

# ROBERT KEITH DOMINICK PETERSON

## EDUCATION

**Doctor of Philosophy.** 1995. University of Nebraska-Lincoln. Entomology. Minor in Agronomy. *Insect Injury and Plant Gas Exchange Processes.*

**Master of Science.** University of Nebraska-Lincoln. 1991. Entomology. *Growth, Yield, and Photosynthetic Responses of Alfalfa to Simulated Alfalfa Weevil Injury.*

**Bachelor of Science.** Iowa State University. 1987. Entomology and Pest Management.

## PROFESSIONAL EXPERIENCE

**Department Head, Land Resources & Environmental Sciences** (2022 – present). Montana State University.

**President, Entomological Society of America** (2019). Vice President (2018); Vice President-Elect (2017); Immediate Past President (2020).

**Professor** (2011 – present); Associate Professor (2002 – 2011), tenured 2006. Agricultural and Biological Risk Assessment. Department of Land Resources & Environmental Sciences. Montana State University. 65% Research, 25% Teaching, 10% Service.

**Research Biologist** (1995 – 2001). Dow AgroSciences, Omaha, NE and Indianapolis, IN. Field Development Scientist (1995-1997), Risk Assessment Leader (1997-1999), Regulatory Manager (1999-2001).

**Adjunct Associate Professor** (1996 – 2008). Department of Entomology. University of Nebraska. Assistant Professor, 1996; Associate Professor, 2000.

**Graduate Research Assistant** (1992 – 1995). Department of Entomology. Insect Ecology and Plant Ecophysiology Research Project. University of Nebraska. Project Leader: Dr. Leon G. Higley.

**Graduate Research Assistant** (1989 – 1991). Department of Entomology. Forage Insects Research Project. University of Nebraska. Project Leader: Dr. Stephen D. Danielson.

**Extension and Research Assistant** (1988 – 1989). Department of Botany and Plant Pathology. Oregon State University. Project Leader: Dr. Jay W. Pscheidt.

**Laboratory and Field Research Technician** (1985 – 1988). Department of Entomology. Integrated Pest Management Project. Iowa State University. Project Leader: Dr. Larry P. Pedigo.

## PUBLICATIONS

**Publications:** 148 refereed publications  
24 popular, extension, or technology-transfer articles  
**Books:** 2 books; 15 book chapters  
**Software:** 3 multimedia programs; 2 software programs; >10 major web sites  
**Citation Information:** h-index 41

## PEER-REVIEWED PUBLICATIONS

(\* = graduate student, major advisee; \*\* = graduate student outside of my lab; \*\*\* = postdoctoral research associate or employee)

1. **Peterson, R.K.D.**, S.H. Hutchins, and P.M. Lasack. 1987. Evaluation of corn inbred lines for resistance to stalk borer, *Papaipema nebris*. *Journal of Agricultural Entomology* 4:66-71.
2. **Peterson, R.K.D.**, L.G. Higley, and W.C. Bailey. 1988. Phenology of the adult celery looper, *Syngrapha falcifera* (Kirby) (Lepidoptera: Noctuidae), in Iowa: evidence for migration. *Environmental Entomology* 17:679-684.
3. **Peterson, R.K.D.**, L.G. Higley, and W.C. Bailey. 1988. Occurrence and relative abundance of Plusiinae species (Lepidoptera: Noctuidae) in Iowa. *Journal of the Kansas Entomological Society* 61:355-356.
4. **Peterson, R.K.D.**, L.G. Higley, and W.C. Bailey. 1990. Occurrence and relative abundance of *Papaipema* species (Lepidoptera: Noctuidae) in Iowa. *Journal of the Kansas Entomological Society* 63:447-449.
5. **Peterson, R.K.D.**, R.B. Smelser, T.H. Klubertanz, and L.P. Pedigo. 1992. Ectoparasitism of the bean leaf beetle (Coleoptera: Chrysomelidae) by *Trombidium hyperi* and *Trombidium newelli* (Acari: Trombidiidae). *Journal of Agricultural Entomology* 9:99-107.
6. **Peterson, R.K.D.**, S.D. Danielson, and L.G. Higley. 1992. Photosynthetic responses of alfalfa to simulated and actual alfalfa weevil (Coleoptera: Curculionidae) injury. *Environmental Entomology* 21:501-507.
7. **Peterson, R.K.D.**, S.D. Danielson, and L.G. Higley. 1992. Alfalfa development after simulated alfalfa weevil injury. *Agronomy Journal* 84:988-993.
8. **Peterson, R.K.D.**, S.D. Danielson, and L.G. Higley. 1993. Yield responses of alfalfa to simulated alfalfa weevil injury and development of economic injury levels. *Agronomy Journal* 85:595-601.
9. **Peterson, R.K.D.**, L.G. Higley, G.D. Buntin, and L.P. Pedigo. 1993. Flight activity and ovarian dynamics of the yellow woollybear, *Spilosoma virginica* (F.) (Lepidoptera: Arctiidae), in Iowa. *Journal of the Kansas Entomological Society* 66:97-103.
10. **Peterson, R.K.D.** and L.G. Higley. 1993. Communicating pesticide risks. *American Entomologist* 39:206-211.

11. **Peterson, R.K.D.** and L.G. Higley. 1993. Arthropod injury and plant gas exchange: current understandings and approaches for synthesis. *Trends in Agricultural Sciences* 1:93-100.
12. **Peterson, R.K.D.** 1994. Students must write: a perspective from the trenches of graduate school. *American Entomologist* 40:80-81.
13. **Peterson, R.K.D.** 1995. Insects, disease, and military history: the Napoleonic campaigns and historical perception. *American Entomologist* 41:147-160.
14. **Peterson, R.K.D.**, L.G. Higley, and S.D. Danielson. 1995. Alfalfa consumption by the adult clover leaf weevil (Coleoptera: Curculionidae) and development of injury equivalents for stubble defoliators. *Journal of Economic Entomology* 88:1441-1444.
15. **Peterson, R.K.D.** and S.J. Meyer. 1995. Relating degree-day accumulations to calendar dates: alfalfa weevil egg hatch in the north central United States. *Environmental Entomology* 24:1404-1408.
16. **Peterson, R.K.D.**, L.G. Higley, and S.M. Spomer. 1996. Cecropia moth, *Hyalophora cecropia* (L.) (Lepidoptera: Saturniidae), injury and photosynthetic responses of apple and crabapple. *Environmental Entomology* 25:416-422.
17. **Peterson, R.K.D.** and L.G. Higley. 1996. Temporal changes in soybean gas exchange following simulated insect defoliation. *Agronomy Journal* 88:550-554.
18. Peterson, M.M., G.L. Horst, P.J. Shea, S.D. Comfort, and **R.K.D. Peterson**. 1996. TNT and 4-amino-2, 6-dinitrotoluene influence on germination and early seedling development of tall fescue. *Environmental Pollution* 93:57-62.
19. **Peterson, R.K.D.**, L.G. Higley, F.J. Haile, and J.A.F. Barrigossi. 1998. Mexican bean beetle (Coleoptera: Coccinellidae) injury affects photosynthesis of *Glycine max* and *Phaseolus vulgaris*. *Environmental Entomology* 27:373-381.
20. Gibson, J.E., **R.K.D. Peterson**, and B.A. Shurdut. 1998. Human exposure and risk from indoor use of chlorpyrifos. *Environmental Health Perspectives* 106:303-306.
21. Meyer, S.J. and **R.K.D. Peterson**. 1998. Predicting movement of stalk borer (Lepidoptera: Noctuidae) larvae in corn. *Crop Protection* 17:609-612.
22. Gibson, J.E., W.L. Chen, and **R.K.D. Peterson**. 1999. How to determine if an additional 10x safety factor is necessary: a case study with chlorpyrifos. *Toxicological Sciences* 48:117-122.
23. Bolles, H.G., H.E. Dixon-White, **R.K.D. Peterson**, J. R. Tomerlin, E. W. Day, and G. R. Oliver. 1999. A US market basket study to determine residues of the insecticide chlorpyrifos. *Journal of Food and Agricultural Chemistry* 47:1817-1822.
24. Haile, F.J.\*\* , **R.K.D. Peterson**, and L.G. Higley. 1999. Gas-exchange responses of alfalfa and soybean treated with insecticides. *Journal of Economic Entomology* 92:954-959.

25. **Peterson, R.K.D.** and B.A. Shurdut. 1999. Human health risks from cockroaches and cockroach management: A risk analysis approach. *American Entomologist* 45:142-148.
26. **Peterson, R.K.D.** 2000. Public perceptions of agricultural biotechnology and pesticides: recent understandings and implications for risk communication. *American Entomologist* 46:8-16.
27. Wolt, J.D. and **R.K.D. Peterson**. 2000. Agricultural biotechnology and societal decision-making: the role of risk analysis. *AgBioForum* 3:291-298.
28. Kleschick, W.A., S. Lubetkin, G.R. Oliver, S.H. Hutchins, and **R.K.D. Peterson**. 2001. Publish or perish: a business and professional argument for private-sector scientists to publish in refereed journals. *American Entomologist* 47:69-72.
29. **Peterson, R.K.D.** and L.G. Higley. 2002. Economic Decision Levels. *In* D. Pimentel (ed.). *Encyclopedia of Pest Management*. Marcel Dekker, New York.
30. Higley, L.G. and **R.K.D. Peterson**. 2002. Decision Making. *In* D. Pimentel (ed.). *Encyclopedia of Pest Management*. Marcel Dekker, New York.
31. Wolt, J.D., **R.K.D. Peterson**, P. Bystrak, and T. Meade. 2003. A screening level approach for non-target insect risk assessment: transgenic Bt corn pollen and the monarch butterfly (Lepidoptera: Danaidae). *Environmental Entomology* 32:237-246.
32. **Peterson, R.K.D.**, and T.E. Hunt. 2003. The probabilistic economic injury level: incorporating uncertainty into pest management decision-making. *Journal of Economic Entomology* 98:536-542.
33. **Peterson, R.K.D.**, and C.J. Arntzen. 2004. On risk and plant-based biopharmaceuticals. *Trends in Biotechnology* 22:64-66.
34. **Peterson, R.K.D.**, C.L. Shannon,<sup>\*\*\*</sup> and A.W. Lenssen. 2004. Photosynthetic responses of legumes to leaf-mass consumption injury. *Environmental Entomology* 33:450-456.
35. **Peterson, R.K.D.**, and A.G. Hulting<sup>\*\*</sup>. 2004. A comparative ecological risk assessment for herbicides used on spring wheat: the effect of glyphosate when used within a glyphosate-tolerant wheat system. *Weed Science* 52:834-844.
36. Macedo, T.B.,<sup>\*\*\*</sup> **R.K.D. Peterson**, D.K. Weaver, and W.L. Morrill. 2005. Wheat stem sawfly, *Cephus cinctus* Norton, impact on wheat primary metabolism: an ecophysiological approach. *Environmental Entomology* 34:719-726.
37. Kirk, D.D., K. McIntosh, A.M. Walmsley, and **R.K.D. Peterson**. 2005. Risk analysis for plant-made vaccines. *Transgenic Research* 14:449-462.
38. Macedo, T.B.,<sup>\*\*\*</sup> P.A. Macedo<sup>\*\*\*</sup>, **R.K.D. Peterson**, D.K. Weaver, and W.L. Morrill. 2005. Rearing the wheat stem sawfly, *Cephus cinctus* Norton, using an artificial diet. *Canadian Entomologist* 137:497-500.
39. **Peterson, R.K.D.**, S.E. Sing, and D.K. Weaver. 2005. Differential physiological responses of Dalmatian toadflax, *Linaria dalmatica* (L.) Miller, to injury from two insect biological

control agents: implications for decision-making in biological control. *Environmental Entomology* 34:899-905.

40. Sing, S.E., **R.K.D. Peterson**, D.K. Weaver, R.W. Hansen, and G.P. Markin. 2005. A retrospective analysis of known and potential risks associated with exotic toadflax-feeding insects. *Biological Control* 35:276-287.
41. Nansen, C., T.B. Macedo,\*\*\* D.K. Weaver, and **R.K.D. Peterson**. 2005. Spatio-temporal distributions of wheat stem sawfly, *Cephus cinctus* Norton, eggs and larvae in dryland wheat fields. *Canadian Entomologist* 137:428-440.
42. **Peterson, R.K.D.** and L.M. Shama. \* 2005. A comparative risk assessment of genetically engineered, mutagenic, and conventional wheat production systems. *Transgenic Research* 14:859-875.
43. **Peterson, R.K.D.** 2006. Comparing ecological risks of pesticides: the utility of a risk quotient ranking approach across refinements of exposure. *Pest Management Science* 62:46-56.
44. **Peterson, R.K.D.**, P.A. Macedo\*\*\*, and R.S. Davis.\* 2006. A human-health risk assessment for West Nile virus and insecticides used in mosquito management. *Environmental Health Perspectives* 114:366-372.
45. Wolt, J.D., K. Wang, and **R.K.D. Peterson**. 2006. Assessing risk of unintended antigen occurrence in food: a case instance for maize-expressed LT-B. *Human and Ecological Risk Assessment* 12:856-870.
46. **Peterson, R.K.D.**, S.J. Meyer, A.T. Wolf, J.D. Wolt, and P.M. Davis. 2006. Genetically engineered plants, endangered species, and risk: A temporal and spatial exposure assessment for Karner blue butterfly larvae and Bt maize pollen. *Risk Analysis* 26:845-858.
47. Macedo, T.B.,\*\*\* D.K. Weaver, and **R.K.D. Peterson**. 2006. Characterization of the impact of wheat stem sawfly, *Cephus cinctus* Norton, on pigment composition and photosystem II photochemistry of wheat heads. *Environmental Entomology* 35:1115-1120.
48. Macedo, T.B.,\*\*\* **R.K.D. Peterson**, and D.K. Weaver. 2006. Photosynthetic responses of wheat, *Triticum aestivum* L., plants to simulated insect defoliation during vegetative growth and grain fill. *Environmental Entomology* 35:1702-1709.
49. Macedo, T.B.,\*\*\* D.K. Weaver, and **R.K.D. Peterson**. 2007. Photosynthesis in wheat at the grain filling stage is altered by larval wheat stem sawfly (Hymenoptera: Cephidae) injury and reduced water availability. *Journal of Entomological Science* 42:228-238.
50. Pariera Dinkins\*, C.L., S.K. Brumfield, **R.K.D. Peterson**, W.E. Grey, and S.E. Sing. 2007. Dalmatian toadflax (*Linaria dalmatica*): new host for cucumber mosaic virus. *Weed Technology* 21:41-44.

51. Macedo, T.B.,<sup>\*\*\*</sup> **R.K.D. Peterson**, C.L. Dausz,<sup>\*\*\*</sup> and D.K. Weaver. 2007. Photosynthetic responses of wheat, *Triticum aestivum* L., to defoliation patterns on individual leaves. *Environmental Entomology* 36:602-608.
52. Schat, M.,<sup>\*</sup> Sing, S.E., and **R.K.D. Peterson**. 2007. External rostral characters for differentiation of sexes in the biological control agent *Mecinus janthinus* (Coleoptera: Curculionidae). *Canadian Entomologist* 139:352-357.
53. Davis, R.S.,<sup>\*</sup> **R.K.D. Peterson**, and P.A. Macedo.<sup>\*\*\*</sup> 2007. An ecological risk assessment for insecticides used in adult mosquito management. *Integrated Environmental Assessment and Management* 3:373-382.
54. Macedo, P.A.,<sup>\*\*\*</sup> **R.K.D. Peterson**, and R.S. Davis.<sup>\*</sup> 2007. Risk assessments for exposure of deployed military personnel to insecticides and personal protective measures used for disease-vector management. *Journal of Toxicology and Environmental Health* 70:1758-1771.
55. **Peterson. R.K.D.** 2007. Charley Patton and his Mississippi Boweavil Blues. *American Entomologist*, 53:142-144.
56. Schleier III, J.J.,<sup>\*</sup> Shama, L.M.,<sup>\*</sup> Davis, R.S.,<sup>\*</sup> P.A. Macedo,<sup>\*\*\*</sup> and **R.K.D. Peterson**. 2008. Equine risk assessment for insecticides used in adult mosquito management. *Human and Ecological Risk Assessment* 14:392-407.
57. Shama, L.M.,<sup>\*</sup> and **R.K.D. Peterson**. 2008. Assessing risks of plant-based pharmaceuticals: I. Human dietary exposure. *Human and Ecological Risk Assessment* 14: 179-193.
58. Shama, L.M.,<sup>\*</sup> and **R.K.D. Peterson**. 2008. Assessing risks of plant-based pharmaceuticals: II. Non-target organism exposure. *Human and Ecological Risk Assessment* 14:194-204.
59. Schleier III, J.J.,<sup>\*</sup> **R.K.D. Peterson**, P.A. Macedo,<sup>\*\*\*</sup> and D.A. Brown. 2008. Environmental concentrations, fate, and risk assessment of pyrethrins and piperonyl butoxide after aerial ultra-low-volume applications for adult mosquito management. *Environmental Toxicology and Chemistry* 27:1063-1068.
60. Schleier III, J.J.,<sup>\*</sup> S.E. Sing, and **R.K.D. Peterson**. 2008. Regional ecological risk assessment for the introduction of *Gambusia affinis* (western mosquitofish) into Montana watersheds. *Biological Invasions* 10:1277-1287.
61. Antwi, F.,<sup>\*\*\*</sup> L.M. Shama<sup>\*</sup>, and **R.K.D. Peterson**. 2008. Risk assessments for the insect repellents DEET and picaridin. *Regulatory Toxicology and Pharmacology* 51:31-36.
62. Davis, R.S.,<sup>\*</sup> and **R.K.D. Peterson**. 2008. Effects of single and multiple applications of mosquito insecticides on non-target arthropods. *Journal of the American Mosquito Control Association* 24:270-280.
63. Pariera Dinkins, C.L.,<sup>\*</sup> **R.K.D. Peterson**, J.E. Gibson, Q. Hu, and D.K. Weaver. 2008. Glycoalkaloid responses of potato to Colorado potato beetle defoliation. *Food and Chemical Toxicology* 46:2832-2836.

