion Cropping and Pest Management: Pest Dynamics and Economic Implications", \$58,000. Lead PI with L. Vough (Agronomy) and A. Grybauskas (Botany).
7. 9/89-6/91, Maryland Agricultural Experiment Station Competitive Grant Program, "Alfalfa/Oat Intercrop Systems to Reduce Pest Impact", \$49,500. Lead PI with D. Sammons and L. Vough (Agronomy).

6. 9/89-6/91, Maryland Agricultural Experiment Station Competitive Grant Program, "Evaluating Oats as an Alternative Small Grain Crop in Maryland", \$20,000. Principal investigator: D. Sammons (Agronomy), co-investigators: L. Slaughter (Agronomy), A. Grybauskas (Botany), and W. Lamp (Entomology).
5. 5/88-8/88, USDA-CSRS Research Apprenticeship Program, "A Computer Model for Improving Soybean Production in Maryland", \$1,650.
4. 7/88-6/89, University of Maryland Graduate Research Board Research Support Award, "Electronically-Recorded Disturbance of Potato Leafhopper Feeding Behavior by Plant-Derived, Antifeedant Oils", \$3,000.
3. 4/87-3/89, Maryland Soybean Board Research Award, "Resistance of Soybean Varieties to Spider Mites in Maryland", \$5,488.
2. 7/86-6/87, University of Maryland Graduate Research Board Research Support Award, "Host Plant Suitability of Background Vegetation as a Predictor of Abundance Patterns of a Polyphagous Herbivore", \$1,000.
1. 8/86-7/89, USDA-CSRS Forage Integrated Pest Management Special Grant Program, "The Effect of Potassium Applications on Pest Management in Alfalfa", \$61,390. Lead PI with L. Vough (Agronomy) and A. Grybauskas (Botany).

j. Fellowships, Prizes and Awards.

- 1/2016, Herb T. Streu Meritorious Service Award, Eastern Branch Entomological Society of America, Philadelphia, PA.
- 3/2015, International IPM Award for Recognition, "Stop BMSB Program", 8<sup>th</sup> International IPM Symposium, Salt Lake City, UT.

k. Editorships, Editorial Boards and Reviewing Activities for Journals and Other Learned Publications.

Manuscripts (average 5/year) reviewed for Environmental Entomology, Journal of Kansas Entomological Society, Canadian Entomologist, Journal of Economic Entomology, Maryland Entomological Society Journal, Journal of Entomological Science, Agronomy Journal, Journal of Agricultural Entomology, Freshwater Biology, Applied Environmental Microbiology

Member, Publications Council, Entomological Society of America, 2009-2013 (Chair, 2012-13)

Technical Editor, Forage and Grazinglands Journal, 2004-2012

Subject Editor, Journal of Agricultural and Urban Entomology, 2003-2009

Editorial Board Member of the American Entomologist, Section C Representative, 1991-1996

3. Teaching, Mentoring and Advising.

a. Courses taught in the last five years.

Spring, 2020, HONR 208D, "Insect Biodiversity: The Good, The Bad and The Weird", 16 students. (part of University Honors Seminar Series)

Spring, 2020, ENTM 667, "Aquatic Entomology", 3 students.

Fall, 2019, BSCI 467, "Freshwater Biology", 48 students.

Spring, 2019, HONR 208D, "Insect Biodiversity: The Good, The Bad and The Weird", 16 students. (part of University Honors Seminar Series)

Fall, 2018, BSCI 467, "Freshwater Biology", 48 students.

Summer, 2018, ENTM 735, "Sustainability", 1 student, (part of OES-ENTM Program)

Spring, 2018, HONR 208D, "Insect Biodiversity: The Good, The Bad and The Weird", 13 students. (part of University Honors Seminar Series)

Spring, 2018, ENTM 667, "Aquatic Entomology", 5 students.

Fall, 2017, BSCI 467, "Freshwater Biology", 48 students.

Summer, 2017, ENTM 735, "Sustainability", 3 students. (part of OES-ENTM Program)

Fall, 2016, BSCI 467, "Freshwater Biology", 47 students.

Summer, 2016, ENTM 735, "Sustainability", 3 students. (part of OES-ENTM Program)

Spring, 2016, ENTM 667, "Aquatic Entomology", 4 students.

