

**John E. Losey**

**Professor**

**265 Old Insectary**

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## **EDUCATION**

<u>Year</u>	<u>Degree</u>	<u>Institution</u>
1996	Ph.D./Entomology	University of Maryland
1992	M.S./Entomology	Pennsylvania State University
1986	B.A./B.S./Biology	Oberlin College

## **PROGRAM DESCRIPTION (60% research, 30% teaching, 10% extension)**

Research: Applied population ecology: Integrated pest management (IPM)  
Teaching: Bizarre Biology of Bugs, Insect Conservation Biology, IPM  
Extension: Insect biodiversity and conservation including The Lost Ladybug Project

## **PROFESSIONAL EXPERIENCE**

2016-present Professor, Department of Entomology, Cornell University  
2003-2015 Associate Professor, Department of Entomology, Cornell University  
1997-2003 Assistant Professor, Department of Entomology, Cornell University  
1996-1997 Postdoctoral Research Associate, The University of Wisconsin

## **HONORS AND AWARDS**

2014 Eastern Branch nominee for Entomological Society of America Distinguished Achievement in Extension Award  
2013 Nominee for White House Office of Science and Technology Policy “Champions of Change” Award  
2010 Official Citation – Future Farmers of America – Conrad Weiser Chapter

## **DEPARTMENTAL SERVICE**

2017-present Curriculum Committee Chair  
2017-2019 Executive Committee  
2015-present Awards Committee  
2013-present Outreach Committee  
2006-2010 DUS  
2009-2011 Director of Graduate Studies

## **COLLEGE SERVICE**

2016-2017 Senator, CALS Faculty Senate  
2009-2010 Chair, CALS Faculty Senate  
2007-2009 Senator, CALS Faculty Senate  
2009, 2013 *Ad hoc* Tenure Committees  
2007 Quantitative Literacy  
2006 Non-majors Biology

## **RESEARCH OVERVIEW (60% FTE)**

The main focus of my position is integrated pest management or IPM. While I plan to maintain a program flexible enough to follow promising research leads as they arise, most of my research falls into the three categories: 1) assessing the distribution and abundance of predatory coccinellids, 2) estimating the impact of changes in the coccinellid complex on pest and non-target populations and, 3) determining the mechanism for native coccinellid decline.

## PEER-REVIEWED PUBLICATIONS

\*All publications in this list were reviewed by an editor and anonymous peer reviewers

\*See “other publications” in this CV and Extension/Outreach for non-peer-reviewed publications

### *Published and Accepted*

73. Youngerman, C.Z., A. DiTommaso, J.E. Losey, and M.R. Ryan. (2019 - *accepted on 22 Mar 2019*). Cover crop seed preference of four common weed seed predators. *Renewable Agriculture and Food Systems*.
72. Ugine, T. A., Krasnoff, S. B., Grebenok, R. J., Behmer, S. T., & Losey, J. E. (2019). Prey nutrient content creates omnivores out of predators. *Ecology Letters*. 22:275-283.
71. Lee, B. W., Ugine, T. A., & Losey, J. E. (2018). An assessment of the physiological costs of autogenous defenses in native and introduced lady beetles. *Environmental Entomology*. 47:1030-1038.
70. Park, M.G., Joshi, N.K., Rajotte, E.G., Biddinger, D.J., Losey, J.E. and Danforth, B.N., 2018. Apple grower pollination practices and perceptions of alternative pollinators in New York and Pennsylvania. *Renewable Agriculture and Food Systems*, pp.1-14.
69. Ugine, T.A., Hoki, E., & Losey, J. E. (2018). Interactions of *Coccinella novemnotata* (Coleoptera: Coccinellidae) and *Coccinella septempunctata* (Coleoptera: Coccinellidae) While foraging for aphids. *Environmental Entomology*. 47:87-92.
68. Woodbury, P. B., DiTommaso, A., Thies, J., Ryan, M., & Losey, J. (2017). Effects of Transgenic Crops on the Environment. *Environmental Pest Management: Challenges for Agronomists, Ecologists, Economists and Policymakers*, 131.
67. Ducatti, R. D. B., Ugine, T. A., & Losey, J. (2017). Interactions of the Asian Lady Beetle, *Harmonia axyridis* (Coleoptera: Coccinellidae), and the North American Native Lady Beetle, *Coccinella novemnotata* (Coleoptera: Coccinellidae): Prospects for Recovery Post-Degradation. *Environmental Entomology*. 46:21-29.
66. Haelewaters, D., Zhao, S.Y., Clusella-Trullas, S., Cottrell, T.E., De Kesel, A., Fiedler, L., Herz, A., Hesketh, H., Hui, C., Kleespies, R.G. and Losey, J.E., (2016). Parasites of *Harmonia axyridis*: current research and perspectives. *BioControl*. 1:1-17.
65. DiTommaso, A., Averill, K., Hoffmann, M., Fuchsberg, J. and Losey, J. (2016). Integrating insect, resistance, and floral resource management in weed control decision-making. *Weed Science* 64:743-756.
64. HE Roy, PMJ Brown, T Adriaens, N Berkvens, I Borges, S Clusella-Trullas, RF Comont, P De Clercq, R Eschen, A Estoup, EW Evans, B Facon, MM Gardiner, A Gil, AA Grez, T Guillemaud, D Haelewaters, A Herz, A Honek, AG Howe, C Hui, WD Hutchison, M Kenis, RL Koch, J Kulfan, LL Handley, E Lombaert, A Loomans, J Losey, AO Lukashuk, DMAes, A Magro, KM Murray, G San Martin, Z Martinkova, IA Minnaar, O Nedved, MJ Orlova-Bienkowskaja, N Osawa, W Rabitsch, HP Ravn, G Rondoni, SL Rorke, SK Ryndevich, M Saethre, JJ Sloggett, AO Soares, R Stals, MC Tinsley, A Vandereycken, P van Wielink, S Vigišová, P Zach, IA Zakharov, T Zaviezo, Z Zhao. (2016). The harlequin ladybird, *Harmonia axyridis*: global perspectives on invasion history and ecology. *Biological Invasions* (2016) 18: 997. doi:10.1007/s10530-016-1077-6.
63. Diepenbrock, L. M., Fothergill, K., Tindall, K. V., Losey, J. E., Smyth, R. R., & Finke, D. L. (2016). The Influence of Exotic Lady Beetle (Coleoptera: Coccinellidae) Establishment on the Species Composition of the Native Lady Beetle Community in Missouri. *Environmental Entomology*. 45:855-864.