64. Pariera Dinkins, C.L.,\* and **R.K.D. Peterson**. 2008. A human dietary risk assessment associated with glycoalkaloid responses of potato to Colorado potato beetle defoliation. *Food and Chemical Toxicology* 46:2837-2840.
65. **Peterson, R.K.D.** 2008. Insect photography. *American Entomologist* 54:202-204.
66. Delaney, K.J.\*\* , F.J. Haile\*\* , **R.K.D. Peterson**, and L.G. Higley. 2008. Impairment of leaf photosynthesis after insect herbivory or mechanical injury on common milkweed, *Asclepias syriaca*. *Environmental Entomology* 37:1332-1343.
67. Macedo, T.B.,\*\*\* **R.K.D. Peterson**, D.K. Weaver, and X. Ni. 2009. Impact of *Diuraphis noxia* (Mordvilko) and *Rhopalosiphum padi* (L.) (Hemiptera: Aphididae) on primary physiology of four near-isogenic wheat lines. *Journal of Economic Entomology* 102:412-421.
68. Schleier III, J.J.,\* P.A. Macedo,\*\*\* R.S. Davis,\* L.M. Shama,\* and **R.K.D. Peterson**. 2009. A two-dimensional probabilistic acute human-health risk assessment of insecticide exposure after adult mosquito management. *Stochastic Environmental Research and Risk Assessment* 23: 555-563.
69. Antwi, F.B.,\*\*\* and **R.K.D. Peterson**. 2009. Toxicity of  $\delta$ -phenothrin and resmethrin to non-target insects. *Pest Management Science* 65:300-305.
70. **Peterson, R.K.D.**, R.S. Davis,\* L.G. Higley, and O.A. Fernandes. 2009. Mortality risk in insects. *Environmental Entomology* 38:2-10.
71. Schleier III, J.J.,\* R.S. Davis,\* L.M. Barber,\*\*\* P.A. Macedo,\*\*\* and **R.K.D. Peterson**. 2009. A probabilistic risk assessment for deployed military personnel after the implementation of the "Leishmaniasis Control Program" at Tallil Air Base, Iraq. *Journal of Medical Entomology* 46:693-702.
72. Golick, D.A., **R.K.D. Peterson**, and L.G. Higley. 2009. Using the World Wide Web to educate and inform the public about risk and agricultural biotechnology. *Journal of Agricultural and Food Information* 10:102-112.
73. **Peterson, R.K.D.** 2009. The real enemy: scrub typhus and the invasion of Sansapor. *American Entomologist* 55:91-94.
74. Barber, L.M.,\*\* **R.K.D. Peterson**, C. Montagne, W.P. Inskeep, and J.J. Schleier III.\* 2009. A dietary risk assessment of an indigenous salt mineral source of the Darhad Valley, Northern Mongolia. *Human and Ecological Risk Assessment* 15:907-922.
75. Delaney, K.J.,\*\* F.J. Haile,\*\* **R.K.D. Peterson**, and L.G. Higley. 2009. Seasonal patterns of leaf photosynthesis after insect herbivory on common milkweed, *Asclepias syriaca*: Reflection of a physiological cost of reproduction, not defense? *American Midland Naturalist* 162:224-238.
76. Buteler, M.,\*\* D.K. Weaver, and **R.K.D. Peterson**. 2009. Oviposition behavior of the wheat stem sawfly when encountering plants infested with cryptic conspecifics. *Environmental Entomology* 38:1707-1715.

77. Schleier III, J.J.,\* and **R.K.D. Peterson**. 2010. Deposition and air concentrations of permethrin and naled used for adult mosquito management. *Archives of Environmental Contamination and Toxicology* 58:105-111.
78. Delaney, K.J.,\*\*\* D.K. Weaver, and **R.K.D. Peterson**. 2010. Photosynthesis and yield reductions from wheat stem sawfly (Hymenoptera: Cephidae) infestation: Interactions with wheat solidness, water stress, and phosphorus deficiency. *Journal of Economic Entomology* 103:516-524.
79. Barber, L.M., \*\*\* J.J. Schleier III,\* and **R.K.D. Peterson**. 2010. Economic cost analysis of West Nile virus outbreak, Sacramento County, California, USA, 2005. *Emerging Infectious Diseases* 16:480-486.
80. Macedo, P.A., J.J. Schleier III,\* M. Reed, K. Kelley, G.W. Goodman, D.A. Brown, **R.K.D. Peterson**. 2010. Evaluation of efficacy and human health risk of aerial ultra-low volume applications of pyrethrins and piperonyl butoxide for adult mosquito management in response to West Nile virus activity in Sacramento County, California. *Journal of the American Mosquito Control Association* 26:57-66.
81. Schleier III,\* J.J., and **R.K.D. Peterson**. 2010. Toxicity and risk assessment of permethrin and naled to non-target terrestrial insects after adult mosquito management. *Ecotoxicology* 19:1140-1146.
82. Schleier III, J.J.,\* and **R.K.D. Peterson**. 2010. Limitations of the Entomological Operational Risk Assessment using probabilistic and deterministic analyses. *Military Medicine* 175:594-598.
83. Schleier III, J.J.,\* C. Preftakes,\*\*\* and **R.K.D. Peterson**. 2010. The effect of fluorescent tracers on droplet spectrum, viscosity, and density of pesticide formulations. *Journal of Environmental Science and Health* 45:621-625.
84. Wolt, J.D., and **R.K.D. Peterson**. 2010. Prospective formulation of environmental risk assessments: probabilistic screening for Cry1A(b) maize risk to aquatic insects. *Ecotoxicology and Environmental Safety* 73:1182-1188.
85. Davis, R.S.,\* **R.K.D. Peterson**, and L.G. Higley. 2011. M-DEC: A spreadsheet program for producing multiple decrement life tables and estimating mortality dynamics for insects. *Computers and Electronics in Agriculture* 75:363-367.
86. Davis, P.B.,\*\* F.D. Menalled, **R.K.D. Peterson**, and B.D. Maxwell. 2011. Refinement of weed risk assessments for biofuels using *Camelina sativa* as a model species. *Journal of Applied Ecology* 48:989-997.
87. **Peterson, R.K.D.**, L.M. Barber,\*\*\* and J.J. Schleier III.\* 2011. Net risk: a risk assessment of long-lasting insecticide bed nets for malaria management. *American Journal of Tropical Medicine and Hygiene* 84:951-956.
88. Schat, M.,\* S.E. Sing, **R.K.D. Peterson**, F.D. Menalled, and D.K. Weaver. 2011. Growth inhibition of Dalmatian toadflax, *Linaria dalmatica* (L.) Miller, in response to injury by

the stem-mining weevil, *Mecinus janthinus* Germar. Journal of Entomological Science 46:232-246.

89. **Peterson, R.K.D.**, M. Buteler, \*\* D.K. Weaver, T.B. Macedo, \*\*\* Z. Sun, \*\* O. Gerardo Perez, \*\* and G.R. Pallipparambil. \*\* 2011. Parasitism and the demography of wheat stem sawfly larvae, *Cephus cinctus*. Biocontrol 56:831-839.
90. Preftakes, C.J., \*\*\* J.J. Schleier III,\* and **R.K.D. Peterson**. 2011. Bystander exposure to ultra-low-volume insecticide applications used for adult mosquito management. International Journal of Environmental Research and Public Health 8:2142-2152.
91. Sing, S.E., and **R.K.D. Peterson**. 2011. Assessing environmental risks for established invasive weeds: Dalmatian (*Linaria dalmatica*) and yellow (*L. vulgaris*) toadflax in North America. International Journal of Environmental Research and Public Health 8:2828-2853.
92. Schleier III,\* J.J., and **R.K.D. Peterson**. 2012. The joint toxicity of type I, II, and non-ester pyrethroid insecticides. Journal of Economic Entomology 105:85-91.
93. Schleier III,\* J.J., **R.K.D. Peterson**, K.M. Irvine, L.M. Marshall, D.K. Weaver, and C.J. Preftakes. \*\*\* 2012. Environmental fate model for ultra-low-volume insecticide applications used for adult mosquito management. Science of the Total Environment 438:72-79.
94. Schleier III,\* J.J., and **R.K.D. Peterson**. 2013. A refined aquatic ecological risk assessment for a pyrethroid insecticide used for adult mosquito management. Environmental Toxicology and Chemistry 32:948-953.
95. Lehnhoff, E.A., B.K. Keith, W.E. Dyer, **R.K.D. Peterson**, and F.D. Menalled. 2013. Minimal fitness cost of multiple herbicide resistance in wild oat (*Avena fatua*). Agronomy Journal 105:854-862.
96. **Peterson, R.K.D.** 2013. *Mosquito Moan*, by Blind Lemon Jefferson. American Entomologist 59:110-112.
97. **Peterson, R.K.D.**, and J.J. Schleier III\*. 2014. A probabilistic analysis reveals fundamental limitations with the environmental impact quotient and similar systems for rating pesticide risks. PeerJ 2:e364; DOI 10.7717/peerj.364.
98. Schleier III,\* J.J., and **R.K.D. Peterson**. 2014. The Mosquito Ultra-Low-Volume Dispersion (MULV-Disp) model for estimating environmental concentrations of insecticides used for adult mosquito management. Journal of the American Mosquito Control Association 30:223-227.
99. **Peterson, R.K.D.** Mean Old Bedbug Blues. 2014. American Entomologist 60:241-243.
100. Schleier III,\* J.J., L.A. Marshall, R.S. Davis,\* and **R.K.D. Peterson**. 2015. A quantitative approach for integrating multiple lines of evidence for the evaluation of environmental health risks. PeerJ 3:e730; DOI 10.7717/peerj.730
101. Varella,\*\* A.C., A.C. Menezes-Netto,\*\* J.D.S. Alonso, D.F. Caixeta, **R.K.D. Peterson**, and O.A. Fernandes. 2015. Mortality dynamics of *Spodoptera frugiperda* (Lepidoptera:

- Noctuidae) immatures in maize. PLoS ONE 10(6): e0130437.  
doi:10.1371/journal.pone.0130437.
102. Buteler, M., **R.K.D. Peterson**, M.L. Hofland, and D.K. Weaver. 2015. A multiple decrement life table reveals that host plant resistance and parasitism are major causes of mortality for the wheat stem sawfly, *Cephus cinctus* (Hymenoptera: Cephidae). *Environmental Entomology* 44:1571-1580.
  103. Whiten\*, S.R. and **R.K.D. Peterson**. 2016. The influence of ambient temperature on the susceptibility of *Aedes aegypti* to the pyrethroid insecticide permethrin. *Journal of Medical Entomology* 53:139-143.
  104. **Peterson, R.K.D.**, C.J. Preftakes\*, J.L. Bodin\*, C.R. Brown\*, A.M. Piccolomini\*, and J.J. Schleier\*. 2016. Determinants of acute mortality of *Hippodamia convergens* (Coleoptera: Coccinellidae) to ultra-low volume permethrin used for mosquito management. *PeerJ* 4:e2167; DOI: 10.7717/peerj.2167.
  105. Varella, A.C.,\*\* D.K. Weaver, **R.K.D. Peterson**, J.D. Sherman, M.L. Hofland, N.K. Blake, J.M. Martin, and L.E. Talbert. 2017. Host plant quantitative trait loci affect specific behavioral sequences in oviposition by a stem-mining insect. *Theoretical and Applied Genetics* 130:187-197.
  106. Menalled, F.D., **R.K.D. Peterson**, R.G. Smith, W.S. Curran, D.J. Paez, and B.D. Maxwell. 2016. The eco-evolutionary imperative: revisiting weed management in the midst of a herbicide resistance crisis. *Sustainability* 8:1297; doi:10.3390/su8121297.
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141. Strand, J.R.,\* O. Perez-Moya, **R.K.D. Peterson**, T.M. Sterling, and D.K. Weaver. 2025. Sensory and behavioral responses of braconid parasitoids to changes in volatile emissions induced by wheat stem sawfly (Hymenoptera: Cephidae) larval feeding in winter wheat and smooth brome. *Journal of Insect Science* 25 <https://doi.org/10.1093/jisesa/ieaf016>.
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## BOOK

- Peterson, R.K.D.** (Editor). 2024. A Cultural History of Insects in the Modern Age. Volume 6. *In* G. Kritsky (ed.). *A Cultural History of Insects*. Bloomsbury Press, London, United Kingdom.
- Peterson, R.K.D.** and L.G. Higley (Editors). 2001. *Biotic Stress and Yield Loss*. CRC Press, Boca Raton, FL.

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- Peterson, R.K.D.** 2024. Introduction to a cultural history of insects in the modern age. Volume 6, *A Cultural History of Insects in the Modern Age*. *In* G. Kritsky (ed.). *A Cultural History of Insects*. Bloomsbury Press, London, United Kingdom.
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- Higley, L.G., and **R.K.D. Peterson**. 1994. Initiating Sampling Programs. *In* L.P. Pedigo and G.D. Buntin (eds.). Handbook of Sampling Methods for Arthropod Pests in Agriculture. CRC Press, Boca Raton, FL.
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## PATENTS

- U.S. Patent No. US 12,319,385 B2. Process for establishing uniform liquid films on polar and non-polar substrates, 3 JUNE 2025. L.G. Higley, and R.K.D. Peterson, inventors; NUtech

Ventures and Montana State University. First filed 11 MAY 2021.  
<https://patents.google.com/patent/US20220363343A1/en?q=17%2f663%2c001>

**GRANTS AND CONTRACTS (Total: \$9,110,811; Project Leader: \$2,614,004)**

<u>Year Awarded</u>	<u>Amount</u>	<u>Title, Agency, Investigators</u>
2025	\$108,623	Desktop Scanning Electron Microscope for Insect, Fungi, and Plant Research, M.A. Ivie, T. Oppedisano, J. Kansman, S. Kinosian, C. Noffsinger, H. Goosey, W. Wetzell, D.K. Weaver, <b>R.K.D. Peterson</b> . MSU MAES Multi-Use Equipment Grant.
2023	\$461,538	Evaluating Caging and Enclosures for Optimizing Yellow Toadflax Agent Establishment and Availability. <b>R.K.D. Peterson</b> , S.E. Sing. USFS Forest Health Protection.
2021	\$55,000	Connecting Great Plains and Rocky Mountain Ecoregions Through Improved Understanding of Army Cutworm Migrations and Grizzly Bear Interactions. USFS Rocky Mountain Research Station. <b>R.K.D. Peterson</b> .
2021	\$1,425,041	My Home, My Health: Place-Based Public Health Resources for Public Educators. NIH-SEPA, National Institutes of Health, Science Education Partnership Award. J. Cornish, S. Ahmed, R. Hammack, <b>R.K.D. Peterson</b> .
2021	\$37,246	Effects on Aquatic Ecosystems from Mosquito Larval Management Strategies. GeneConvene, Foundation for the National Institutes of Health (funding from the Bill & Melinda Gates Foundation). <b>R.K.D. Peterson</b> , M. Rolston.
2020	\$51,300	Army Cutworm Moth Ecology in the Eastern Greater Yellowstone Ecosystem. <b>R.K.D. Peterson</b> . USDA-USFS Cooperative Agreement.
2020	\$79,976	Invertebrate-based Assessment for Newly Created Streams. W. Kleindl, <b>R.K.D. Peterson</b> . Natural Resource Damage Program, Montana Department of Justice.
2020	\$9,440	LICOR LAI-2200C Plant Canopy Analyzer. Equipment Grant Program. Montana State University, College of Agriculture, Montana Agricultural Experiment Station. <b>R.K.D. Peterson</b> .
2019	\$400,000	The Biology of Insect Adaptations to Extreme Environments. <b>R.K.D. Peterson</b> , L.G. Higley. Therion, LLC.
2019	\$2,000	Adaptations of <i>Cicindela haemorrhagica</i> and Associated Arthropods to the Extreme Conditions of the Thermal Pools in Yellowstone National Park. <b>R.K.D. Peterson</b> . Montana Nanotechnology Facilities Grant. Montana State University.
2017	\$300,000	AWaRe: A Decision Tool For Assessment of Wheat Streak