Spring, 2016, ENTM 798G, "Insects and Climate Change", 12 students.

Fall, 2015, BSCI 467, "Freshwater Biology", 48 students.

#### b. Course or Curriculum Development.

Courses developed and approved:

2018, HONR208D, "Insect Biodiversity: The Good, The Bad and The Weird", part of the University Honors Seminar Series, 3 credits.

2016, ENTM 735, "Sustainability", online only, 3 credits.

2002, ENTM 609, "Integrated Pest Management", 1 credit per module with 10 modules, co-taught with Arvydas Grybauskas.

2002, ENTM/MEES 633, "Structure and Function of Stream Ecosystems", 4 credits, lecture and lab, co-taught with Margaret Palmer.

1999, ENTM 667, "Aquatic Entomology", 3 credits, lecture, discussion, and lab.

1998, BSCI 467, "Freshwater Biology", 4 credits, lecture and lab.

1993, ENTM 428, "Ecology of Aquatic Insects", 3 credits, lecture and lab.

1989, ENTM 454, "Principles of Plant Protection", 2 credits, lecture and lab, co-taught with Dale Bottrell.

Competitive grants for instruction:

7/89-6/90, UMCP Improvement of Undergraduate Education Program, "Innovative Training Materials for Plant Protection Courses," \$3,797.

7/87-8/88, IBM Advanced Education Project, "Development of Interactive Educational Software for Entomology Curriculum," 2 IBM PC-AT work stations.

#### c. Textbooks, Manuals, Notes, Software, Web pages and Other Contributions to Teaching.

Lamp, W. 2018. Field Guide to Aquatic Macroinvertebrates. 2 pp. (first developed in 2017)

Lamp, W., and A. Leslie. 2018. Freshwater Biology Laboratory Manual. 74 pp. (first developed in 2012)

d. Teaching Awards and Other Special Recognition.

3/2009, Eastern Branch-Entomological Society of America Distinguished Teaching Award.

3/2002, Undergraduate Research Mentor of the Year Award, University of Maryland.

e. Advising (other than research direction):

i. Undergraduate.

10/89-9/91, 3/94-5/11, Undergraduate Student Advisor for College Biological Sciences Program (approx. 30 students/year over 21 years).

8/92-5/93, Undergraduate Student Advisor for Division of Letters and Sciences (approx. 20 students/year).

ii. Graduate.

Service on study committees:

Veronica Johnson, 5/17-8/18	(M.S., ENTM)
Hanna Kahl, 5/16-12/17	(M.S., ENTM)
Jacob Oster, 3/16-1/18	(M.S., MEES)
Roy Weitzell, 9/14-12/14	(PhD, MEES)
Karen Kesler, 5/14-1/15	(Ph.D., MEES)
Lauren Hunt, 5/14-9/16	(M.S., ENTM)
Virginia Weeks, 4/14-5/19	(M.S., ENST)
Megan Saunders, 1/14-5/19	(Ph.D., ENST)
Cara Campbell, 1/14-4/14	(Ph.D., MEES)
Nathalie Steinhauer, 10/13-11/17	(Ph.D., ENTM)
Lily Calderwood, 5/13-5/15	(Ph.D., Plant and Soil Sci., Univ. of Vermont)
Chris Taylor, 5/12-5/16	(Ph.D., ENTM)
Alina Avanesyan, 12/11-6/14	(Ph.D., Biology, Univ. of Cincinnati)
Jermaine Hinds, 2/11-8/12	(M.S., ENTM)
Zack Freed, 1/11-8/12	(M.S., ENST)
Casie Smith, 10/09-12/11	(M.S., ENST)
David Ruppert, 9/09-8/12	(Ph.D., ENST)
Owen McDonough, 9/08-12/12	(Ph.D., BEES)
Danny Lewis, 1/09-8/09	(Ph.D., ENTM)
Yin-Phan Tsang, 1/06-8/08	(Ph.D., BRE)
Andrew Sensenig, 3/06-8/10	(Ph.D., ENTM)
Susan Cushman, 3/06-6/06	(Ph.D., MEES)
Meenu Padmanabhan, 10/06-12/06	(Ph.D., CMBG)
David Blersch, 1/06-8/07	(Ph.D., BRE)
Kalim Hanna, 2/05-12/06	(Ph.D., BRE)
Kreshnik Bejleri, 12/02-6/04	(M.S., ENTM)
Andrea Huberty, 11/01-1/05	(Ph.D., ENTM)
Lisa Smith, 9/01-7/06	(M.S., TOXI)
Robyn Rose, 5/01-5/05	(Ph.D., ENTM)
Aaron Moore, 10/00-12/03	(M.S., BEES)
Holly Menninger, 10/00-12/06	(Ph.D., BEES)
Stacy Swartwood, 9/00-5/04	(M.S., MEES)
Linda Barker, 9/00-12/03	(Ph.D., BRE)
Carolyn Smith, 1/99-5/00	(M.S.)
Catherine Long, 12/98-5/00	(M.S.)
Donna Stockton, 2/97-12/99	(M.S.)