62. Park, M. G., Raguso, R. A., Losey, J. E., & Danforth, B. N. (2016). Per-visit pollinator performance and regional importance of wild *Bombus* and *Andrena* (*Melandrena*) compared to the managed honey bee in New York apple orchards. *Apidologie*. 47:145-160.
61. Park, M. G., Blitzer, E. J., Gibbs, J., Losey, J. E., & Danforth, B. N. (2015). Negative effects of pesticides on wild bee communities can be buffered by landscape context. *Proc. R. Soc. B* 282:20150299.
60. Turnipseed, R., T. Ugine, and J.E. Losey. (2015). Egg predation by the invasive lady beetle, *Coccinella septempunctata* (Coleoptera:Coccinellidae), lowers mortality but raises relative risk for the native lady beetle, *Coccinella novemnotata*. *PloS one* 10 (6), e0118493.
59. Tumminello, G., T. Ugine, and J.E. Losey. (2015). Intraguild Interactions of Native and Introduced Coccinellids: The Decline of a Flagship Species. *Environmental Entomology*. 44:64-72.
58. Brandt, D.M., P.J. Johnson, J.E. Losey, M.A. Catangui, and L.S. Hesler. (2015). Development and survivorship of a predatory lady beetle, *Coccinella novemnotata*, on various aphid diets. *BioControl* 60:221-229.
57. DiTommaso, A., M. Ryan, C.L. Mohler, D.C. Brainard, L.L. Allee, and J.E. Losey. (2014). Effect of Cry3Bb transgenic maize and tefluthrin on post-dispersal weed seed predation. *Weed Science*. 62:619-624.
56. Sickler, J., T.M. Cherry, J.E. Losey, L. Allee, and, R. R. Smyth. (2014). Scientific value and educational goals: balancing priorities and increasing adult engagement in a citizen science project. *Applied Environmental Education Communication*. 13:109-119.
55. Turnipseed, R., T. Ugine, and J.E. Losey. (2014). Effect of prey limitation on competitive interactions between a native lady beetle, *Coccinella novemnotata*, and invasive lady beetle, *Coccinella septempunctata* (coleoptera: coccinellidae). *Environmental Entomology*. 43:969-976.
54. Ugine, T., and J.E. Losey. (2014). Development times and age-specific life table parameters of the native lady beetle species *Coccinella novemnotata* (Coleoptera:Coccinellidae) and its invasive congener *Coccinella septempunctata* (Coleoptera:Coccinellidae). *Environmental Entomology*. 43:1067-1075.
53. Fox, T.B., M. Caillaud, and J.E. Losey. Temperature and host condition affect phenotypic plasticity in the pea aphid (*Acyrtosiphon pisum*) (Homoptera: Aphididae). (Accepted: *Journal of Insect Science* 4/4/14).
52. Losey, J.E., E. Stephens, L. Allee, P. Priolo, R. Smyth and L. Stellwag. (2014). Lady beetles in New York: Insidious invasions, erstwhile extirpations, and recent rediscoveries. *Northeastern Naturalist*. 21:271-284.
51. Hesler, L.S., J.E. Losey, L.L Allee, and R.R. Smyth. (2014). New records of Coccinellidae (Coleoptera) from Wyoming, Usa. *Coleopterist Bulletin*. 68:1-3.
50. Stellwag, R., and J.E. Losey. (2014). Assessment of sexual dimorphism within the genus *Coccinella* (Coleopter: Coccinellidae) in North America. *Coleopterist Bulletin*. 68:271-281.
49. Hoki, E., J.E. Losey, and T. Ugine. (2014). Comparing the consumptive and non-consumptive effects of a native and introduced lady beetle on pea aphids (*Acyrtosiphon pisum*). *Biological Control*. 70:78-84.
48. Smyth, R., J.E. Losey, and L. Allee. (2013). The status of *Coccinella undecimpunctata* (L.) (Coleopter: Coccinellidae) in North America: An updated distribution and new method of assessment. *The Coleopterist Bulletin*. 67:532-535.
47. Stephens, E.J., J.E. Losey, L. Allee, A. DiTommaso, C. Bodner, and A. Breyre. (2012). The impact of Cry 3Bb1 *Bt*-maize on two guilds of beneficial beetles. *Agriculture, Ecosystems, and Environment*. 156:72-81.