		Mosaic Risk. M. Burrows, <b>R.K.D. Peterson</b> , T. Seipel, D.K. Weaver. USDA-NIFA-AFRI Critical Agricultural Research and Extension: CARE.
2015	\$5,500	Wetland Strategic Framework Funding Application (Equipment). Montana Department of Environmental Quality. <b>R.K.D. Peterson</b> and W. Kleindl.
2015	\$43,347	Strengthening Research Infrastructure for Pollinating Bee Production and Conservation in Montana. MSU College of Agriculture Research Innovation Grant Program. <b>R.K.D. Peterson</b> , Kevin M. O'Neill, C.M. Delphia, L.A. Burkle, M.L. Flenniken, F.D. Menalled, G.V.P. Reddy, K.W. Wanner.
2015	\$69,310	Risks to Pollinating Bees from Adult Mosquito Control. Mosquito Research Foundation. <b>R.K.D. Peterson</b> .
2015	\$8,000	Interactions Among Alternative Forms of Developmental Mortality in Alfalfa Leafcutting Bees. USDA-ARS. K.M. O'Neill, R.P. O'Neill, <b>R.K.D. Peterson</b> .
2014	\$690,650	InvaCost: INVASive Insects and their COST Following Climate Change. BNP Parisbas Foundation. <i>[I am a collaborator on this project, not a co-investigator]</i> .
2014	\$134,100	Assessing Efficacy, Exposure, and Risk for Pesticide Drift Reduction Technologies. Dow AgroSciences. <b>R.K.D. Peterson</b> .
2012	\$9,900	Stereomicroscope System for Research and Teaching. Equipment Grant Program. Montana State University, College of Agriculture, Montana Agricultural Experiment Station. <b>R.K.D. Peterson</b> .
2012	\$104,781	Integrated Management of Mite-Transmitted Cereal Viruses. USDA PMAP. M. Burrows, F. Menalled, Z. Miller, <b>R.K.D. Peterson</b> , A. Bekkerman, B. Jacobsen.
2012	\$499,801	Molecular, Physiological, and Ecological Characterization of Multiple Herbicide Resistance in <i>Avena fatua</i> . USDA NIFA-AFRI. Dyer, W.E., B.K. Keith, E.A. Lehnhoff, B.D. Maxwell, F.D. Menalled, <b>R.K.D. Peterson</b> .
2011	\$60,812	Influence of Toadflax Genotype and Biocontrol Agent Biotype on Plant Primary Physiological Responses: A Mechanistic Approach to Improving Agent Screening. USDA Forest Service Joint Venture Agreement. <b>R.K.D. Peterson</b> .
2011	\$48,600	Expanding Access to MSU Through New Online Programs: Master of Science in Environmental Science. MSU Extended University and Provost's Office. <b>Peterson, R.K.D.</b> , L.M. Marshall, S. Powell, C. Fox.

2011	\$119,910	Optimizing Control Efficacy and Placing ULV Technology on a Firm Scientific Foundation. Deployed War Fighter Protection Program, Armed Forces Pest Management Board, Department of Defense. <b>Peterson, R.K.D.</b> , M. Breidenbaugh, J.J. Schleier III.
2010	\$199,389	Understanding Carbon Dynamics: Agronomic, Socioeconomic & Biophysical Tradeoffs in Determining Sustainability of Multifunctional Cropping Systems in the Northern Great Plains. USDA, NIFA. Maxwell, B. D., C. Zabinski, P.R. Miller, D. Buschena, R. Lawrence, J. Antle, D. Long, J. Shaw, R. Wolff, <b>R.K.D. Peterson</b> , C. Jones, F. Menalled.
2009	\$78,600	Improving IPM of Mosquitoes by Addressing Scientific Uncertainty and Public Concerns. USDA, Western Regional IPM Grant Program (WRIPM). <b>Peterson, R.K.D.</b> and D.K. Weaver.
2009	\$283,989	An Interdisciplinary Framework for Pest Resistance Risk Assessment in Plant Production Systems. Nebraska Research Initiative, State of Nebraska. Hunt, T.E., B.D. Siegfried, M.L. Bernards, S.N. Wegulo, D.J. Lee, L.J. Meinke, and <b>R.K.D. Peterson</b> .
2009	\$402,650	American Indian Research Opportunities in Ecology and Environmental Science. National Science Foundation, Directorate for Biological Sciences, Division of Biological Infrastructure, Undergraduate Mentoring in Environmental Biology. Watts, J.G., D.W. Roberts, N.A. Bird, et al. <i>[I was a research mentor and collaborator on this project, not a co-investigator].</i>
2007	\$45,212	Environmental Concentrations and Fate of Pyrethrins and Piperonyl Butoxide after Ultra-Low-Volume Sprays for Adult Mosquito Management. California Mosquito and Vector Control Research Foundation. <b>R.K.D. Peterson</b> , J. Schleier, and F. Antwi.
2006	\$372,928	Environmental Fate of Mosquito Insecticides used as Space Sprays and Associated Human Health Risk Assessments. Deployed War Fighter Protection Program, Armed Forces Pest Management Board, Department of Defense. <b>R.K.D. Peterson</b> and P.A. Macedo
2006	\$146,978	RELEASE: Risk Evaluation Learning to Explore Alien Species Establishment. USDA Higher Education Challenge Grant. W.W. Hoback, K.L. Skinner, <b>R.K.D. Peterson</b> and S.E. Sing.
2006	\$481,518	Sustainable, Integrated Management of the Wheat Stem Sawfly. USDA Special Research Grant. D.K. Weaver, J. Perez-Mendoza, T.B. Macedo, <b>R.K.D. Peterson</b> , and W. Morrill.

2006	\$23,940	A Pilot Program to Demonstrate the Feasibility of Managing Toadflax with Biological Control in Burned Areas. Montana Noxious Weed Trust Fund Grant Program. <b>R.K.D. Peterson</b> , S.E. Sing, D.K. Weaver, F. Menalled, G. Markin, M. Schat.
2006	\$8,245	Plant-based Pharmaceuticals: Adding Value to Biobased Products in Montana through the Assessment and Communication of Risks and Benefits. USDA Special Research Grant, Institute for Biobased Products. <b>R.K.D. Peterson</b> .
2005	\$25,000	Plant-based Pharmaceuticals: Adding Value to Biobased Products in Montana through the Assessment and Communication of Risks and Benefits. MSU, Institute for Biobased Products. <b>R.K.D. Peterson</b> .
2005	\$486,145	Novel Semiochemical- and Natural Enemy-Based Management Strategies for Wheat Stem Sawfly. CSREES Special Research Grant. D. Weaver, W. Morrill, <b>R.K.D. Peterson</b> , and J. Perez-Mendoza, T.B. Macedo.
2005	\$185,446	Comparative Human Health Risk Assessments of Vector-borne Diseases and Vector Control. United States Army Medical Research and Materiel Command, Deployed War Fighter Protection Program, Department of Defense. <b>R.K.D. Peterson</b> .
2004	\$80,432	Biotechnology Risk Assessment Research. CSREES Special Research Grant, MSU, Institute for Biobased Products and Food Science. <b>R.K.D. Peterson</b> .
2004	\$419,743	Novel Semiochemical and Pathogen Based Management Strategies for Wheat Stem Sawfly. CSREES Special Research Grant. D. Weaver, W. Morrill, <b>R.K.D. Peterson</b> , and J. Perez.
2004	\$399,984	Linking Biotechnology/Bioengineering with Mali-based Agribusiness: Strengthening Food and Water Quality for Health, Safety, and Exports. U.S. AID – Mali through the Association Liaison Office (ALO) for University Cooperation in Development. F. Dunkel et al. <i>[I was a collaborator on this project, not a co-investigator]</i> .
2004	\$2,500	Plant Gas Exchange as a Measure of Impact of Wildland Fire and Insect Biological Control on Dalmatian and Yellow Toadflax. USDA Forest Service. <b>R.K.D. Peterson</b> and S. E. Sing.
2004	\$7,500	Environmental Risk Research. Unrestricted research support grant. Monsanto. <b>R.K.D. Peterson</b> .
2003	\$12,000	Environmental Risk Research. Unrestricted research support grant. Dow AgroSciences. <b>R.K.D. Peterson</b> .
2003	\$81,232	Biotechnology Risk Research. CSREES Special Research Grant,

MSU, Institute for Biobased Products and Food Science. **R.K.D. Peterson.**

2003	\$471,979	Novel Semiochemical-based Management Strategies for Wheat Stem Sawfly and Cereal Aphids. CSREES Special Research Grant. D. Weaver, W. Morrill, X. Ni, and <b>R.K.D. Peterson.</b>
2003	\$2,500	Plant Gas Exchange as a Measure of Impact of Wildland Fire and Insect Biological Control on Dalmatian and Yellow Toadflax. USDA Forest Service. <b>R.K.D. Peterson</b> and S.E. Sing.
2003	\$5,000	Wheat Stem Sawfly Parasitism and its Effect on Wheat Physiology and Stress. Montana Wheat and Barley Committee. <b>R.K.D. Peterson,</b> D. Weaver, and W. Morrill.
2003	\$50,000	Plant-based Pharmaceutical Risk Assessment. Collaborative research project with Iowa State University as part of funding to the Biosafety Institute for Genetically Modified Agricultural Products (Total Project: \$500,000). <b>R.K.D. Peterson.</b>
2002	\$5,000	Wheat Stem Sawfly Parasitism and its Effect on Wheat Physiology and Stress. Montana Wheat and Barley Committee. D. Weaver, W. Morrill, and <b>R.K.D. Peterson.</b>
2002	\$18,000	Plant-based Pharmaceutical Research. Dow AgroSciences. <b>R.K.D. Peterson.</b>
2002	\$25,000	Public Health and Environmental Research. Unrestricted research support grant. SPHERE grant (Supporting Public Health and Environmental Research). The Dow Chemical Company Foundation. <b>R.K.D. Peterson.</b>
2002	\$10,000	Biotechnology Risk Assessment Curriculum and Web Site Development. Subcontract with the University of Nebraska as part of a competitive grant awarded by the Council for Biotechnology Information. <b>R.K.D. Peterson.</b>

#### **NON-REFEREED PUBLICATIONS**

1. **Peterson, R.K.D.** and L.G. Higley. 1994. Communicating pesticide risks—a primer. *Wing Beats*, a publication of the American Mosquito Control Association 5:18-22. (invited).
2. **Peterson, R.K.D.** and L.G. Higley. 1994. Communicating pesticide risks—how to. *Wing Beats*, a publication of the American Mosquito Control Association 5:4-8. (invited).
3. Shama, L.M. and **R.K.D. Peterson.** 2004. The benefits and risks of producing pharmaceutical proteins in plants. *Risk Management Matters* 2(4):28-33. (invited).
4. Sing, S.E., **R.K.D. Peterson,** and B.D. Maxwell. 2008. Invasive species management: ensuring the ‘cure’ is not worse than the condition. *Proceedings of the North American Prairie Conference*, 2006, Kearney, Nebraska, 20:381-386. (invited).
5. **Peterson, R.K.D.** 2010. Mosquito management and risk. *Wing Beats*, a publication of the Florida Mosquito Control Association 21(3):28-31. (invited).

## POPULAR AND TECHNOLOGY-TRANSFER ARTICLES

1. Hutchins, S.H., L.P. Pedigo, R.B. Smelser, L.G. Higley, P.M. Lasack, **R.K.D. Peterson**. 1987. Control of alfalfa insects in Iowa (early season). 1986. *Insect. Acar. Test.* 12:168.
2. Hutchins, S.H., L.P. Pedigo, T.H. Klubertanz, **R.K.D. Peterson**. 1987. Control of alfalfa insects in Iowa (middle season). 1986. *Insect. Acar. Test.* 12:169.
3. Riggert, C., T. Larson, **R.K.D. Peterson**. 1988. The effect of copper fungicides on yield. *Filbert Facts*. Oregon State University Extension Service.
4. **Peterson, R.K.D.** 1992. Thistle caterpillars numerous; scout gardens for damage. *Inside/Outside: A Newsletter for Home, Yard & Garden*. University of Nebraska Cooperative Extension Service. 92-5:3.
5. **Peterson, R.K.D.**, and R.J. Wright. 1992. Thistle caterpillars abundant. *Insect Science, Plant Disease, and Weed Science News*. University of Nebraska Cooperative Extension Service. 92-8:2.
6. **Peterson, R.K.D.** 1993. Development of economic thresholds for the alfalfa weevil. *Proceedings of the Crop Pest Management Update: A Conference for Professional Agriculturists*, Kearney, NE.
7. Meyer, S. J. and **R.K.D. Peterson**. 1995. When to sample for alfalfa weevil. *NebGuide*. University of Nebraska Cooperative Extension Service (G95-1263-A).
8. **Peterson, R.K.D.** 2000. The need for collective brilliance: An industry member's perspective on the Entomological Society of America. *ESA Newsletter*, 23(5):2 (invited article).
9. **Peterson, R.K.D.** 2001. Insect resistance management. White paper published on [www.whybiotech.com](http://www.whybiotech.com).
10. **Peterson, R.K.D.** 2002. Communicating to the public about pesticide risks. *Montana Crop Health Report*, 15(1-3).
11. **Peterson, R.K.D.** 2002. Why scientists can never prove that biotech crops are safe: How does science work? *AgBiosafety* (<http://agbiosafety.unl.edu/education/science.htm>).
12. **Peterson, R.K.D.** 2002. I don't care what the scientists say—biotech crops are too risky: Risk as perception. *AgBiosafety* (<http://agbiosafety.unl.edu/education/perception.htm>).
13. **Peterson, R.K.D.** 2002. How bad times how often: Risk as science. *Agbiosafety* (<http://agbiosafety.unl.edu/education/riskasscience.htm>).
14. **Peterson, R.K.D.** 2002. I know what risk is, but how do I assess it?: The risk assessment paradigm. *Agbiosafety* (<http://agbiosafety.unl.edu/education/paradigm.htm>).
15. **Peterson, R.K.D.** 2003. Is this stuff safe to eat?: How foods from biotech crops are evaluated for human safety. *Agbiosafety* ([http://agbiosafety.unl.edu/test/food\\_safety.shtml](http://agbiosafety.unl.edu/test/food_safety.shtml)).
16. **Peterson, R.K.D.** 2003. The Holcim issue: technology, risk, and society. *Commentary* (<http://www.montana.edu/commserv/csnews/nwview.php?article=905>).
17. Shama, L.M. and **R.K.D. Peterson**. 2005. Will this stuff harm the environment? How biotech crops are evaluated for environmental safety in the United States. *AgBiosafety* (<http://agbiosafety.unl.edu/environment.shtml>).
18. **Peterson, R.K.D.** 2006. Biotechnology and comparative risk assessment. *Information Systems for Biotechnology*. February, 1–4. (invited).
19. **Peterson, R.K.D.** and S.E. Sing. 2007. Releasing biocontrol agents: risk assessment and overdue reform. *Newsletter of the International Organization for Biological Control—Nearctic Regional Section* 29(2):1-3. (invited).
20. **Peterson, R.K.D.** 2008. An overview of risk assessment issues for plant-based pharmaceuticals. Introduction to Online Forum on Risk Assessment and Risk

- Management of Living Modified Organisms. Convention on Biological Diversity, United Nations Environment Programme (UNEP). (invited).
21. **Peterson, R.K.D.** 2017. Mosquito control: What we are doing and the science behind it. American Mosquito Control Association. (invited).
  22. **Peterson, R.K.D.** 2017. Mosquito control: Risk to people, bees, & the environment. American Mosquito Control Association. (invited).
  23. **Peterson, R.K.D.** and L.G. Higley. 2022. Hot springs, cool beetles: insects in Yellowstone go to extremes to survive and thrive. Yellowstone Caldera Chronicles. USGS. <https://www.usgs.gov/observatories/yvo/news/hot-springs-cool-beetles-insects-yellowstone-go-extremes-survive-and-thrive>

## SOFTWARE AND WEB SITE DEVELOPMENT

**DowElanco Internet Handbook '96: A Guide to Agricultural Information. 1996.** Text written by R. Johnson, E.A. Flora, and R.K.D. Peterson. Hypertext program written and produced by R.K.D. Peterson. Written with GUIDE 4.0, hypertext authoring software. HTML version published at University of Minnesota Insects Web Site.

**DowElanco Interactive Pest Newsletter (PESTINFO). 1996.** Material developed by E.A. Flora and R.K.D. Peterson. Multimedia program by R.K.D. Peterson. Written with Authorware 3.0, multimedia authoring software.

**Corn IPM: An Interactive Guide to Corn Insect Pest Management. 1997, 1999.** (versions 1.0, 1.2, 2.0, 2.1). Multimedia program. Written with Authorware, multimedia authoring software.

**Corn and Alfalfa Insect Pest Profiles Web Site. 1997.** More than 50 pest species sections covering biology and management. Dow AgroSciences Intranet.

**Insects, Disease, and History Web Site. 1997 - present.** Devoted to understanding the impact of insects and disease on human history. Produced and edited by R.K.D. Peterson and G. Miller. <http://entomology.montana.edu/historybug/>.

**Global Exposure and Risk Assessment Web Site. 1998.** Devoted to communicating risk assessment information to users. Dow AgroSciences Intranet.

**Research and Development Perspectives Web Site. 2000.** Devoted to featuring issues of interest to scientists. Dow AgroSciences Intranet.