Xiaozhong Bao, 10/96-5/99	(M.S.)
Tracy Horner, 4/96-5/00	(Ph.D)
Hartmut Doebel, 9/95-12/96	(Ph.D)
Andrea Huberty, 3/96-5/99	(M.S.)
Mark Suarez, 3/96-12/97	(M.S.)
Alfred Fornier, 12/95-12/97	(M.S.)
Stephen Hight, 6/94-12/97	(Ph.D.)
David Myers, 5/94-8/96	(M.S.)
Micky Eubanks, 4/94-8/97	(Ph.D.)
John Losey, 11/93-4/96	(Ph.D.)
Christine Casey, 6/93-8/94	(M.S.)
Paula Leddy, 4/93-6/96	(Ph.D.)
Amara Naksathit, 3/93-9/96	(Ph.D.)
Leonida Mwenesi, 2/92-8/96	(M.S.)
Jo Ann Bentz, 9/90-8/93	(Ph.D.)
Fernando Vega-Sanchez, 4/88-5/92	(Ph.D.)
Moshe Coll, 11/86-12/91	(Ph.D.)
Elizabeth Carazo, 5/88-8/91	(Ph.D.)
Karen Olmstead, 1/88-7/91	(Ph.D.)
Karen Kester, 10/85-7/91	(Ph.D.)

iii. Other advising and mentoring activities.

Graduate student independent research:

Sarah Au, 9/11-5/12	
Rebecca Jacquay, 9/09-12/09	Online MS degree scholarly paper
Edward Schwartzman, 5/01-6/02	

High school teachers:

Alexis Donoghue, 7/13-8/13	ExPERT Program for HS teachers
Stacie Henry, 7/13-8/13	ExPERT Program for HS teachers
Brittney Shaw, 7/12-8/12	ExPERT Program for HS teachers
Evangeline Sy, 6/11-9/11	ExPERT Program for HS teachers
Yolanda King, 6/09-9/09	ExPERT Program for HS teachers

High school student research:

Nina McGranahan, 6/18-8/19
Cameron Anderson, 9/17-5/18
Oliver Meade, 9/13-5/14
Alesia Richardson, 9/13-5/14
Lenora Henry, 9/12-5/13
Amanda Hastings, 9/12-5/13
Sadia Naseem, 9/11-5/12
Joseph Denicola, 6/11-5/12
Amanda Chu, 6/11-5/12
Damilola Otukoya, 9/10-5/11
Kurt Isaak-Elder, 8/08-5/09
Kamaria Simon, 8/07-5/08
Kamedra McNeil, 8/07-5/08
Melanie Stevens, 8/07-5/08
Nofisat Sonekan, 9/06-2/07

f. Advising: Research Direction.

i. Undergraduate.