46. Ramsey, S., and J. Losey. (2012). Why is *Harmonia axyridis* the culprit in coccinellid biting incidents? An analysis of means, motive and opportunity. *American Entomologist*. 58:166-170.
45. Hesler, L.S., G. McNickle, M.A. Catangui, J.E. Losey, E.A. Beckendorf, L. Stellwag, D.M. Brandt, and P.B. Bartlett. (2012). Method for Continuously Rearing *Coccinella* Lady Beetles (Coleoptera: Coccinellidae). *Open Entomology Journal*. 6:42-48.
44. Gardiner, M., L. Allee, P. Brown, J. Losey, H. Roy, and R. Smyth. (2012). Lessons from lady beetles: Accuracy of monitoring data from US and UK citizen science programs. *Frontiers in Ecology and the Environment*. 10:471-476.
43. Losey, J.E., L. Allee, and R. Smyth. (2012). The Lost Ladybug Project: Citizen spotting surpasses scientist's surveys. *American Entomologist*. 58:22-24.
42. Losey, J., J. Perlman, J. Kopco, S. Ramsey, L. Hesler, E. Evans, L. Allee, and R. Smyth. (2012). Potential causes and consequences of decreased body size in field populations of *Coccinella novemnotata*. *Biological Control*. 61:98-103. (*published in advance online in 2011*)
41. Finkbeiner, S.D., R.D. Reed, R. Dirig, and J. E. Losey. 2011. The role of environmental factors in the Northeastern range expansion *Papilio cressphontes* Cramer (Papilionidae). *Journal of the Lepidopterist Society* 65:119-125.
40. Hesler, L.S., K. Fothergill, K.V. Tindall, and J. E. Losey. 2010. Novel elytral-color forms of *Coccinella septempunctata* (Coleoptera: Coccinellidae) in North America. *Proc. Ent. Soc. Wash.* 112:500-507.
39. Denmark, E., and J.E. Losey. 2010. Causes and consequences of ladybug washups in the Fingerlakes region of New York State (Coleoptera: Coccinellidae). *Entomologica Americana*. 116:78-88.
38. Fothergill, K. W. Moore, J. Losey, L. L. Allee and R. R. Smyth. 2010. First Arizona records of the multicolored Asian lady beetle, *Harmonia axyridis* (Pallas) (Coleoptera: Coccinellidae). *The Coleopterists Bulletin*. 64 (1): 51-52.
37. Caillaud M.C. and J.E. Losey. 2010. Genetics of color polymorphism in the pea aphid, *Acyrtosiphon pisum*. *Journal of Insect Science* 10:95, available online: [insectscience.org/10.95](http://insectscience.org/10.95) (Open source; no hard copy).
36. Hesler, L.S., M.A. Cantangui, J.E. Losey, J. B. Helbig and A. Mesman. 2009. Recent records of *Adalia bipunctata* (L.), *Coccinella transversoguttata* Richardsoni Brown, and *Coccinella novemnotata* Herbst (Coleoptera: Coccinellidae) from South Dakota and Nebraska. *The Coleopterists Bulletin*, 63(4):475-484. 2009.
35. Losey, J. and M. Vaughan. 2008. Conserving the ecological services provided by insects. *American Entomologist* 54: 113-115.
34. Vaughan, M., F. Kuehn, J. Losey, and S. Black. 2008. Conservation of Insects. *American Entomologist* 54: 96-97.
33. Shuler, R.E., A. DiTommaso, J.E. Losey, and C.L. Mohler. 2008. Postdispersal weed seed predation is affected by experimental substrate. *Weed Science* 56: 889-895.
32. Losey, J.E., J.E. Perlman, and R. Hoebeke. 2007. Citizen scientist rediscovers rare nine-spotted lady beetle, *Coccinella novemnotata*, in eastern North America. *Journal of Insect Conservation*. 11:415-417.
31. Fuchsberg, J.R., T.-H. Yong, J.E. Losey, M.E. Carter, and M.P. Hoffmann. 2007. Evaluation of corn leaf aphid (*Rhopalosiphum maidis*; Homoptera: Aphididae) honeydew as a food source for the egg parasitoid *Trichogramma ostrinae* (Hymenoptera: Trichogrammatidae).