**M-DEC, version 1.0. 2011.** A spreadsheet program for producing multiple decrement life tables. Spreadsheet program by R.S. Davis, R.K.D. Peterson, and L.G. Higley. Published in Computers and Electronics in Agriculture, 2011, 75:363-367.

**MULV-Disp, version 1.0. 2012.** A spreadsheet for predicting concentrations of insecticides sprayed from ground-based ultra-low-volume equipment used for management of adult mosquitoes. Spreadsheet program by J.J. Schleier and R.K.D. Peterson. Published in Journal of the American Mosquito Control Association, 2014, 30:223-227.

**Insects of the Greater Yellowstone Ecosystem. 2016 – present.** Website and social media project. An online photo book of insects. <http://www.montana.edu/yellowstoneinsects>.

## TEACHING

### Instructor

Environmental Risk Assessment (ENSC 407 / LRES 507, fall semesters, also taught as an online course for graduate students, LRES 507)

Insect Ecology (BIOE 422 / ENTO 510, alternate spring semesters, also taught as an online course for graduate students, ENTO 510)

Principles of Living Systems (BIOL 102, alternate spring semesters from 2004 - 2010)

Knowledge and Community (CLS 101US, fall semester 2009)

Risk-Benefit Analysis of Biological Control; Environmental Risk Assessment; Plague: Biology, History, and Sociology; Advanced Insect Community Ecology, Insects and Evolution; Insects and Ecosystem Function; Insect Biomimicry, Insects in Extreme Environments (ENTO 500/594, 2002 - 2020)

Integrated Pest Management (ENTO 401, spring semester 2004)

Individual Problems Course (ENTO 570, LRES 489/490, 570). Topics: Probabilistic Risk Assessment, Advanced Biological Risk Assessment, Ecotoxicology, Determinations of Germination for Invasive Toadflax, Advanced Insect Ecology, Environmental Risk Assessment for Glyphosate Tolerant Alfalfa

### Guest Lecturer (2002 – present)

Ethical Practices in Science (VTMB 424), Introduction to Biotechnology (VTMB 101), Bioprocess Engineering (CHBE 438), Animal and Range Science Program Planning and Analysis (ARNR 401), Societal Impacts of Engineering (CHE 251), Host Plant Resistance to Insects (ENTO 480), Integrated Pest Management (ENTO 401), Pesticide Use in Agriculture (ENTO 405), Natural Product Toxicology (ENTO 480), Scientific Writing (LRES 580), Climate Change/Science Honors Seminar (UH 494), Soil Remediation (ENSC 460), Insects and Human Society (BIOO 162), Writing and Professional Development for Environmental Scientists (LRES 501).

### Guest Lecturer – University of Nebraska (1992, 1994, 1995, 1999)

Becoming a Professional Scientist, Entomology Seminar, Pest Management Systems, Insects, Science, and Society

### Teaching Assistant (Spring 1992, Spring 1994)

Insect Ecology (3 credit hrs, advanced undergraduate/graduate course; 15 students). Lectured, prepared assignments, and assisted the instructor with grading of assignments and exams.

### Teaching Assistant (Fall 1990)

Introduction to Pesticides and Their Use (2 credit hrs, undergraduate course; 60 students). Lectured and assisted the instructor with grading of exams and with accommodation of guest lecturers.

### Laboratory Instructor (Fall 1991, Spring 1992, Fall 1992)

General Entomology. (3 credit hrs, undergraduate course; 20 students/lab). Taught several labs in the absence of the instructor.

### Graduate Students Supervised (does not include online M.S. advisees)

<u>Date Graduated</u>	<u>Name</u>	<u>Degree</u>
	Jackson Strand	PhD, Ecology & Environ. Sci.
	Alyssa Piccolomini	PhD, Ecology & Environ. Sci.
	Robert Wyatt	PhD, Ecology & Environ. Sci.

Dec. 2025	Madie Willis	PhD, Ecology & Environ. Sci. (co)
May 2025	Taylor Kennedy	MS, Entomology
May 2022	Katerina Lozano	MS, LRES
May 2022	Clare Dittimore	MS, Entomology
Mar. 2022	Laissa Cavallini	MS, Entomology (co-advisor)
Dec. 2021	John Bowley	MS, Entomology
May 2020	Miranda Margetts	PhD, Ecology & Environ. Sci.
Jan. 2019	Claire Donahoo	MS, Entomology
Aug. 2017	Alyssa Piccolomini	MS, Entomology
Aug. 2017	Collin Preftakes	PhD, Ecology & Environ. Sci.
Aug. 2017	Chris Brown	PhD, Ecology & Environ. Sci.
Aug. 2014	Shavonn Whiten	MS, Entomology
May 2014	Ron LodgePole	MS, LRES (co-advisor)
Dec. 2012	Bahram Farokhkish	MS, LRES (co-advisor)
May 2012	Jerome Schleier	PhD, Ecology & Environ. Sci.
Dec. 2008	Jerome Schleier	MS, LRES
Dec. 2008	Marjolein Schat	PhD, LRES
May 2007	Ryan Davis	MS, Entomology
Dec. 2006	Courtney Pariera Dinkins	MS, Entomology
Dec. 2006	Leslie Shama	MS, PSPP

#### **Postdoctoral Scientists Supervised and First Position**

2007 – 2008	Dr. Frank B. Antwi (Research Scientist, Cocoa Research Institute, Ghana)
2005 – 2006	Dr. Paula A. Macedo (Laboratory Director, Sacramento-Yolo Mosquito and Vector Control District, California)
2004 – 2005	Dr. Tulio B. Macedo (Research Scientist, Helena Chemical Co., California)

#### **Workshops and Shortcourses (all invited):**

##### **Presenter and Co-Organizer (May 2019)**

Current & Emerging Issues for Regulating Crop Protection Technologies. (40 participants). Hosted by the MSU Initiative for Regulation and Applied Economic Analysis. Bozeman, Montana.

##### **Instructor (March 2019)**

Better Science Through Storytelling. (40 students). Workshop at the Annual Meeting of the North Central Branch of the Entomological Society of America. Cincinnati, Ohio.

##### **Instructor and Facilitator (November 2017)**

Inspiring Science through Storytelling. (100 students). Workshop at the Annual Meeting of the Entomological Society of America. Denver, Colorado.

##### **Instructor and Expert (September 2016)**

Should We Engineer the Mosquito? (10 attendees). NSF-sponsored “Building with Biology” public forum. Belgrade, Montana.

##### **Instructor and Organizer (September 2013)**

Pesticide Risk Assessment, Management, Perception, and Communication. (15 students). Training program between U.S. EPA, universities, and industry to improve participation in global joint pesticide regulatory reviews. Training for the Institute for the Control of Agrochemicals, Ministry of Agriculture, China.

**Expert** (November 2008)

Online Expert Forum on Risk Assessment and Risk Management of Living Modified Organisms. Convention on Biological Diversity, United Nations Environment Programme (UNEP). Initiated forum (through invitation) on plant-based pharmaceuticals, risk assessment, and international regulation.

**Instructor** (October 2008)

Risk, Exposure, and Systems Thinking. (25 students). Working Together to Protect Endangered Species from Pesticides. A multi-agency workshop between EPA Region 8, FWS Region 6, States, Tribes, and Other Partners, Bozeman, Montana.

**Instructor and Organizer** (March 2008, 2009)

Environmental Risk Assessment: Public Health Insecticides and Vector-Borne Diseases (30 students). U.S. Navy Environmental Health Conference, Hampton, Virginia.

**Instructor and Organizer** (October 2007)

Communicating to the Public about Risks from Mosquito Insecticides and other Management Activities (25 students). Annual Meeting of the Northwest Mosquito and Vector Control Association, Whitefish, Montana.

**Instructor and Organizer** (May 2004)

Biological Risk Assessment: Pesticides, Crop Biotechnology, and Biological Control (20 students). Sao Paulo State University, Jaboticabal, SP, Brazil.

**Instructor and Organizer** (May 2004)

Insect Macrophotography (30 students). Sao Paulo State University, Jaboticabal, SP, Brazil.

**Instructor** (August 2003)

New Zealand Mud Snail Risk Assessment Workshop (30 students). Montana State University, Bozeman, Montana.

**Instructor and Organizer** (May 2001)

Agricultural Biotechnology Risk Analysis. Shortcourse to 20 students. Staff from Boyce Thompson Institute, Arizona State University, and Benchmark Biolabs. Lincoln, Nebraska.

**Instructor and Organizer** (March 2001)

Food and Agricultural Technology. Shortcourse to 50 students for professional certification credit. Central Indiana District Dietetics Association. Indianapolis, Indiana.

**Instructor and Organizer** (February 2001)

Biotechnology Risk Analysis. Shortcourse to 50 students. USDA-APHIS Center for Veterinary Biologics and Iowa State University.

**Instructor and Organizer** (October 2000)

Risk Assessment of Agricultural Technologies. Shortcourse to 30 students. Montana State University.

**Instructor and Organizer** (May 2000)

Agricultural Biotechnology and Pesticide Risk Assessment Workshop. Shortcourse to 30 students. University of Nebraska.

**Instructor** (February 1996)

Pesticide Risk Communication for Mosquito Control. One-day shortcourse to 40 students as part of the 1996 Florida Mosquito Control Association Dodd Short Courses.

## APPENDIX

### PAPERS PRESENTED (86 of 171 invited)

1. **Peterson, R.K.D.**, S.D. Danielson, and L.G. Higley. 1990. Physiological responses of alfalfa to simulated alfalfa weevil injury. Annu. Meet. ESA, New Orleans, Louisiana.
2. **Peterson, R.K.D.**, S.D. Danielson, and L.G. Higley. 1991. Developmental responses of alfalfa to simulated alfalfa weevil defoliation. Annu. Meet. Kan. Ent. Soc., Ames, Iowa.
3. **Peterson, R.K.D.**, S.D. Danielson, and L.G. Higley. 1991. Compensation of alfalfa to actual and simulated alfalfa weevil injury. Annu. Meet. ESA, Reno, Nevada.
4. **Peterson, R.K.D.**, S.D. Danielson, and L.G. Higley. 1991. Consumption of alfalfa by adult clover leaf weevils. Annu. Meet. ESA, Reno, Nevada.
5. **Peterson, R.K.D.**, S.D. Danielson, and L.G. Higley. 1992. Photosynthetic responses of alfalfa to actual and simulated alfalfa weevil injury. Annu. Meet. NCB-ESA, Kansas City, Missouri.
6. **Peterson, R.K.D.** 1993. Development of economic thresholds for the alfalfa weevil. Crop Pest Management Update: A Conference for Professional Agriculturists, Kearney, NE. (invited).
7. **Peterson, R.K.D.** and L.G. Higley. 1993. Temporal changes in plant gas exchange following insect defoliation. Annu. Meet. ESA, Indianapolis, Indiana.
8. **Peterson, R.K.D.** and L.G. Higley. 1994. The communication of pesticide risks. Second National IPM Symposium, Las Vegas, Nevada.
9. **Peterson, R.K.D.** and L.G. Higley. 1994. Mechanism of photosynthetic rate reduction in soybean to Mexican bean beetle. Annu. Meet. ESA, Dallas, Texas.
10. **Peterson, R.K.D.** and L.G. Higley. 1995. Teaching entomology and pest management with multimedia programs. Annu. Meet. NCB-ESA, Lexington, Kentucky.
11. **Peterson, R.K.D.** and S.J. Meyer. 1995. Relating degree-day accumulations to calendar dates to predict insect phenology. Annu. Meet. NCB-ESA, Lexington, Kentucky.
12. **Peterson, R.K.D.** 1996. Mechanisms and yield loss: photosynthesis and injury guilds. Understanding Yield Loss from Insects Symposium, Annu. Meet. NCB-ESA, Omaha, Nebraska. (invited).
13. **Peterson, R.K.D.** 1996. Interactive multimedia and entomology. Information Technology Delivery Symposium. Annu. Meet. NCB-ESA, Omaha, Nebraska. (invited).
14. Meyer, S. J. and **R.K.D. Peterson**. 1996. Predicting stalk borer movement in corn. Annu. Meet. Agron. Soc. Am., Indianapolis, Indiana.
15. **Peterson, R.K.D.** and L.G. Higley. 1997. Corn insects: a multimedia program. Annu. Meet. NCB-ESA, Columbus, Ohio.
16. **Peterson, R.K.D.** 1997. Beyond the billboards: adding content to the Web. Annu. Meet. NCB-ESA, Columbus, Ohio. (invited).
17. Foster, J.E., T.L. Clark, R. Subramanian, **R.K.D. Peterson**, and M.D. Culy. 1997. European corn borer management using spinosad. Annu. Meet. NCB-ESA, Columbus, Ohio.
18. **Peterson, R.K.D.** 1998. Creating and disseminating pest management technical knowledge. Annu. Meet. Florida Entomological Society, Sanibel Island, Florida. (invited).
19. Haile, F.J., **R.K.D. Peterson**, L.G. Higley, and D.L. Kerns. 1999. Impact of insecticides on crop physiology. Annu. Meet. NCB-ESA, Des Moines, Iowa.
20. Higley, L.G., and **R.K.D. Peterson**. 1999. Tolerance in the transgenic era. Annu. Meet. ESA, Atlanta, Georgia. (invited).

21. Wolt, J.D., T. Meade, P.G. Bystrak, and **R.K.D. Peterson**. 2000. Characterizing the impact of Bt corn pollen on non-target lepidopteran species using a risk assessment framework. Annu. Meet. ESA, Montreal, Quebec, Canada.
22. Wolt, J.D., T. Meade, P.G. Bystrak, and **R.K.D. Peterson**. 2000. Characterizing the impact of Bt corn pollen on non-target lepidopteran species using a risk assessment framework. Annu. Meet. North Central Branch, ESA, Ft. Collins, Colorado.
23. **Peterson, R.K.D.** 2001. What is risk assessment? Annu. Meet. ESA, San Diego, California. (invited).
24. **Peterson, R.K.D.** 2001. Genetically-modified pest protected crops and human health. Annu. Meet. ESA, San Diego, California. (invited).
25. Thompson, G.D., **R.K.D. Peterson**, and P.G. Bystrak. 2001. Regulating resistance management: do we have the knowledge and resources? Annu. Meet. ESA, San Diego, California. (invited).
26. **Peterson, R.K.D.** 2002. Relationships between insect injury, plant physiological response, and crop yield. Annu. Meet. Entomological Society of Canada, Winnipeg, Manitoba. (invited).
27. Delaney, K. J., L.G. Higley, **R.K.D. Peterson**, and F.J. Haile. 2002. A seasonal pattern to photosynthetic rate impairment in some milkweed species following insect defoliation. Annu. Meet. ESA, Ft. Lauderdale, Florida.
28. **Peterson, R.K.D.**, and S.J. Meyer. 2002. Assessing the temporal exposure of Karner blue butterfly larvae to Bt corn pollen. Annu. Meet. ESA, Ft. Lauderdale, Florida.
29. **Peterson, R.K.D.** and S. E. Sing. 2003. The power of a paradigm: risk assessment and biological control. Annu. Meet. ESA-NCB, Madison, Wisconsin. (invited).
30. **Peterson, R.K.D.** 2003. Risk assessment of plant-based pharmaceuticals. Annu. Meet. ESA-NCB, Madison, Wisconsin. (invited).
31. Sing, S.E., and **R.K.D. Peterson**. 2003. A new perspective on invasive weed risk assessment. 7<sup>th</sup> International Conference on the Ecology and Management of Alien Plant Invasions. Ft. Lauderdale, Florida.
32. Sing, S.E., and **R.K.D. Peterson**. 2003. Risk assessment of Dalmatian and yellow toadflax biological control. 7<sup>th</sup> International Conference on the Ecology and Management of Alien Plant Invasions. Ft. Lauderdale, Florida.
33. **Peterson, R.K.D.**, and S.E. Sing. 2004. A comparative environmental risk assessment of invasive weeds and associated weed management strategies. Montana Weed Control Association Annual Conference. Billings, Montana.
34. Weaver, D.K., **R.K.D. Peterson**, and S.E. Sing. 2004. Evaluating plant stress indicators for Dalmatian toadflax being consumed by biocontrol insects. Montana Weed Control Association Annual Conference. Billings, Montana.
35. Sing, S.E., **R.K.D. Peterson**, D.K. Weaver, and G.P. Markin. 2004. Use of SADIE for weed risk assessment and evaluation of weed biocontrol efficacy. Decision-Making in Biological Control of Weeds. Denver, Colorado. (invited).
36. **Peterson, R.K.D.** 2004. Relative risk evaluation: mosquito control and West Nile virus. 2004 National Conference on West Nile Virus in the United States. Denver, Colorado. (invited).
37. **Peterson, R.K.D.** 2004. A comparative risk assessment between West Nile Virus and mosquito control strategies. 2004 Annual Meeting of the American Mosquito Control Association. Savannah, Georgia. (invited).
38. **Peterson, R.K.D.** 2004. Plant-insect ecophysiology: where have we been and where are we now? Annu. Meet. ESA-PB, Bozeman, Montana. (invited).
39. **Peterson, R.K.D.** 2004. Plant-insect ecophysiology: where are we going? Annu. Meet. ESA-PB, Bozeman, Montana. (invited).