Hannah Sutton, 12/19-5/20	
Megan Geesin, 1/19-5/20	(BSCI 389)
Maggie Wartman, 12/17-5/18	(BSCI 389)
Katherine Okada, 10/17-11/18	(BSCI 389)
Kevin Clements, 9/17-11/18	(BSCI 389)
Kimberly Delonge, 1/17-5/17	(BSCI 389)
Pouria Farhadi, 9/16-5/17	(BSCI 389)
Raina Kaji, 6/15-5/17	(ILS internship, BSCI 389H, ENTM Honors Program)
Chloe Garfinkel, 6/15-5/18	(ILS internship, BSCI 389H, ENTM Honors Program)
Cullen McAskill, 1/15-5/17	(BSCI 389H, ENTM Honors Program)
William Boudhraa, 1/15-5/16	(BSCI 389)
Anthony Zhao, 9/14-5/17	(BSCI 389H, ENTM Honors Program)
Rachel Gao, 1/14-5/14	(BSCI 389)
Claire Weber, 1/14-5/15	(BSCI 389H, ENTM Honors Program)
Sadia Naseem, 9/13-7/16	(BSCI 389H, ENTM Honors Program)
Julianne Tice, 6/12-2/13	(SESYNC Intern)
Sean McCanty, 1/12- 5/13	(BSCI 389H, ENTM Honors Program)
Conor O'Leary, 6/11-5/12	(BSCI 389)
Veronica Johnson, 1/12-5/13	(BSCI 389)
Ashlea Glickstein, 9/11-12/11	(BSCI 389)
Jasmine Spencer, 2/11-5/11	(BSCI 389)
Ashfia Rahman, 9/10-12/11	(BSCI 389)
Arnon Dayak, 1/10-12/10	(BSCI 389)
Grace Park, 1/10-12/10	(BSCI 389)
Megan Flora, 1/09-5/10	(BSCI 389H, ENTM Honors Program)
Jessica Kelly, 1/09-5/11	(BSCI 389)
Irina Shapiro, 1/08-5/10	(BSCI 389, URAP, ENTM Honors Program)
David Axelrod, 9/08-12/08	(BSCI 389)
Jermain Hinds, 1/08-5/08	(BSCI 389)
Emilie Wolfson, 9/07-5/08	(URAP)
Meaghan Fahey, 9/07-5/08	(BSCI 389)
Oluwabunmi Fakilede, 6/07-9/07	(McNair Scholar)
Josh Schwartzbaum, 1/07-5/07	(URAP)
Kimya Davani, 1/07-12/07	(BSCI 389)
Alan Leslie, 9/06-5/07	(URAP, BSCI 389)
Cara Hines, 9/06-5/08	(HHMI, BSCI 389H, ENTM Honors Program)
Piyumi Ranaweera, 1/06-5/06	(BSCI 389)
Jennifer Chiang, 1/06-5/06	(URAP)
Caitlin Dietsche, 1/06-5/07	(URAP)
Sufia Siddiqui, 1/06-5/06	(URAP)
Angelica Reyes, 1/06-5/06	(URAP)
Jennifer Kresina, 9/05-12/05	(URAP)
Cattlena Changpriroa, 9/05-12/05	(BSCI 389)
Daniel Miranda, 9/05-5/06	(URAP)
Ann-Cathrin Evensen, 9/04-12/04	(URAP)
Melanie Delion, 6/04-5/05	(BSCI 389)
Lauren Drexel, 10/03-12/03	(URAP)
Adelia Bles, 10/03-12/03	(URAP)
Pamela Brozowsky, 10/03-5/04	(URAP, BSCI 389)
Paul Nevenglosky, 10/03-5/04	(URAP)
Steve Davis, 1/03-6/03	(URAP)
Mary Dulko, 10/02-1/03	(URAP)
Lauren Moffatt, 5/01-4/02	(Nature Conservancy Grant)
Lorri-Ann Burke, 10/00-1/01	(URAP)

Navid Nouri, 10/00-1/01	(URAP)
Michael Nguyen, 2/00-5/03	(URAP, Howard Hughes Fellowship, ENTM Honors Program)
Amy Miller, 2/00-5/00	(URAP)
Brian Hoffman, 2/00-5/00	(BSCI 389)
Sandy Cariello, 2/00-5/00	(BSCI 389)
Kum Ja Jun, 9/99-1/00	(URAP)
Alex Farrand, 9/99-12/99	(URAP)
Ivy Sotomayor, 10/98-5/99	(URAP)
Amy Kulesza, 9/98-5/99	(BSCI 389)
Cary Pirone, 9/98-5/00	(ENTM Honors Program, Senior Summer Scholarship, Howard Hughes Fellowship)
Aaron Lovinger, 2/97-8/98	(Senior Summer Scholar)
Sarah Jernigan, 8/95-5/96	
Steve String, 9/94-12/94	
Dan Schmidt, 9/94-12/94	
Pooja Shukla, 2/93-5/93	
Eric Ranne, 6/88-8/89	

ii. Master's.