40. **Peterson, R.K.D.**, S.E. Sing, and D.K. Weaver. 2004. Primary and secondary metabolic responses of Dalmatian toadflax after injury by insect biological control agents. Annu. Meet. ESA-PB, Bozeman, Montana.
41. Puliafico, K.P., and **R.K.D. Peterson**. 2004. Host specificity testing for classical biological control of weeds using the environmental risk assessment paradigm. Annu. Meet. ESA-PB, Bozeman, Montana.
42. Weaver, D.K., W.L. Morrill, **R.K.D. Peterson**, S.E. Sing, and C. Nansen. 2004. Insect-induced expression of plant secondary metabolites: volatiles and their importance to ecophysiology. Annu. Meet. ESA-PB, Bozeman, Montana.
43. Arthur, H. and **R.K.D. Peterson**. 2004. Environmental risk associated with plant resistance to insects. International Congress of Entomology, Brisbane, Australia. (invited).
44. Pariera-Dinkins, C., and **R.K.D. Peterson**. 2004. Physiological responses of potato (*Solanum tuberosum*) to defoliation by the Colorado potato beetle (*Leptinotarsa decemlineata*). Annu. Meet. ESA, Salt Lake City, Utah.
45. Buteler, M., D.K. Weaver, and **R.K.D. Peterson**. 2004. Evaluating winter wheat varieties to determine suitability in trap cropping to protect spring wheat against the wheat stem sawfly, *Cephus cinctus* Norton (Hymenoptera: Cephidae). Annu. Meet. ESA, Salt Lake City, Utah.
46. Sing, S.E., G.P. Markin, D.K. Weaver, C.W. Davis, and **R.K.D. Peterson**. 2004. Evaluating the risks, benefits, and efficacy of Dalmatian toadflax (*Linaria dalmatica*) biological control with the stem-boring weevil *Mecinus janthinus* (Coleoptera: Curculionidae). Annu. Meet. ESA, Salt Lake City, Utah.
47. Macedo, T.B., **Peterson, R.K.D.**, Weaver, D.K., and Morrill, W.L. 2005. Wheat stem sawfly, *Cephus cinctus* Norton, impact on wheat primary metabolism: an ecophysiological approach. Joint Meeting of the Entomological Society of Canada and the Entomological Society of Alberta. Canmore, Alberta, Canada. (invited).
48. **Peterson, R.K.D.**, P.A. Macedo, and R.S. Davis. 2005. Comparing human health risks: West Nile virus and mosquito adulticides. Annu. Meet. ESA, Ft. Lauderdale, Florida. (invited).
49. Macedo, P.A., **R.K.D. Peterson**, and R.S. Davis. 2006. Human-health risk assessment for West Nile virus and insecticides used in mosquito management. Young Scientist Research Award Symposium. 231<sup>st</sup> American Chemical Society National Meeting. Atlanta, Georgia. (invited).
50. Macedo, P.A., **R.K.D. Peterson**, and R.S. Davis. 2006. West Nile Virus and Mosquito Management – Human Health Risks. Wyoming Mosquito Management Association Annual Meeting. Lander, Wyoming. (invited).
51. **Peterson, R.K.D.**, P.A. Macedo, and R.S. Davis. 2006. Comparing risks: West Nile virus, mosquito management, and human health. Idaho Mosquito and Vector Control Association Annual Meeting. Jerome, Idaho. (invited).
52. **Peterson, R.K.D.**, and L.G. Higley. 2006. Why should we care about economic injury levels? 21<sup>st</sup> Congress of the Entomological Society of Brazil. Recife, Brazil. (invited).
53. **Peterson, R.K.D.**, R.S. Davis, and P.A. Macedo. 2006. An ecological risk assessment for West Nile Virus and insecticides used in mosquito management. 21<sup>st</sup> Congress of the Entomological Society of Brazil. Recife, Brazil. (invited).
54. Macedo, P.A., **R.K.D. Peterson**, and R.S. Davis. 2006. A human-health risk assessment for West Nile Virus and insecticides used in mosquito management. 21<sup>st</sup> Congress of the Entomological Society of Brazil. Recife, Brazil. (invited).
55. **Peterson, R.K.D.** 2006. Update on West Nile Virus and insecticide risk assessment research. Annual Meeting of the Northwest Mosquito and Vector Control Association. Newport, Oregon. (invited).

56. Davis, R.S., and **R.K.D. Peterson**. 2006. An ecological risk assessment for insecticides used in mosquito management. Annu. Meet. ESA, Indianapolis, Indiana.
57. Schat, M., S. Sing, D.K. Weaver, and **R.K.D. Peterson**. 2006. Impact of *Mecinus janthinus* injury on growth and primary physiology of Dalmatian toadflax. Annu. Meet. ESA, Indianapolis, Indiana.
58. Pallipparambil, G.R., D.K. Weaver, W.L. Morrill, **R.K.D. Peterson**, and P.R. Miller. 2006. Mass rearing of *Bracon cephi* (Gahan) and *B. lissogaster* Muesbeck, parasitoids of the wheat stem sawfly, *Cephus cinctus* Norton, in field cages. Annu. Meet. ESA, Indianapolis, Indiana.
59. Macedo, T.B., D.K. Weaver, and **R.K.D. Peterson**. 2006. Characterization of wheat stem sawfly injury and impact on wheat primary physiology and yield under water stress conditions. Annu. Meet. ESA, Indianapolis, Indiana.
60. **Peterson, R.K.D.**, P.A. Macedo, and R.S. Davis. 2007. Risk assessments for exposure of deployed military personnel to insecticides used for personal protection and disease-vector management. 2007 Department of Defense Pest Management Workshop, Naval Air Station, Jacksonville, Florida. (invited).
61. Sing, S.E. and **R.K.D. Peterson**. 2007. Comparative risk assessment of *Linaria dalmatica* and *L. vulgaris* biological control. XII International Symposium on Biological Control of Weeds, 22-27 April, 2007. La Grande Motte, France.
62. Schleier, J.J. and **R.K.D. Peterson**. 2007. Environmental concentration and fate of insecticides after ULV application. Annu. Meet. Northwest Mosquito and Vector Control Association, Whitefish, Montana. (invited).
63. Sing, S.E., and **R.K.D. Peterson**. 2007. *Binodoxys communis* and *Aphis glycines*: a model system for evaluating the goals, safety, and efficacy of classical biocontrol through risk assessment. Annu. Meet. ESA, San Diego, California.
64. Macedo, T., **R.K.D. Peterson**, and D.K. Weaver. 2007. Responses of wheat to wheat stem sawfly injury: connecting physiological responses to host resistance approaches. Annu. Meet. ESA, San Diego, California. (invited).
65. Antwi, F., and **R.K.D. Peterson**. 2007. Risk assessment of DEET and picaridin. Annu. Meet. ESA, San Diego, California. (invited).
66. Schleier III, J.J. and **R.K.D. Peterson**. 2008. Mosquito management and risk: environmental concentrations of insecticides and their meaning. 76th Annu. Meet. Mosquito and Vector Control Association of California, Palm Springs, California. (invited).
67. Schleier III, J.J. and **R.K.D. Peterson**. 2008. Mosquito management and risk: environmental concentrations of insecticides and their meaning. 74th Annu. Meet. American Mosquito Control Association, Reno, Nevada.
68. **R.K.D. Peterson**, J.J. Schleier III, and R.S. Davis. 2008. How safe is safe enough? Mosquito adulticides and public health risks. 74th Annu. Meet. American Mosquito Control Association, Reno, Nevada.
69. **Peterson, R.K.D.** 2008. Comparative biological risk research to protect deployed forces. 74th Annu. Meet. American Mosquito Control Association, Reno, Nevada. (invited).
70. **Peterson, R.K.D.** and J.J. Schleier III. 2008. Environmental concentrations of pesticides and their use in risk assessment. Annu. Meet. Association of Official Analytical Chemists, Bozeman, Montana. (invited).
71. **Peterson, R.K.D.** and J.J. Schleier III. 2008. How risk assessors use analytical chemistry that pushes the detection limits. Annu. Meet. Association of Official Analytical Chemists, Bozeman, Montana. (invited).
72. Schleier III, J.J. and **R.K.D. Peterson**. 2008. Environmental concentrations and risks of permethrin and naled after truck-mounted ULV applications. Annu. Meet. Northwest Mosquito and Vector Control Association, Union, Washington. (invited).

73. Schleier III, J.J., **R.K.D. Peterson**, and S.E. Sing. 2008. Are mosquitofish safe? An ecological risk assessment for use in the Northwest. Annu. Meet. Northwest Mosquito and Vector Control Association, Union, Washington. (invited).
74. **Peterson, R.K.D.**, and J.J. Schleier III. 2009. Putting risks from mosquito control in perspective. Annu. Meet. Montana Mosquito and Vector Control Association, Helena, Montana. (invited).
75. Schleier III, J.J., and **R.K.D. Peterson**. 2009. What are the risks of establishing a population of mosquitofish in Montana? Annu. Meet. Montana Mosquito and Vector Control Association, Helena, Montana. (invited).
76. Schleier III, J.J., and **R.K.D. Peterson**. 2009. The fate and risks of truck-mounted ultra-low-volume insecticides. Annu. Meet. West Central Mosquito and Vector Control Association, Rapid City, South Dakota. (invited).
77. Camara, H.P., K.J. Delaney, **R.K.D. Peterson**, and D.K. Weaver. 2009. Mechanical injury and *Spodoptera frugiperda* herbivory on cereal grasses: volatile organic compound induction is uncoupled with injured leaf photosynthetic responses. Montana State University Student Research Celebration.
78. Camara, H.P., K.J. Delaney, **R.K.D. Peterson**, and D.K. Weaver. 2009. *Spodoptera frugiperda* herbivory and mechanical injury on cereal grasses: volatile organic compound induction is uncoupled with injured leaf photosynthetic responses-day 1. Annu. Meet. Western Section of the American Society of Plants Biologists. Tucson, Arizona.
79. **Peterson, R.K.D.**, and J.J. Schleier III. 2009. Chasing zero: adulticides and environmental risk. Annu. Meet. Northwest Mosquito and Vector Control Association, Coeur d'Alene, Idaho.
80. Schleier III, J.J., **R.K.D. Peterson**, and C. Preftakes. 2009. The movement of ULV adulticides in the environment and their relationship to risk. Annu. Meet. Northwest Mosquito and Vector Control Association, Coeur d'Alene, Idaho.
81. **Peterson, R.K.D.** 2009. The heart of the matter: economic damage and thresholds. Annu. Meet. ESA, Indianapolis, Indiana. (invited).
82. **Peterson, R.K.D.**, M. Buteler, and D.K. Weaver. 2009. Does host protection from mortality lead to high irreplaceable mortality from parasitoids? An example with wheat stem sawfly (*Cephus cinctus* Norton). Annu. Meet. ESA, Indianapolis, Indiana.
83. Buteler, M., D.K. Weaver, and **R.K.D. Peterson**. 2009. Temporal variation and cultivar effects on wheat stem sawfly larval mortality caused by braconid parasitoids. Annu. Meet. ESA, Indianapolis, Indiana.
84. Crespo, R.J., M.L. Bernards, **R.K.D. Peterson**, and D.J. Lee. 2010. Herbicide resistance risk assessment approach for dicamba soybean. Pan-American Weed Resistance Conference, Miami Beach, Florida. (invited).
85. Schleier III, J.J., and **R.K.D. Peterson**. 2010. The movement of ULV insecticides and its relationship to efficacy. Annu. Meet. Montana Mosquito and Vector Control Association, Helena, Montana. (invited).
86. **Peterson, R.K.D.**, and J.J. Schleier III. 2010. Science and nonsense: adulticiding and environmental risk. Annu. Meet. Montana Mosquito and Vector Control Association, Helena, Montana. (invited).
87. **Peterson, R.K.D.** and J.J. Schleier III. 2010. Chasing zero: adulticiding and environmental risk. Annu. Conf. Utah Mosquito Abatement Association, Salt Lake City, Utah. (invited).
88. Schleier III, J.J. and **R.K.D. Peterson**. 2010. The environmental factors that influence the movement, risk, and efficacy of ULV applications. Idaho Mosquito and Vector Control Association Annu. Meet., Pocatello, Idaho. (invited).

89. Schleier III, J.J., **R.K.D. Peterson**, and C. Preftakes. 2010. Pyrethroid mixture toxicity to non-target organisms. Idaho Mosquito and Vector Control Association Annu. Meet., Pocatello, Idaho. (invited).
90. Davis, P., F. Menalled, B. Maxwell, and **R.K.D. Peterson**. 2011. A quantitative protocol to assess the invasive potential of a plant species into a rangeland ecosystem using *Camelina sativa* (Gold of Pleasure, Large-seeded False Flax) as a model. Annu. Meet. Soc. Range Management, Billings, Montana.
91. **Peterson, R.K.D.** 2011. Tips and tricks for insect photography. Annu. Meet. North Central Branch, ESA, Minneapolis, Minnesota. (invited).
92. Schleier III, J.J., P.A. Macedo, and **R.K.D. Peterson**. 2011. The risk of aerially applied ULV insecticides to humans and non-target organisms. Gulf Coast Aerial Workshop and Fly-In, Angleton, Texas (invited).
93. Schleier III, J.J. and **R.K.D. Peterson**. 2011. The effect of meteorological and physicochemical variables on fate and efficacy of ground-based ULV insecticide applications. Gulf Coast Aerial Workshop and Fly-In, Angleton, Texas (invited).
94. Schleier III, J.J., Collin Preftakes, and **R.K.D. Peterson**. 2011. The joint toxicity of three pyrethroid insecticides to *Drosophila melanogaster*. Annu. Meet. Montana Academy of Sciences, Butte, Montana.
95. Schleier III, J.J. and **R.K.D. Peterson**. 2011. What factors influence the movement and risk of ULV applications? Idaho Mosquito and Vector Control Association Meet., Sun Valley, Idaho. (invited).
96. Bodin, J. and **R.K.D. Peterson**. 2011. What factors influence the efficacy of ground ULV insecticides? Idaho Mosquito and Vector Control Association Meet., Sun Valley, Idaho. (invited).
97. Schleier III, J.J., Collin Preftakes, and **R.K.D. Peterson**. 2011. The joint toxicity of three pyrethroid insecticides to *Drosophila melanogaster*. Annu. Meet. ESA, Reno, Nevada.
98. **Peterson, R.K.D.** 2011. Competing risk in mortality analysis: rethinking efficacy in biological control. Annu. Meet. ESA, Reno, Nevada. (invited).
99. **Peterson, R.K.D.** 2012. "More feared than all the armies in the world": insects, disease, and military history. Annu. Meet. AMCA, Austin, Texas. (invited).
100. Schleier III, J.J. and **R.K.D. Peterson**. 2012. Model development for predicting environmental concentrations after applications of ultra-low-volume insecticides for adult mosquito management. Annu. Meet. AMCA, Austin, Texas.
101. Bodin, J.L., **R.K.D. Peterson**, M. Breidenbaugh and J.J. Schleier III. 2012. The influence of environmental factors on the efficacy of insecticides used in adult mosquito management. Annu. Meet. AMCA, Austin, Texas.
102. **Peterson, R.K.D.**, M. Buteler, and D.K. Weaver. 2012. Can life tables improve management of the wheat stem sawfly? Fifth International Wheat Stem Sawfly Conference, Bozeman, Montana. (invited).
103. Delaney, K.J., **R.K.D. Peterson**, and D.K. Weaver. 2012. The importance of leaf photosynthesis responses to understanding the impact of wheat stem sawfly stem herbivory. Fifth International Wheat Stem Sawfly Conference, Bozeman, Montana. (invited).
104. **Peterson, R.K.D.** 2012. Putting it all in perspective: mosquito management and environmental risk. North Central Mosquito Control Association Meet., Aberdeen, South Dakota. (invited).
105. **Peterson, R.K.D.** 2012. What do we know about risk and mosquito management? Annu. Meet. Northwest Mosquito and Vector Control Association, West Yellowstone, Montana. (invited).
106. Bodin, J.L., **R.K.D. Peterson**, J.J. Schleier III, and M. Breidenbaugh. 2012. The environmental variables that influence efficacy of ground ULV applications for adult