	<u>Current Position</u>
Ali Shokoohi, 6/2020-present (ENTM)	University of Maryland
Margaret Hartman, 1/2019-present (ENTM)	University of Maryland
Dylan Kutz, 9/17-present (ENTM)	University of Maryland
Brock Couch, 11/16-5/19 (BEES)	Eastern Tennessee State (Ph.D. program)
Morgan Thompson, 9/16-5/19 (ENTM)	Texas A&M University (Ph.D. program)
Jessica Grant, 9/14-12/16 (ENTM)	North Carolina State University (technician)
Susan Lombardi, 9/06-8/09 (MEES)	Buffalo, NY
Lauren Culler, 9/06-12/08(ENTM)	Research Assistant Professor, Dartmouth College
Robert Smith, 1/06-12/06 (ENTM)	see below
Angel Peña, 8/88-8/91 (ENTM)	Professor of Biology, Universidad Autonoma de Santo Domingo, Dominican Republic

iii. Doctoral.

Darsy Smith, 1/19-present (ENTM)	University of Maryland
Rebecca Eckert, 9/14-5/20 (ENTM)	Pennsylvania Dept of Agriculture, Harrisburg, PA
Rebecca Wilson, 9/13-12/18 (ENTM)	Portland State University, Portland, OR
Dilip Venugopal, 10/11- 5/14 (ENTM)	(co-chair with G. Dively) Biologist/Environmental Reviewer, FDA, Silver Spring, MD
Ryan Gott, 9/11-5/16 (ENTM)	(co-chair with D. Hawthorne) IPM Specialist, Phipps Conservatory and Botanical Gardens, Pittsburgh, PA
Elanor Spadafora, 9/10-8/16 (BEES)	St. Louis, MO
Alan Leslie, 9/08-12/14 (ENTM)	Extension Specialist, University of Maryland
Bridget Wille DeLay, 9/07-12/13 (ENTM)	Postdoctoral Research Associate, University of Texas Medical School, Houston, Texas
Robert Smith, 1/07- 9/12 (ENTM)	Assistant Professor, Lycoming College, PA
Sara Pollack, 10/06-12/08 (MEES)	Environmental Contaminants Biologist, Fish & Wildlife Service, Washington, DC
Laurie Alexander, 1/00-5/07 (ENTM)	Ecologist, US Environmental Protection Agency, Arlington, VA
Nick Baer, 9/98-8/04 (MEES)	Professor, Dept of Biology Colby-Sawyer College, NH
Amy Soli, 1/96-5/00 (MEES)	Environmental & Occupational Toxicologist Abbvie, North Chicago, IL



Clara Fuentes, 8/88-12/98 (ENTM)

Pesticide Programs, US Environmental Protection Agency, Washington, DC

iv. Postdoctoral or Visiting Scientists

Dr. Alina Avanesyan, Postdoctoral Research Associate, 2018-2020.

Dr. Peter Jensen, Postdoctoral Research Associate, 2007-2009, now Ecotoxicology Biotechnology Platform Lead, Monsanto, St. Louis, MO

Dr. Barbara Howard, Visiting Professor, Department of Biology, Catholic University, 2001-2003

Xiao Yingfang, Visiting Scholar, Jiangsu Academy of Agricultural Sciences, PRC, 1999-2000

Zhao Limin, Visiting Scholar, Qinghai Academy of Agriculture and Forestry, PRC, 1990-92

Li Yiwei, Visiting Scholar, Jiangsu Academy of Agricultural Sciences, PRC, 1986-88

Dr. Gary Nielsen, Postdoctoral Research Associate, 1986-1989, now Director of Training, JP Pest Services, Milford, NH

g. Extension Activities.

Presentations.

Insect Biodiversity: Global and Local Issues. 2019. Dorsey Hall Garden Club, Clarksville, MD.

Climate Change & Your Farm, Panel Discussion. 2015. Future Harvest/CASA Conference, College Park, MD.

Kudzu Bug: The New Insect. 2014. University of Maryland Extension, Cecil County, Winter Extension Agronomy Meeting, Rising Sun, MD.

Kudzu Bug: The New Insect. 2014. University of Maryland Extension, Lower Eastern Shore, Winter Extension Agronomy Meeting, Salisbury, MD.

Kudzu Bug: The New Insect. 2014. University of Maryland Extension, Harford County, Winter Extension Agronomy Meeting, Street, MD.

Kudzu Bug: The New Insect. 2014. University of Maryland Extension, Western Maryland Pesticide Conference, Frederick, MD.

Kudzu Bug: The New Insect. 2014. University of Maryland Extension, Eastern Shore Pesticide Conference, Denton, MD.

Continued Detection of the Kudzu Bug and its Biology/Damage in Soybeans. 2014. Maryland Commodity Classic, Queenstown, MD.

Detection and Preparation for the Invasive Soybean Pest, the Kudzu Bug. 2013. Maryland Commodity Classic, Queenstown, MD.

Insect Pest Management in Alfalfa. 2005. Maryland/Delaware Pesticide Conference, Frederick, MD.

Alfalfa Insect Pests and the Status of Leafhopper Resistant Alfalfa. 2003. Caroline Co., MD.

Glandular-Haired Alfalfa Resistant to Potato Leafhopper: Research and Status. 1998. Western Maryland Research and Education Center Field Day, Keedysville, MD.

Forage Crop IPM. 1995. Maryland Cooperative Extension Service Training, Riverdale, MD.

Treatment Threshold Problems with Selected Insect Pests. 1995. Regional Crop Management School, Calverton, MD.

Biological Control in Field and Forage Crops. 1993. Western Maryland Research and Education Center, Keedysville, MD.

Alfalfa insects. 1991. Maryland-Delaware Forage Council, Bittinger, MD.

Integrated Pest Management of Corn Rootworm in Maryland. 1991. Western Maryland Research and Education Center, Keedysville, MD.

Pest management alternatives for alfalfa production. 1989. Western Maryland Research and Education Center, Keedysville, MD.

Facts about spider mites in soybeans. 1988. Wye Research and Education Center, Queenstown, MD.

Alfalfa insects. 1986. Western Maryland Research and Education Center, Keedysville, MD.

Alfalfa insect management. 1985. Crop Protection Workshop, Champaign, IL.

Interactions between weeds and leafhoppers in alfalfa. 1985. Illinois Custom Spray Operators Training School, Urbana, IL.

Current research on insects attacking alfalfa. 1984. Illinois Area IPM Advisors Meeting, Champaign, IL.

Effect of *Rhinocyllus conicus* on musk thistle. 1979. Nebraska Weed Control Conference, Kearney, NE.

#### Media Contributions.

##### Internet:

Quoted in article in The Diamondback online, "UMD researchers find hotter temperatures deter invasive stink bugs" based on the Venugopal et al. (2016) paper in PLoS ONE, March, 2016.

Baker, et al. (2015) paper in PLoS ONE described on over 50 websites within one month of publication, May-June, 2015.

Quoted in an online article on cicadas on herald-mail.com, May 2, 2013.

Mentioned in an online article on kudzu bug on Southern Maryland News Net, July 11, 2013.

Highlighted on UMD Right Now, "Tracking the Kudzu Bug in Maryland", July 16, 2013.

##### TV:

Interview on kudzu bug with WJZ TV, Baltimore, July 26, 2013.

Interview on kudzu bug with FOX 45 TV, Baltimore, October 22, 2013

##### Radio:

Interview on kudzu bug with WYPR, Baltimore, July 27, 2013.

##### Print Media:

Mentioned in article on kudzu bug in a Washington Post article, July 23, 2013.

#### 4. Service.

##### a. Professional.

i. Offices and committee memberships held in professional organizations.

Entomological Society of America

2020, President-Elect, Eastern Branch ESA  
2018, “Aquatic Insects” display for “It’s a Bug World”, Eastern Branch ESA  
2017-19, Judge, President’s Prize for Student Presentations, ESA National Meetings  
2015-17, Judge, Student Oral Presentations and Linnaean Games, Eastern Branch ESA  
2011-13, Student Awards Committee, Eastern Branch ESA (Chair)  
2009-13, PIE Representative to the Publications Council (Chair, 2012-13)  
2009-11, Program Committee, Eastern Branch ESA (Chair, 2010-11)  
2004-09, ESA Finance Committee  
2003-09, Member-at-Large, Eastern Branch ESA Executive Board  
2002, Judge, President’s Prize for Student Presentations  
1999-2001, ESA Handbook Series Committee  
1997, Judge, President's Prize for Student Presentations  
1992, Judge, President's Prize for Student Presentations  
1992-96, Section C Representative, American Entomologist Editorial Board (Chair, 1996)  
1989, Member, ESA Recognition Award Committee  
1988, Chair, Subsection Cd  
1986-88, Officer, Subsection Cd  
1985-86, Chairman, NCB-ESA Awards Committee  
1983-84, 84-85, Member, NCB-ESA Awards Committee  
1984, Judge, Student Paper Contest