- mosquito management. Northwest Mosquito and Vector Control Association, West Yellowstone, Montana. (invited).
107. **Peterson, R.K.D.** 2012. Introduction to insect macrophotography. Annu. Meet. ESA, Knoxville, Tennessee. (invited).
  108. Hunt, T.E., **R.K.D. Peterson**, and B.D. Siegfried. 2012. How likely is resistance to neonics to develop? Is IRM needed or possible for neonic seed treatments? Annu. Meet. ESA, Knoxville, Tennessee. (invited).
  109. **Peterson, R.K.D.** 2013. From risk assessment to perception to communication: improving dialogue with the public. Annu. Meet. AMCA, Atlantic City, New Jersey. (invited).
  110. Bodin, J.L., **R.K.D. Peterson**, and M. Breidenbaugh. 2013. The environmental variables that influence efficacy of ground ULV applications for adult mosquito management. Annu. Meet. AMCA, Atlantic City, New Jersey.
  111. Whiten, S.R. and **R.K.D. Peterson**. 2013. Increasing ambient temperature and susceptibility of the mosquito *Aedes aegypti* to the insecticide permethrin: what's global warming got to do with it? Third Biennial Western Regional IDEa Conference, Honolulu, Hawaii.
  112. Whiten, S.R. and **R.K.D. Peterson**. 2013. The effect of increasing ambient temperature and susceptibility of the mosquito *Aedes aegypti* to the insecticide permethrin: what's global warming got to do with it? Annu. Meet. ESA, Austin, Texas.
  113. Whiten, S.R. and **R.K.D. Peterson**. 2014. Temperature and the susceptibility of *Aedes aegypti* to pyrethroid insecticides. Annual Meeting of the Montana Mosquito Vector Control Association. Great Falls, Montana. (invited).
  114. **Peterson, R.K.D.** 2014. The importance of perspective: mosquito management and environmental risk. Annual Conference of the Michigan Mosquito Control Association. Lansing, Michigan. (invited – keynote address).
  115. **Peterson, R.K.D.** 2014. More Feared Than All the Armies in the World: Insects, Disease, and History. Annual Conference of the Michigan Mosquito Control Association. Lansing, Michigan. (invited).
  116. Varella, A.C., J.D. Sherman, J. Martin, **R.K.D. Peterson**, D.K. Weaver, L.E. Talbert. 2014. Wheat genes impact the behavior of an insect pest. Triticeae Coordinated Agricultural Project Meeting, San Diego, California.
  117. **Peterson, R.K.D.**, M. Buteler, and D.K. Weaver. 2014. How do wheat stem sawflies die? Using demography to improve management. Sixth International Wheat Stem Sawfly Conference, Bozeman, Montana. (invited).
  118. Whiten, S.R. and **R.K.D. Peterson**. 2014. The influence of temperature on the susceptibility of *Aedes aegypti* to the insecticide permethrin. NIH, NIGMS Fifth Biennial National IDEa Symposium of Biomedical Research Excellence (NISBRE), Washington, D.C.
  119. **Peterson, R.K.D.** 2014. Influencing the public and policy: the importance of science as storytelling. Annu. Meet. ESA, Portland, Oregon. (invited).
  120. **Peterson, R.K.D.** 2015. Mosquito management and environmental risk: the value of perspective. Annual Conference of the West Central Mosquito and Vector Control Association. Moab, Utah. (invited – keynote address).
  121. **Peterson, R.K.D.** 2015. Insects, disease, and military history. Annual Conference of the West Central Mosquito and Vector Control Association. Moab, Utah. (invited).
  122. Preftakes, C.J., J.J. Schleier, and **R.K.D. Peterson**. 2015. Assessing efficacy, exposure, and risk for insecticide drift reduction technologies. Annu. Meet. ESA, Minneapolis, Minnesota.
  123. Brown, C.R. and **R.K.D. Peterson**. 2015. Stimulating natural enemy abundance and biocontrol in Bt maize. Annu. Meet. ESA, Minneapolis, Minnesota.

124. Preftakes, C.R. and **R.K.D. Peterson**. 2016. Evaluating drift reduction potential of pesticide spray mixtures within a risk assessment framework. Dow AgroSciences Global Headquarters. Indianapolis, Indiana. (invited).
125. Reis, D.A., M.L. Hofland, **R.K.D. Peterson**, and D.K. Weaver. 2016. Assessing the role of sugar nutrition in braconid parasitoids that specialize in the wheat stem sawfly. XXV International Congress of Entomology. Orlando, Florida.
126. Preftakes, C.J., J.J. Schleier III, and **R.K.D. Peterson**. 2016. Assessing efficacy, exposure, and risk for pesticide drift reduction technologies. XXV International Congress of Entomology. Orlando, Florida.
127. **Peterson, R.K.D.** 2016. Bugs and the blues: insects as tricksters in early blues music. XXV International Congress of Entomology. Orlando, Florida.
128. Brown, C.R., and **R.K.D. Peterson**. 2016. Simulating prey removal, natural enemy abundance, and biocontrol in Bt maize. XXV International Congress of Entomology. Orlando, Florida.
129. Piccolomini, A., and **R.K.D. Peterson**. 2017. Pyrethroids and the alfalfa leafcutting bee: what's the risk? Annual Meeting of the Montana Mosquito and Vector Control Association. Great Falls, Montana (invited).
130. **Peterson, R.K.D.** 2017. Location, location, location: position and susceptibility of non-target insects to mosquito adulticides. Annual Meeting of the Montana Mosquito and Vector Control Association. Great Falls, Montana (invited).
131. **Peterson, R.K.D.** 2017. The importance of decentralized leadership before, during, and after the March for Science. Annual Meeting of the Entomological Society of America. Denver, Colorado (invited).
132. **Peterson, R.K.D.** 2017. All the news that's not fit to print: science vs. science journalism. Annual Meeting of the Entomological Society of America. Denver, Colorado (invited).
133. Donahoo, C.L., and **R.K.D. Peterson**. 2017. Life table analysis of the alfalfa leafcutting bee, *Megachile rotundata* (Hymenoptera: Megachilidae). Annual Meeting of the Entomological Society of America. Denver, Colorado.
134. Achhami, B., M.L. Hofland, **R.K.D. Peterson**, G.V.P. Reddy, J. Sherman, and D.K. Weaver. 2017. Detailed assessment of wheat stem sawfly (*Cephus cinctus* Norton) infestation in barley (*Hordeum vulgare* L.) in Montana. Annual Meeting of the Entomological Society of America. Denver, Colorado.
135. Reis, D.A., M.L. Hofland, J.M. Martin, **R.K.D. Peterson**, and D.K. Weaver. 2017. Effects of sugar feeding on longevity, egg load, and egg volume in two bivoltine braconid parasitoids that attack *Cephus cinctus* Norton. Annual Meeting of the Entomological Society of America. Denver, Colorado.
136. Achhami, B., G.V.P. Reddy, **R.K.D. Peterson**, J. Sherman, and D.K. Weaver. 2018. Does *Cephus cinctus* Norton infestation induce compensatory grain yield in barley? ESA, ESC, and ESBC Joint Annual Meeting. Vancouver, BC, Canada.
137. **Peterson, R.K.D.** 2019. Not your grandad's ESA: Changing demographics and the 21<sup>st</sup> century of entomology. Annual Meeting of the Southwestern Branch of the Entomological Society of America. Tulsa, Oklahoma (invited).
138. Achhami, B.B., G.V.P. Reddy, J.D. Sherman, **R.K.D. Peterson**, and D.K. Weaver. 2019. Causes of larval mortality: a key component of wheat stem sawfly (*Cephus cinctus* Norton) management. Annual Meeting of the Entomological Society of America. St. Louis, Missouri.
139. Dittmore, C., D. Tyers, **R.K.D. Peterson**, and E. Nunlist. 2019. The ecology of the army cutworm moth in the Greater Yellowstone Ecosystem. Annual Meeting of the Entomological Society of America. St. Louis, Missouri.

140. Maxcer, M., E. Oberg, and **R.K.D. Peterson**. 2019. Ants of northern Yellowstone National Park: A survey of biodiversity. Annual Meeting of the Entomological Society of America. St. Louis, Missouri.
141. Santos, L.C., L.M.B. Bento, D.A. Reis, **R.K.D. Peterson**, and D.K. Weaver. 2019. Extrafloral nectaries and associated nutrients: importance for braconid parasitoids. Annual Meeting of the Entomological Society of America. St. Louis, Missouri.
142. **Peterson, R.K.D.** 2020. Mosquito management and risk. Annual Meeting of the Michigan Mosquito Control Association. Lansing, Michigan, Feb. 5, 2020.
143. McKelvy, U., T. Seipel, **R.K.D. Peterson**, and M.E. Burrows. 2020. AWaRe: An online learning tool for the assessment of wheat streak mosaic risk in Montana. Annual Meeting of the American Phytopathological Society. August 10-14.
144. Bowley, J.L. and **R.K.D. Peterson**. 2020. Hot springs, cool beetles: Ecophysiological heat tolerance of *Cicindelidia haemorrhagica* inhabiting hot springs in Yellowstone National Park. Annual Meeting of the Entomological Society of America. November 16-19.
145. Cavallini, L., T. Seipel, P. Miller, **R.K.D. Peterson**, and D.K. Weaver. 2020. The contribution of diet supplementation in braconid parasitoid longevity, egg load, and egg volume. Annual Meeting of the Entomological Society of America. November 16-19.
146. Hager, M., J.R. Lima Pinto, B.B. Achhami, L. Cavallini, M. Hofland, L. Hamburg, L.S. Ermatinger, S.L. Powell, **R.K.D. Peterson**, and D.K. Weaver. 2020. Identification of phenotypic differences associated with wheat stem sawfly (*Cephus cinctus*) resistance in near isogenic lines of spring wheat. Annual Meeting of the Entomological Society of America. November 16-19.
147. Achhami, B.B., G.V.P. Reddy, M. Hofland, J. Sherman, **R.K.D. Peterson**, and D.K. Weaver. 2020. The effects of barley plant volatiles on host selection behaviors of wheat stem sawfly, *Cephus cinctus* Norton. Annual Meeting of the Entomological Society of America. November 16-19.
148. **Peterson, R.K.D.** 2021. Mosquito management in the age of science denialism. Annual Meeting of the American Mosquito Control Association. March 3. Keynote presentation (invited).
149. **Peterson, R.K.D.** 2021. Exposure and risk to mosquito insecticides. Annual Meeting of the Council of State and Territorial Epidemiologists. June 13. (invited).
150. Cavallini, L. T.F. Seipel, P.R. Miller, **R.K.D. Peterson**, and D.K. Weaver. 2021. How a cover crop can benefit parasitoid natural enemies of wheat stem sawfly. Annual Meeting of the Entomological Society of America. October 31 – November 4. Denver, Colorado.
151. Dittmore, C.M., **R.K.D. Peterson**, and D. Tyers. 2021. Natal source region of the army cutworm moth (*Euxoa auxiliaris*) at three peaks in the Greater Yellowstone Ecosystem. Annual Meeting of the Entomological Society of America. October 31 – November 4. Denver, Colorado.
152. **Peterson, R.K.D.** 2021. Cutting through the firehose of information: communicating science to busy policymakers and others. Annual Meeting of the Entomological Society of America. October 31 – November 4. Denver, Colorado. (invited).
153. **Peterson, R.K.D.** and L.G. Higley. 2022. Hot springs, cool beetles: expanding the scope of extremophile science. 15<sup>th</sup> Biennial Scientific Conference on the Greater Yellowstone Ecosystem. May 16. Bozeman, Montana.
154. Dittmore, C.M., D. Tyers, **R.K.D. Peterson**. 2022. Expanding the scope of grizzly bear conservation by understanding army cutworm migration in the GYE. 15<sup>th</sup> Biennial Scientific Conference on the Greater Yellowstone Ecosystem. May 16. Bozeman, Montana.
155. Lozano, K.N., C. Dittmore, D. Tyers, **R.K.D. Peterson**. 2022. Expanding the scope of grizzly bear conservation through a better understanding of food resources at moth

- aggregation sites in the Greater Yellowstone Ecosystem. 15<sup>th</sup> Biennial Scientific Conference on the Greater Yellowstone Ecosystem. May 16. Bozeman, Montana.
156. Hager, M. et al. 2022. Comparison of volatile organic compound profiles in near isogenic lines of durum wheat (*Triticum turgidum*) associated with resistance to wheat stem sawfly (*Cephus cinctus*). Annual Meeting of the Entomological Society of America. November 13 – 16. Vancouver, British Columbia.
  157. Cavallini, L., D. Smith, **R.K.D. Peterson**, and D.K. Weaver. 2022. Supplemental nutrition may improve the effectiveness of wheat stem sawfly parasitoids: observations on longevity, egg load, and egg volume. Annual Meeting of the Entomological Society of America. November 13 – 16. Vancouver, British Columbia.
  158. **Peterson, R.K.D.** 2022. Rethinking everything: ESA Sections in the 21<sup>st</sup> century. Annual Meeting of the Entomological Society of America. November 13 – 16. Vancouver, British Columbia. (invited).
  159. **Peterson, R.K.D.** 2023. Highly toxic, broad-spectrum insecticides, but low risk? The case of outdoor space applications of mosquito adulticides. Annual Meeting of the Pacific Branch of the Entomological Society of America. April 5. Seattle, Washington (invited).
  160. Doyle, J.T., Eggers, M.J., Martin, C. (Presenter), Young, S.L., Lefthand, M.J., LaFrance, J., Bradley, P., Smalling, K., Killian, E., **Peterson, R.**, Parker, A.E. 2023. Cumulative health risk assessment of home well water consumption, Crow Reservation, Montana. National Water Quality Monitoring Conference, Virginia Beach, Virginia. April 26, 2023.
  161. Eggers, M.J., Sigler, WA, Bradley, P., Parker, A.E. Smalling, K., Hoelscher-Hull, E., Kiekofer, N., Killian, E., Warnke, S., **Peterson, R.**, 2023. Cumulative Health Risk Assessment of Private Well Water Consumption across Montana. National Water Quality Monitoring Conference, Virginia Beach, Virginia. April 26, 2023.
  162. **Peterson, R.K.D.** 2023. Influence 101: The academic and ESA perspective on engaging policymakers and the public about crop protection. Annual Meeting of the Entomological Society of America, National Harbor, Maryland. November 5-8, 2023. (invited).
  163. **Peterson, R.K.D.** 2023. The imperative for understanding insecticides and non-target insects lies within the risk assessment paradigm. Annual Meeting of the Entomological Society of America, National Harbor, Maryland. November 5-8, 2023. (invited).
  164. Strand, J., Weaver, D.K., Sterling, T.M., **Peterson, R.K.D.** 2023. Using organic volatile compounds to assess the relationship between wheat stem sawfly, parasitoids, and smooth brome. Annual Meeting of the Entomological Society of America, National Harbor, Maryland. November 5-8, 2023.
  165. Eggers, MJ, Sigler, WA, Grocke-Dewey, MU, Kiekofer, N, Bradley, PM, Smalling, KL, **Peterson, R**, Parker, A, LaFave, J. 2023. Cumulative Health Risk Assessment of Private Well Water Consumption across Montana. Annual Meeting of the Society of Environmental Toxicology and Chemistry North America, Louisville, Kentucky. November 12-16, 2023.
  166. Kennedy, T, Diehl, R, Jankowski, M, **Peterson, R.K.D.** 2024. Army cutworm and continental-scale landscape interactions. Annual Meeting of the North Central Branch of the Entomological Society of America. March 27. Ft. Collins, Colorado (invited).
  167. **Peterson, R.K.D.** 2024. Mosquito management, risk, and regulation. Annual Meeting of the AMCA Washington Conference. May 14. Arlington, Virginia (invited).
  168. Kennedy, T, Diehl, R, Jankowski, M, **Peterson, R.K.D.** 2024. Army cutworm moth migration and grizzly bear conservation in the Greater Yellowstone Ecosystem. Biennial Scientific Conference on the Greater Yellowstone Ecosystem, Big Sky, Montana, September 4, 2024.
  169. Kennedy, T, Diehl, R, Jankowski, M, **Peterson, R.K.D.** 2024. Army cutworm moth migration and grizzly bear conservation in the Greater Yellowstone Ecosystem. Annual

- Meeting of the Entomological Society of America, Phoenix, Arizona. November 11, 2024.
170. Kennedy, T, Diehl, R, **Peterson, RKD**. 2025. Following the flight: tracking the migration of the army cutworm moth. Annual Meeting of the Entomological Society of America, Portland, Oregon. November 9, 2025.
171. **Peterson, RKD**. 2025. Managing systems and risks from the long view of IPM. Annual Meeting of the Entomological Society of America, Portland, Oregon. November 12, 2025 (invited; delivered by RK Krell).