ii. Reviewing activities for agencies.

5/14, invited panel member for USDA-NIFA-AFRI Pre/Postdoctoral Fellowship Program.  
11/10, invited panel member for USAID-MERC Program.  
10/03, invited panel member for NAS Research Support Program.  
10/02, invited panel member for NAS Research Support Program.  
12/00, invited panel member for USDA Northcentral Regional IPM Special Grant Program.  
2/98, invited panel member for USDA Small Business Grant Program, Plant Production and Protection Panel.  
3/98, invited panel member for USDA Northcentral Regional IPM Special Grant Program.  
5/97, invited panel member for USDA Southern Regional IPM Special Grant Program.  
10/97, invited panel member for USDA Fund for Rural America Grant Program, Environmental Panel.  
1/95, invited panel member for USDA Northcentral Regional IPM Special Grant Program.  
5/94, invited panel member for USDA Western Regional IPM Special Grant Program.  
10/91, invited panel member for USAID Grant Program in Science and Technology Cooperation.  
11/89, invited panel member for USDA Southern Regional IPM Special Grant Program.

iii. Other unpaid services to local, state and federal agencies.

2014, invited panelist, “Back River Midge Issue”, Md Department of Natural Resources.

iv. Other non-University committees, commissions, panels, etc.

2007-present, Station Representative, USDA-CSREES Multistate Committee NCCC-31, "Ecophysiological Aspects of Forage Management", (Chair, 2010-11)

2004-05, Station Representative and Secretary, USDA-CSREES Multistate Committee NCT-205, "Development of Pest Management Strategies for Forage Alfalfa Persistence"

2004-05, Station Representation and Secretary, USDA-CSREES Regional Committee NC-226, "Development of Pest Management Strategies for Forage Alfalfa Persistence"

1998-99, Station Representative and Committee Chair, USDA-CSRS Regional Committee NCT-175, "Development of Pest Management Strategies for Forage Alfalfa Persistence"

1988-99, Station Representative (Committee Chair, 1988-1993), USDA-CSRS Regional Committee NC-193, "Spatial Dynamics of Leafhopper Pests and their Management on Alfalfa"

1986-91, Station Representative, USDA-CSRS Regional Committee NE-155, "Integrated Pest Management of Forage Crops in the Northeast"

b. Campus.

i. Departmental.

2017-18, Faculty Search Committee for two community ecologists

2014-2016 (Chair, 2015-16), 2007-2009, 2001-2002, Faculty Evaluation Committee

2013-14, Faculty Search Committee, Sustainable Agroecosystems Entomologist

2011-13, 2007-2008, 1990-2003, Graduate Affairs Committee (Graduate Director, 1991-1996)

2009-12, 2002, Department Awards Committee (Chair, 2011-12)

2010, 2007, 2004, 2000-01, Entomology Colloquium

2004-present, Director, Entomology Undergraduate Honors Program

2004-07, Undergraduate Curriculum Committee

2003-04, Department Website Committee

2001, Cory Undergraduate Scholarship Committee

2000, Chair, Entomology Graduate Curriculum Committee

1998-00, 1995-1997, Faculty Advisory Committee

1996-99, Faculty Search Committee, Ornamental IPM Position

1995-97, Undergraduate Teaching Curriculum Committee

1995-96, Faculty Search Committee, Population Genetics Position

1987-89, Teaching Evaluation Committee

1986-present, Chair (1986-91), Greenhouse Committee

ii. College.

2018-19, Search Committee, Maryland Agricultural Experiment Station Director and Associate Dean, AGNR

2016-17, 2017-18, College APT Committee, CMNS

2011, invited panel member for MAES Grant Program, University of Maryland

2007, College Faculty Awards Committee, Chemical and Life Sciences

2004-07, College Undergraduate Program Committee, Chemical and Life Sciences

2002-present, Controlled Environment and Greenhouse Committee

2000, Controlled Environment Specialist Search Committee

1999-00, Biological Sciences Teaching Evaluation Committee

1994-99, BGEN Study Area Committee, General Biological Sciences Program, College of Life Sciences, University of Maryland (Chair, 1995-98)

1998, Controlled Environment Specialist Search Committee

1997-98, Life Sciences Advisory Council (Vice-Chair)

1996-97, PCC Committee, College of Life Sciences

1996, Agroecology Committee, College of Agriculture and Natural Resources

1996, Biological Sciences Program Transition Committee, College of Life Sciences (Chair)

1994, Environmental Sciences Subcommittee, Life Sciences Review, University of Maryland

1987-88, MAES Centennial Committee

1986, Integrated Use of Computers Committee, Division of Agricultural and Life Sciences, University of Maryland

iii. University.

2013, Reviewer for CAREER grant program

2012-13, Senate Nominations Committee

2011-13, Senate Educational Affairs Committee (Subcommittee Chair for Research and MOOCs)

2010-13, University Senate, Representative for Dept. of Entomology

1998, Banneker-Key Scholarship Selection Committee

c. Community, State, National (Outreach).

Presentations.

Insects: Their Lives and Characteristics. 2018. Kindergarten class, Greenwood Elementary School, Olney, MD.

Aquatic Insects of Fishing Creek: Bioassessment. 2018. Fifth grade GT class, Atholton Elementary School, MD.

Insects and their Kin. 2017. Preschool classes: Creative Learning Center , Olney, MD.

Insect Traits and Evolution. 2016. Third Grade, Atholton Elementary School, Columbia, MD.

Insects and their Kin. 2016. Two preschool classes: Creative Learning Center , Olney, MD, and East Columbia Preschool, Columbia, MD.

Life Cycles and Traits of Insects and Plants. 2015. Third Grade, Atholton Elementary School, Columbia, MD.

The Life of Insects. 2015. Second Grade, Atholton Elementary School, Columbia, MD.

The Life of Insects. 2015. Preschool Class, East Columbia Preschool, Columbia, MD.

Discovering the Life of Insects. 2014. University of Maryland Residence Life Program, College Park, MD.

The Life of Insects. 2014. Second Grade, Atholton Elementary School, Columbia, MD.

Discover a Swamp. 2002-2004, 2006-2016, 2019. Maryland Day, University of Maryland, College Park, MD.

Insects: Wetland Warriors. 2012. Brookhaven Family Learning Night, Brookhaven Elementary School, Aspen Hill, MD.

Discover a Swamp. 2002. BugFest, Carrie Nature Center, Baltimore, MD.

Insects: Friends or Foes. 1997. Dorsey Hall Garden Club, Ellicott City, MD.

**Books edited.**

Brydon, A. 2020. Little Kids First Nature Guide: BUGS, National Geographic Kids, National Geographic Society (invited science editor).

Lamichhane, P. 2017. 1,000 Facts About Insects, National Geographic Kids, National Geographic Society. (invited science editor). 96 pp.

Romero, L. 2017. Insects, Ultimate Explorer Field Guide, National Geographic Kids, National Geographic Society. 81 pp. (invited science editor). 160 pp.

Szymanski, J. 2017. Buzz, Bee!, Pre-reader, National Geographic Kids, National Geographic Society. 13 pp. (invited science editor) (in press)

Marsh, L. 2015. Caterpillar to Butterfly. National Geographic Kids, National Geographic Society. 32 pp. (invited science editor)

Alinsky, S. 2015. Flutter Butterfly. National Geographic Kids, National Geographic Society. 24 pp. (in press, invited science editor)

Delano, M.F. 2014. Explore My World: Butterflies. National Geographic Kids, National Geographic Society. 31 pp. (invited science editor)

Murawski, D., and N. Honovich. 2013. Ultimate Bugopedia: The Most Complete Bug Reference Ever. National Geographic Kids, National Geographic Society. 272 pp. (invited science editor; won the NSTA award for outstanding science trade book for students K-12, 2014)