#### **SEMINARS AND PUBLIC PRESENTATIONS (Senior-author only)**

1. 1990. The role of insects in the development and use of biological warfare. Dept. of Entomology, University of Nebraska-Lincoln.
2. 1991. Insect-borne disease and the military campaigns of the nineteenth century: rethinking historical perceptions. Dept. of Entomology, University of Nebraska-Lincoln.
3. 1991. Growth, yield, and photosynthetic responses of alfalfa to simulated alfalfa weevil injury. Dept. of Entomology, University of Nebraska-Lincoln. (M.S. thesis defense).
4. 1993. A paradigm for the communication of pesticide risks. Dept. of Entomology, University of Nebraska-Lincoln.
5. 1994. Insect thermal development and its use in integrated pest management. Dept. of Agricultural Meteorology, University of Nebraska-Lincoln. (with L. G. Higley).
6. 1994. Soybean gas exchange and insect injury: characterizing physiological responses. DowElanco, Indianapolis, Indiana.
7. 1994. Using entomology to teach scientific literacy. Nebraska Association of Teachers of Science Annual Fall Conference.
8. 1994. The physiology and biochemistry of photosynthetic rate limitations. Dept. of Agronomy, University of Nebraska-Lincoln.
9. 1995. Improving integrated pest management in the Midwest. DowElanco, Indianapolis, Indiana.
10. 1995. Insect injury and plant gas exchange processes. Dept. of Entomology, University of Nebraska-Lincoln. (Ph.D. dissertation defense).
11. 1995. A multimedia program for insect management in corn. Servi-Tech All Staff Annual Meeting, Kearney, Nebraska.
12. 1995. Instructional multimedia and its role in Nebraska agriculture. 1996 Dealer Kickoff Meeting, Lincoln, Nebraska.
13. 1996. Managing the alfalfa weevil: new directions. Midwest extension entomologists meeting, Omaha, Nebraska.
14. 1996. Insect management information delivery systems. Corn Insects Working Group, Department of Entomology, University of Nebraska (with Dr. L.G. Higley).
15. 1996. Pest resistance to management tactics: western corn rootworm in Nebraska. Servi-Tech All Staff Annual Meeting, Kearney, Nebraska.
16. 1998. Pesticide development: an industry perspective. National Research Council Special Committee on the Future Role of Pesticides in U.S. Agriculture, Washington, DC.
17. 2000. Perspectives on strategic planning. College of Agriculture Staff Meeting, Montana State University, Bozeman, Montana.
18. 2000. The challenge of the Food Quality Protection Act: risk assessment and pesticide registration. Department of Entomology, Iowa State University, Ames, Iowa.
19. 2000. The power of a paradigm: risk analysis and agricultural biotechnology. Department of Entomology, Montana State University, Bozeman, Montana.
20. 2002. Tips and tricks for insect photography. Department of Entomology, Montana State University, Bozeman, Montana.

21. 2002. Agricultural and biological risk assessment at Montana State University. Fall Conference, Noxious Weed Control Association, Billings, Montana, 35 attendees.
22. 2002. Biotechnology risk assessment at Montana State University. Annual Meeting of the Montana Farmers Union, Great Falls, Montana, 75 attendees.
23. 2002. Biological risk assessment and its interface with the plant sciences. Department of Plant Sciences and Plant Pathology, Montana State University, Bozeman, Montana, 20 attendees.
24. 2003. Biotechnology, regulation, and risk. Montana Agri-Women Winter Meeting, Billings, Montana, 25 attendees.
25. 2003. Risk and regulation of biotechnology crops. Crop and Pest Management School, Montana State University, Bozeman, Montana, 50 attendees.
26. 2003. Assessing and communicating the risks from plant-based biopharmaceuticals. Iowa State University, Ames, Iowa, 50 attendees.
27. 2003. The power of a paradigm: risk assessment and genetically engineered crops. Iowa State University, Ames, Iowa, 35 attendees.
28. 2003. Montana State University's role in biotechnology research. National Hard Spring Wheat Show, Williston, North Dakota, 150 attendees.
29. 2003. Risk assessment for new agricultural technologies. Annual Meeting of the Montana Seed Trade Association, Bozeman, Montana, 65 attendees.
30. 2003. Science-based risk vs. perceived risk: assessing dangers in mosquito control. Mosquitoes in Montana: biology, risks, and control, Lewistown, Montana, 65 attendees.
31. 2003. Pesticide risk assessment and regulation. Montana Department of Agriculture Pesticide Applicator Training, Billings and Great Falls, Montana, 70 attendees each.
32. 2003. Pesticide risk perception and communication. Montana Department of Agriculture Commercial Pesticide Applicator Training, Billings and Great Falls, Montana, 70 attendees each.
33. 2003. West Nile virus, mosquito control pesticides, and risk assessment. Wyoming Mosquito Management Association, Annual Meeting, Jackson, Wyoming, 50 attendees.
34. 2003. Agricultural risk assessment. Montana Ag Live, guest panelist (May 11, 2003), Montana Public Television.
35. 2003. West Nile virus, mosquito control tactics, and risk assessment. Montana Mosquito Control Meeting, Helena, Montana, 25 attendees.
36. 2003. West Nile virus, mosquito management, and risk assessment. Utah Mosquito Management Association, Provo, Utah, 100 attendees.
37. 2003. West Nile virus, mosquito control tactics, and biological risk assessment. Pacific Northwest Vector Control Association, Boise, Idaho, 75 attendees.
38. 2003. Pesticide risk assessment, perception, and communication. Pest Management Training, Region 1, Ronan, Plains, Montana, 75 attendees each.
39. 2003. Pesticide risk assessment, perception, and communication. Montana Department of Agriculture Commercial Pesticide Applicator Training, Billings and Missoula, Montana, 125 attendees each.
40. 2004. Risk assessment and regulation of biotechnology crops. Crop and Pest Management School, Montana State University, Bozeman, Montana, 35 attendees.
41. 2004. Risk assessment of biotech wheat. MABA/MGEA Annual Meeting, Great Falls, Montana, 125 attendees.
42. 2004. Concepts for human and ecological risk assessment. First Annual Biosafety of Genetically Modified Agricultural Products Conference. Iowa State University, Ames, Iowa, 150 attendees.
43. 2004. Comparative risk assessment between WNV and mosquito control strategies. Mosquito and Vector Control Association of California Annual Meeting, Sacramento, California, 300 attendees.

44. 2004. Agricultural and biological risk assessment, plant-stress ecophysiology, and integrated pest management (program update). MSU Annual Extension Conference, Bozeman, Montana, 60 attendees.
45. 2004. Weed and herbicide risk assessment. US Forest Service Pesticide Training Workshop, Helena, Montana, 30 attendees.
46. 2004. Pesticide risk assessment, perception, and communication. Pest Management Training, Deer Lodge, Whitehall, Dillon, Montana, 50 attendees each.
47. 2004. West Nile virus and risk. Montana Ag Live, guest panelist (Oct. 17, 2004), Montana Public Television.
48. 2004. Comparing risks between West Nile virus and mosquito control strategies. Louisiana Mosquito Control Association Annual Meeting, Monroe, Louisiana, 100 attendees (keynote address).
49. 2004. Understanding the risks and benefits of biotechnology. Montana Crop Biotechnology Information & Education Forum, Billings, Montana, 75 attendees.
50. 2005. Pesticide risk assessment, perception, and communication. Crop and Pest Management School, Montana State University, Bozeman, Montana, 45 attendees.
51. 2005. Current research in mosquito control and risks. Montana Mosquito and Vector Control Association, Helena, Montana, 30 attendees.
52. 2005. Principles of herbicide risk assessment. Regional Training Academy, Northern Region USDA Forest Service, Missoula, Montana, 15 attendees.
53. 2005. Comparative human health risk assessments of vector-borne diseases and vector control. Public Health Insecticides Consortium, Inaugural Meeting, Silver Spring, Maryland, 25 attendees.
54. 2005. Comparing environmental risks: a case study with an invasive weed and its associated management strategies. University of Nebraska Department of Entomology Seminar, Lincoln, Nebraska, 35 attendees.
55. 2005. A trip abroad as seen through a macro lens: the insects of Jaboticabal, Brazil. Montana State University, Bozeman, Montana, 20 attendees.
56. 2006. Communicating pesticide risks to your employees and the public. Regional Training Academy, Northern Region USDA Forest Service, Missoula, Montana, 10 attendees.
57. 2006. Assessing and communicating comparative risks associated with biotechnology. Third Annual Conference of the Biosafety Institute for Genetically Modified Agricultural Products. Iowa State University, Ames, Iowa, 100 attendees.
58. 2006. Update on risk assessment research for mosquito insecticides. Public Health Insecticides Consortium Meeting, Silver Spring, Maryland, 25 attendees.
59. 2007. Risk assessment research for mosquito insecticides. Montana Mosquito and Vector Control Association, Helena, Montana, 30 attendees.
60. 2007. An ecological risk assessment for an invasive weed and its associated management strategies. Department of Ecology, Montana State University, Bozeman, Montana, 40 attendees.
61. 2007. Risk comparison: chemical exposure vs. West Nile virus. Idaho Environmental Health Association, Annual Education Conference, Boise, Idaho, 50 attendees.
62. 2008. The necessary death and resurrection of classical biological control. South Dakota State University, Brookings, South Dakota, 50 attendees.
63. 2008. A nice fit: Risk assessment and environmental science. Department of Land Resources and Environmental Sciences, Montana State University, Bozeman, Montana, 25 attendees.
64. 2009. Pesticide risk assessment and regulation. Crop and Pest Management School, Montana State University, Bozeman, Montana, 45 attendees.

65. 2010. Comparative biological risk assessment at MSU. Orientation for students in Bridging Tribal College Students to Montana State University (BRIDGES), Bozeman, Montana, 25 attendees.
66. 2011. Mosquito management and risk assessment. Webinar, American Mosquito Control Association Continuing Education, 150 registered attendees.
67. 2011. Comparative biological risk assessment. Orientation for students in Bridging Tribal College Students to Montana State University (BRIDGES), Bozeman, Montana, 30 attendees.
68. 2011. Professional networking strategies. Webinar, Entomological Society of America, Program for Graduate Student Members, 200 registered attendees.
69. 2012. The necessary death and resurrection of biological control. University of Arkansas, Fayetteville, Arkansas, 40 attendees.
70. 2014. Update on research and other activities. Annual Meeting of the Montana Mosquito Vector Control Association. Great Falls, Montana.
71. 2014. Bed nets, mosquito fish, bacterial endotoxins, and aerosol clouds: when an unanticipated opportunity leads to a comprehensive research story. University of Nebraska, Lincoln, Nebraska, 50 attendees.
72. 2015. Mosquitoes, management, and environmental risk: the role of science. Bozeman Kiwanis Meeting. Bozeman, Montana, 50 attendees.
73. 2015. Invasive species risk assessment. Montana Invasive Species Council. Helena, Montana, 25 attendees.
74. 2015. More feared than all the armies in the world: insects, disease, and military history. Bozeman Kiwanis Meeting. Bozeman, Montana, 40 attendees.
75. 2016. Risks to bees from ground-applied permethrin and etofenprox. Annual Meeting of the Montana Mosquito Control Association. Great Falls, Montana, 30 attendees.
76. 2016. How an unanticipated crisis led to a comprehensive story about pesticide risk. Dow AgroSciences Global Headquarters. Indianapolis, Indiana, 40 attendees.
77. 2016. Better science through storytelling. Center for Faculty Excellence, Montana State University. Bozeman, Montana, 40 attendees.
78. 2016. Writing your story. Montana State University Grant Writing Boot Camp. Bozeman, Montana, 15 attendees.
79. 2017. Managing risk in a complex world: Reflections on mosquito-borne diseases and the scientist's role in a post-fact media landscape. Café Scientifique. Bozeman, Montana, 90 attendees.
80. 2017. How an unanticipated opportunity led to a comprehensive story about pesticide risk. Golf Course Superintendents Association of America, Peaks & Prairies Chapter. Bozeman, Montana, 125 attendees.
81. 2017. Science is a force for good. March for Science-Bozeman. Bozeman, Montana, 1,000 attendees.
82. 2017. The MSU mission and the power of science. Field Day, MSU Western Agricultural Research Center, Corvallis, Montana, 100 attendees.
83. 2017. Writing your story in the grant-writing process. Montana State University Grant Writing Boot Camp. Bozeman, Montana, 15 attendees.
84. 2019. Pesticide risk assessment and the current status of glyphosate. MSU Crop Pest Management School. Bozeman, Montana, 75 attendees.
85. 2019. Presidential Address. Annual Meetings of the ESA Branches. Five branches. >1,500 attendees.
86. 2019. Montana Ag Live, guest panelist (September 22, 2019), Montana Public Television.
87. 2019. Are insects going extinct? It's a complicated story. MSU Wonderlust: Lifelong Learning. September 30, 2019. Bozeman, Montana, 150 attendees.

88. 2020. Tigers in Yellowstone: Insect adaptations to extreme environments. LRES Seminar. February 3, 2020. Bozeman, Montana, 35 attendees.
89. 2020. Commencement Speech. Summer graduation ceremony, Department of Entomology, University of Nebraska, 30 attendees.
90. 2021. Tigers in Yellowstone: adaptations of insects to extreme environments. February 15, 2021. Seminar Series, Department of Entomology, Washington State University, 50 attendees.
91. 2021. Tigers in Yellowstone National Park: insect adaptations to extreme environments. March 31, 2021. Seminar Series, Department of Entomology, University of California-Davis, 25 attendees.
92. 2021. Hot springs, tigers, and bears...oh my! Adaptations of insects to extreme environments in Yellowstone National Park. Department of Entomology, University of Illinois, 40 attendees.
93. 2021. What if we flip the script? Brightspace as the foundation for the course. Fall Faculty Symposium, Montana State University, 75 attendees.
94. 2022. Linking environmental science, environmental health, and public health using comparative risk assessment. April 13, 2022. Institute on Ecosystems. Montana State University, 20 attendees.
95. 2022. Hot springs, cool beetles: adaptations of the wetsalts tiger beetle, *Cicindelidia haemorrhagica*, to living on thermal areas in Yellowstone National Park. April 18, 2022. Webster Groves Nature Study Society, 28 attendees.
96. 2022. Comfortable narratives, uncomfortable data: does biological control work? December 6, 2022. Hyde Seminar, Department of Entomology, Washington State University, 60 attendees.
97. 2023. Light-trapping insects with an emphasis on moths. MSU Wildlife Society, 30 attendees.
98. 2023. The tigers of Yellowstone: insect adaptations to extreme environments. Presentation to gifted high school class from California, 25 attendees.
99. 2023. The tigers of Yellowstone: insects in extreme environments. Department of Ecology, Montana State University, 60 attendees.
100. 2023. Time management tips and tricks webinar. Bruner Entomology Club. University of Nebraska, 12 attendees.
101. 2025. Tiger beetles thrive in Yellowstone Hot Springs. Thermal Biology Institute, Montana State University, 35 attendees.

### **PUBLISHED PHOTOGRAPHS**

(Does not include website photographs or photographs requested by MSU Communications Services or others for use in press releases and subsequent publication in newspapers)

- *Amblycheila cylindriformis* (cover photo). The Coleopterists Bulletin, Vol 78, issue 4, December 2024.
- *Cephus cinctus* (wheat stem sawfly, 3 images, including cover photo). CSA News, 2 June 2020.
- Demonstrator Bill Kleindl at the 2017 March for Science-Bozeman. Science Not Silence: Voices from the March for Science Movement. 2018. MIT Press. Cambridge, MA.
- *Megachile rotundata* (alfalfa leafcutting bee), cover of volume 16 of the Journal of Insect Science, 2016.
- *Cephus cinctus* (wheat stem sawfly, 2 images), *Bracon cephi*, *Bracon lissogaster* (3 images). 2014 Calendar of Common Montana Wheat Pests. Montana State University Extension Service.

- Painted lady butterfly chrysalis (*Vanessa cardui*). Featured insect. *American Entomologist*, 2013, 59:58.
- Adult stiletto fly (*Thereva* sp.). Featured insect. *American Entomologist*, 2012, 58:105.
- Adult female wheat stem sawfly, wheat stem sawfly adult pair, fully grown larva of the wheat stem sawfly, wheat stems where the wheat stem sawfly has not emerged and emerged, Abdomen comparison of female and male sawfly. Wheat Stem Sawfly Biology. MontGuide, MT201107AG, 8/11, Montana State University Extension Service.
- *Apis mellifera*, *Megachile rotundata*, *Bombus* sp., Bombyllid, Tenthredinid, Vespid, Syrphid. Montana Bee Identification Guide. USDA-NRCS, Montana State University, Pollinator Partnership, 2011.
- Sphingid caterpillar. 2011 World of Insects Calendar, Entomological Society of America.
- *Cephus cinctus* (wheat stem sawfly, 3 images), *Bracon cephi*, *Bracon lissogaster* (2 images), *Melanoplus* sp. nymph, *Melanoplus femurrubrum* (redlegged grasshopper), *Melanoplus differentialis* (differential grasshopper), *Melanoplus bivittatus* (two-striped grasshopper), *Feltia ducens* (dingy cutworm). 2011 Calendar of Common Montana Wheat Pests. Montana.
- *Pseudopomala brachyptera* (short-winged toothpick grasshopper), *Adjeania vexatrix* (tachinid fly). 2010 World of Insects Calendar, Entomological Society of America.
- *Cephus cinctus* (wheat stem sawfly, 3 images). *Bracon cephi* (1 image). *Bracon lissogaster* (2 images). 2010 Calendar of Common Montana Wheat Pests. Montana Wheat & Barley Committee and Montana State University Extension.
- *Hyles euphorbiae* (leafy spurge hawk moth). Cover Photo of *American Entomologist* (2009, vol. 55, issue 4).
- *Syrphus opinator* (hover fly). 2009 World of Insects Calendar, Entomological Society of America.
- *Panorpa* sp. (scorpionfly), *Camptonotus carolinensis* (leaf-rolling cricket), *Homaemus* sp. (shield-backed bug), *Stenolopus lecontei* (seedcorn beetle), *Euphoria inda* (bumble flower beetle), *Cephus cinctus* (wheat stem sawfly adult and larva). Kaufman Field Guide to Insects of North America (2007, Houghton Mifflin, 392 pp).
- *Melanoplus femurrubrum* (red-legged grasshopper). En bref, *Insectes* (2004, vol. 134, issue 3, pg. 18, French journal).
- *Parthenos sylvia* and lady beetle on yellow sweetclover. Article on phytoecdysteroids, Journal of the American Herbalists Guild (Fall/Winter 2004, pg. 18-28).
- *Citheronia regalis* (“Regal Moth at Night”). Award winner, *Photographic* (Feb. 2003, pg. 13).
- Dr. Tulio Macedo with portable photosynthesis system and *Bracon cephi*. MSU, Department of Land Resources and Environmental Sciences brochure.

## PROFESSIONAL ACTIVITIES

### Montana State University

- Designated Primary Review Administrator for the Retention, Tenure, & Promotion Process, Department of Research Centers, 2025.
- Panel Moderator, Ag Tech Innovation Summit, 2024.
- Chair, Search Committee, Director of WSARE, 2024-25.
- Panelist, Early Career Faculty Learning Community session, 2023.
- Member, Search Committee, COA/MAES Endowed Chair of Precision Agriculture, 2023.
- Member, Search Committee, MAES Program Coordinator, 2023.
- Member, Search Committee, LRES Research Associate, 2021.

- Member, Search Committee, LRES Administrative Associate III, 2021.
- Member, University Retention, Promotion, and Tenure Committee, 2020 – 2023.
- Chair, MSU Review of the Department of Plant Science & Plant Pathology, 2020.
- Member, MSU Academic Contingency Planning Task Force, 2020.
- Member, Search Committee, LRES Watershed Analysis Tenure-Track Faculty Position, 2019-2020, 2022.
- Member, Communications Team, MSU College of Agriculture Strategic Plan, 2019.
- Judge, MSU Women in Agriculture Photography Contest, 2019.
- Chair, Search Committee, Associate Dean for Research, MSU College of Agriculture, 2018.
- Member, Search Committee, MSU Instructional Designer, 2015
- Member, Search Committee, MSU College of Agriculture Fiscal Manager, 2015.
- Member, College of Agriculture Promotion and Tenure Committee, 2015 – 2018. Chair, 2017-18.
- Research Mentor, Howard Hughes Medical Institute, Montana Apprenticeship Program for Native American High School Students, 2014.
- College of Agriculture Representative. MSU Online Education Advisory Committee, 2012 – 2014.
- Host, Natural and Environmental Sciences. MSU Graduate School Information Night, 2012.
- College of Agriculture Representative. MSU Graduate Student Appeals Board, 2011 – present.
- Chair, Promotion and Tenure Committee. Department of Land Resources and Environmental Sciences, 2012 – 2013.
- Founder and Director, Online M.S. Degree Program in Land Resources and Environmental Sciences, 2011 – present.
- In-Depth Teaching Evaluation Committee. Department of Land Resources and Environmental Sciences, 2007 – 2011.
- Promotion and Tenure Committee. Department of Land Resources and Environmental Sciences, 2006 – 2013.
- Graduate Curriculum Committee. Department of Land Resources and Environmental Sciences, 2011 – present.
- Chemical Safety Steering Committee, College of Agriculture Representative, 2009.
- Chair, Search Committee, Assistant Professor of Non-Native Plant Ecology, LRES, 2008.
- Search Committee, Assistant Professors in Biogeochemistry, Soil and Environmental Physics, and Land-Air Interactions, LRES, 2008 – 2009.
- Department of Land Resources and Environmental Sciences Curriculum Committee, Interim Chair, 2007 – 2008.
- Role, Scope, Criteria, Standards, and Procedures Committee. Department of Land Resources and Environmental Sciences, Chair, 2006 – 2010.
- Contemporary Issues in Science, Montana State University Core Curriculum Committee, 2003 – 2010.
- Faculty Affairs Committee, College of Agriculture Representative, 2004 – 2006.
- Marsh Laboratory Building Committee, 2004 – 2010.
- Pest Survey Advisory Council, Montana Department of Agriculture, 2003 – 2004.
- Search Committee (biological control faculty position), Department of Entomology, Chair, 2003.
- Graduate Student Recruitment Committee, Department of Entomology, 2002 – 2005.
- Master of Agriculture Distance Education Steering Committee, 2002 – 2004.

### **Regional, National, and International**

- Judge, Antlion Pit Pitch Competition, Entomological Society of America, 2025.
- Co-organizer, Antlion Pit Pitch Competition, Entomological Society of America, 2023.
- Moderator, Cultural Competence and Inclusion Webinar, Entomological Society of America, 10-January-2022.
- Advisory Board Member, International Congress of Entomology, 2020-2024.
- Chair, Entomological Society of America Science Policy Committee, 2019-2020.
- Immediate Past President, Entomological Society of America, 2019-2020.
- President, Entomological Society of America, 2018-2019.
- President, The Entomological Foundation, 2017-2018.
- Vice President, Entomological Society of America, 2017-2018.
- Vice President-Elect, Entomological Society of America, 2016-2017.
- Chair, Entomological Society of America Presidential Committee on Science Policy, 2012 – 2013.
- Guest Editor, Special Issue on Environmental Health Risk Assessment, International Journal of Environmental Research and Public Health, 2010 – 2012.
- Executive Committee of the Governing Board, Entomological Society of America, 2011 – 2012.
- Governing Board, Entomological Society of America, 2010 – 2012.
- Governing Council Member, Plant-Insect Ecosystems Section, Entomological Society of America, 2010 – 2012.
- Poster Chair, Committee of the Annual Meeting of the Entomological Society of America, 2008.
- Chair, Program Committee of the Annual Meeting of the Entomological Society of America, 2007.
- Student Competition Chair, Program Committee of the Annual Meeting of the Entomological Society of America, 2006.
- Member, Governing Board Committee on the Entomological Society of America Insect Calendar, 2008 – present (Chair, 2009 – 2014).
- Senior Editor, *Plant Health Progress*, 2007 – 2009.
- Member, National Public Health Insecticides Consortium, 2005 – 2015.
- Editorial Review Board Member, *Environmental Health Perspectives*: a publication of the National Institute of Environmental Health Sciences, US Dept. of Health and Human Services, 2004 – present.
- Associate Editor, IPM Section, *Agronomy Journal*, 2004 – 2007.
- Member, Entomological Society of America Committee on the Founders' Memorial Lecture, 2003-2005.
- Chair, Exhibitor Arrangements Committee, Annual Meeting of the Pacific Branch ESA, 2004.
- Advisory Board Member, Biosafety Institute for Genetically Modified Agricultural Products, Iowa State University, 2003 – present.
- Contributing Co-editor, Heritage Section, *American Entomologist*, 2001 – present.
- Co-moderator and co-organizer, Program Symposium, ESA Annual Meeting, San Diego, California, 2001.
- Co-moderator, Section F paper presentations, NCB-ESA, Kansas City, Missouri, 1992.
- Student Representative, Section F, Entomological Society of America, 1994.
- Committee Member, Corn and Soybean IPM Workshop, Second National IPM Symposium, 1994.
- Chair, NCB-ESA Public Information and Public Relations Committee, 1998.
- Program Committee, NCB-ESA Annual Meeting, Omaha, Nebraska, 1996.

- Co-moderator and co-organizer, Section F symposium, NCB-ESA Annual Meeting, Omaha, Nebraska, 1996.
- Invited committee member, USDA-supported grant, *Expanding and Adapting MAIZE, a Microcomputer Decision-support System to Midwest Corn Production*.

### Reviews

- Peer reviewer, Western SARE Research and Education Grant Program, 2024.
- External peer reviewer, candidate for promotion to professor, Washington State University, 2024.
- Panel peer reviewer, American Mosquito Control Association Research Fund, 2024.
- Panel peer reviewer, Proposal to Czech Science Foundation, 2024.
- Peer reviewer, Western SARE Research and Education Grant Program, 2023.
- External peer reviewer, candidate for promotion to professor, University of Nebraska, 2022.
- Peer reviewer, MSU INBRE Grant Program, 2021.
- Peer reviewer, MSU Special COVID-19 Research Funding Program, 2020.
- Panel peer reviewer, 2020 Western SARE Research and Education Preproposals, 2019.
- Peer reviewer, Integrated Pest Management of Mosquitoes: A Case Study of West Nile Virus in California. Publication of the Western IPM Center, 2017.
- Peer reviewer, USDA NIFA AFRI Grant Panel, 2016.
- Peer reviewer, Generic Risk Assessment Models for Insect Vector Management. World Health Organization Communicable Disease Control, Prevention and Eradication, 2016.
- Peer reviewer, Proposal for academic text on invertebrates and global climate change, Wiley Blackwell Press, 2014.
- External reviewer, Hatch Project proposal, Washington State University, 2011.
- Panel peer reviewer, A Generic Risk Assessment Model for Insecticide-Treated Bed Nets, 2<sup>nd</sup> Edition, World Health Organization Communicable Disease Control, Prevention and Eradication, 2011.
- Panel peer reviewer, Special Emphasis Panel, Time-Sensitive Environmental Health Sciences Research, Gulf of Mexico Deepwater Horizon Well Blowout Grant, National Institutes of Health, 2010.
- External reviewer, full professor dossier, University of Alberta, 2010.
- Peer reviewer, Insect Ecology textbook manuscript, Cambridge Press, 2009.
- Peer reviewer, M. J. Murdock Charitable Trust, Murdock College Research Program for Life Sciences, 2009, 2010.
- Peer reviewer, The German Israeli Foundation for Scientific Research and Development, 2009.
- Peer reviewer, U.S. National Science Foundation Grant Program (Ecological Biology Division), 2008.
- Peer reviewer, Suffolk County (New York) Vector Control and Wetlands Management Long-Term Plan Environmental Impact Statement, 2006.
- Peer reviewer, Great Lakes Fishery Commission Grant Program, 2006.
- Peer reviewer, Austrian Science Fund, START Young Investigator Award, 2006.
- Peer reviewer, Swiss National Science Foundation Grant Program, 2005.
- Peer reviewer, Genetic Engineering book manuscript, Oxford Press, 2003
- Peer reviewer, USDA ARS Research Project Plan, 1998, 2002.
- Peer reviewer: Agronomy Journal, American Entomologist, Annals of Applied Biology, Annals of the Entomological Society of America, Arthropod-Plant Interactions, Austral Entomology, Biotechnology for Biofuels, Bulletin of Entomological Research, CABI Agriculture and Bioscience, California Agriculture, Chemosphere, Crop Protection, Crop

Science, Ecology and Evolution, Ecotoxicology and Environmental Safety, Ecosphere, Encyclopedia of Environmental Health, Entomologia Experimentalis et Applicata, Entomological Society of America Handbooks, Environmental Entomology, Environmental Health Perspectives, Environmental Pollution, Environmental Science and Pollution Research, Environmental Toxicology and Chemistry, Florida Entomologist, Forensic Science International, Frontiers in Bioengineering and Biotechnology, Human and Ecological Risk Assessment, Insects, International Journal of Plant & Soil Science, Invasive Plant Science and Management, Journal of Agricultural and Food Chemistry, Journal of Agricultural Entomology, Journal of Agricultural and Urban Entomology, Journal of the American Mosquito Control Association, Journal of Apicultural Research, Journal of Applied Entomology, Journal of Chemical Ecology, Journal of Economic Entomology, Journal of Entomological Science, Journal of Experimental Botany, Journal of Exposure Science and Environmental Epidemiology, Journal of Extension, Journal of Insect Science, Journal of Integrated Pest Management, Journal of the Kansas Entomological Society, Journal of Medical Entomology, Journal of Vector Ecology, Kuwait Journal of Science and Engineering, Nature Biotechnology, Nature Communications, Neotropical Entomology, Oecologia, Pakistan Journal of Scientific and Industrial Research, PeerJ, Pest Management Science, Pesticide Biochemistry and Physiology, PLoS ONE, Polish Journal of Environmental Studies, Proceedings of the National Academy of Sciences, Regulatory Toxicology and Pharmacology, Risk Analysis, Science of the Total Environment, Scientia Agricola, Scientific Research and Essays, Trends in Biotechnology

#### **Industry Task Forces**

- Technical/Regulatory Subcommittee, ACPA Biotechnology Committee, 1999 – 2001.
- Global Agricultural Biotechnology Science and Regulatory Steering Group, Council for Biotechnology Information, 2000 – 2002.

#### **Dow AgroSciences**

- Co-chair, Multimedia Applications Work Group Core Team, 1995.
- Individual Workload Committee, 1996-97.
- Research and Development Information Management Board, 1997-2000.

#### **University of Nebraska**

- Graduate Student Representative, Department Publicity Committee, 1990-92.
- Graduate Student Representative, Department Computer Committee, 1990-92.
- Chairman, *ad hoc* Graduate Student Assistantship Committee, 1990, 1992.
- Graduate Student Representative, *ad hoc* Graduate Policies Committee, 1991.
- Graduate Student Representative, *ad hoc* Graduate Curriculum Committee, 1991.
- Graduate Student Representative, CSRS Department of Entomology Review, 1992.
- Member, Department Head Search Committee, Department of Entomology, 1994.
- Panelist, Institute of Agriculture and Natural Resources Ethics Workshop, 1994.
- Steering Committee Member, CSREES Department of Entomology Review, 1998

#### **Bruner Entomology Club, University of Nebraska**

- President, 1990-91.
- Chairman, Exhibit and Resource Committee, 1989-91.
- Student Representative to Faculty, Bruner Entomology Club, 1991-93.

#### **Miscellaneous**

- Member, Linnean Games Team, 1990-1992.
- Entomology Representative, University Graduate Student Association, 1990-91.
- Supervisor, Future Farmers of America Entomology Exam, 1991-92.
- Judge, 4-H Insect Collection Contest, Nebraska State Fair, 1991-92.

## **HONORS**

### **Honor Societies**

- Sigma-Xi, The Scientific Research Society
- Gamma Sigma Delta, The Honor Society of Agriculture

### **Recognition**

- Fellow, Entomological Society of America, 2025.
- Honorary Member, Entomological Society of America, 2023.
- Distinguished Faculty Award, College of Agriculture, Montana State University, 2021.
- Excellence in Online Teaching Award, Montana State University, 2015.
- Distinguished Alumni Recognition Award, Department of Entomology, University of Nebraska, 2014.
- Most Valuable Professor of the Week. Montana State University Football Game, October 4, 2014.
- Teaching Award of Merit, NACTA and Montana State University, 2014.
- Award for Excellence, Montana State University Alumni Foundation and the Bozeman Area Chamber of Commerce, 2013.
- Presidential Citation, American Mosquito Control Association, 2012.
- Outstanding Paper of the Year, “The Real Enemy: Scrub Typhus and the Invasion of Sansapor”. 2010 Editor’s Choice Award, American Entomologist, Entomological Society of America.
- Excellence in Integrated Pest Management Award, The Entomological Foundation, 2009.
- Excellence in Integrated Pest Management Award, Pacific Branch of the Entomological Society of America, 2009
- Top 10 Papers Advancing the Science of Risk Assessment: Shama, L.M., and R.K.D. Peterson. 2008. Assessing risks of plant-based pharmaceuticals: I. Human dietary exposure. Human and Ecological Risk Assessment 14:179-183. Society of Toxicology, 2009.
- Entomology Educational Project Award, “Insects, Disease, and History” Web Site, Board Certified Entomologists, Mid-America Chapter, 1999.
- Entomology Educational Project Award, “Corn IPM CD,” Board Certified Entomologists, Mid-America Chapter, 1998.
- Special Recognition Award, Dow AgroSciences, 1999.
- Special Recognition Award, Dow AgroSciences, 1998.
- Special Recognition Award, DowElanco, 1996.

### **Graduate Student Recognition**

- Wick Alumni Association Outstanding Graduate Research Assistant Award, UN-L Alumni Association, 1995.
- Inaugural Guest Speaker, DowElanco North America Research and Development Graduate Seminar Series, 1994.
- Hardin Distinguished Graduate Fellowship in Plant Physiology, UN-L Foundation, 1992, 93, 94.
- Display Presentation Award, Central States (Kansas) Entomological Society, 1992.
- M.S. Research Award, North Central Branch-Entomological Society of America, 1992.
- J. H. Comstock Award, North Central Branch-Entomological Society of America, 1994.
- Maude Hammond Fling Fellowship, UN-L Foundation, 1994.
- Farmers National Teaching Fellowship, UN-L Foundation, 1993.
- Sigma Xi, Outstanding Graduate Student Award, 1993.

- North Central Branch-Entomological Society of America Graduate Student Scholarship, 1992.
- Widaman Trust Distinguished Graduate Research Assistant Award, UN-L Foundation, 1991-92.

#### **Undergraduate Recognition**

- Iowa Pest Control Association Scholarship, 1986.
- Accepted to Iowa State University with Recognition and Award, 1983.
- Rotary Club Academic Scholarship, 1983.

#### **PEER-REVIEWED ARTICLES (IN REVIEW)**

Piccolomini, A.M., M. Flenniken, K.M. O'Neill, and **R.K.D. Peterson**. Leaf residue toxicity and risk of mosquito insecticides to *Megachile rotundata*. (in review).

Preftakes, C.J., J.J. Schleier, D.K. Weaver, and **R.K.D. Peterson**. Risk to non-target insects exposed to agricultural spray drift of insecticide formulations and spray adjuvants. *Journal of Economic Entomology* (in review).