- Biological Control 40(2): 230-236.
30. Hayden, V.R., J.M. Duxbury, A. DiTommaso, and J.E. Losey. 2007. Weed Community Dynamics in the System of Rice Intensification (SRI) and the Efficacy of Mechanical Cultivation and Competitive Rice Cultivars for Weed Control in Indonesia. *Journal of Sustainable Agriculture* 30:5-26.
  29. Harmon, J. E., J. Stephens, and J. Losey. 2007. The decline of native coccinellids (Coleoptera: Coccinellidae) in the United States and Canada. *Journal of Insect Conservation*. 11:85-84.
  28. Hoffmann, M. P., S. A. Pitcher, S. A. Cheever, J. E. Losey, T. P. Kuhar, C. A. Laub, and R. R. Youngman. 2006. Efficacy of inoculative releases of *Trichogramma ostrinae* (Hymenoptera: Trichogrammatidae) against European corn borer *Ostrinia nubilalis* (Lepidoptera: Crambidae) in field corn. *Biological Control* 36: 345-349.
  27. Losey, J.E., and M. Vaughan. 2006. The economic value of ecological services provided by insects. *BioScience* 56:311-323.
  26. E.J. Stephens, and J.E. Losey. 2004. Comparison of sticky cards, visual and sweep sampling for assessment of coccinellid populations in alfalfa. *Environmental Entomology* 33:535-539.
  25. Carter, M.E., M.G. Villani, L.L. Allee, and J.E. Losey. 2004. Absence of non-target effects of *Bacillus thuringiensis* coleopteran active endotoxins to the bulb mite, *Rhizoglyphus robini* (Clapere) (Acari, Acaridae). *Journal of Applied Entomology*. 128:56-63
  24. Losey, J.E., R.A. Hufbauer, and R.G. Hartzler. 2003. Enumerating lepidopteran species associated with maize as a first step in risk assessment. *Environmental Biosafety Research* 2:247-261.
  23. DiTommaso, A. and J.E. Losey. 2003. Potential impact of two invasive swallow-worts, *Vincetoxicum rossicum* and *Vincetoxicum nigrum* on monarch butterfly (*Danaus plexippus*) populations. *Entomologia Experimentalis et applicata* 108:205-209.
  22. Losey, J.E., L.L. Allee, V. Zbarsky, J.K. Waldron, and E.J. Shields. 2003. Transect sampling to enhance efficiency of corn rootworm (Coleoptera: Chrysomelidae) monitoring. *Journal of Economic Entomology*. 96:1420-1425.
  21. Losey, J.E., J. K. Waldron, E. R. Hoebeke, L. E. Macomber, and B. N. Scott. 2002. First record of the soybean aphid, *Aphis glycines* Matsumura (Hemiptera: Sternorrhyncha: Aphididae), in New York. *The Great Lakes Entomologist* 35:101-105.
  20. Losey, J.E., M.E. Carter, and S.A. Silverman. 2002. The affect of stem diameter on European corn borer behavior and survival: Consequences for IRM in Bt-corn. *Entomologia Experimentalis et Applicata* 105:89-96.
  19. Teulon, D.A.J. and J.E. Losey. 2002. Issues relating to the practical use of transgenic crops for insect pest management. *New Zealand Plant Protection* 55:396-404.
  18. Losey, J.E., D.D. Calvin, M.E. Carter, and C.E. Mason. 2001. Evaluation of non-corn host plants as a refuge in a resistance management program for European corn borer (Lepidoptera: Crambidae) on Bt-corn. *Environmental Entomology* 30:728-735.
  17. Jensen, M.A., J.E. Losey and A.E. Hajek. 2001. Altered behavior and distribution of pea aphids, *Acyrtosiphon pisum* (Homoptera: Aphididae), infected with *Pandora neoaphidus* (Zugomycetes: Entomophthorales). *BioControl* 46:337-343.
  16. Obrycki, J.J., J.E. Losey, O. Taylor, and L.C. Hansen. 2001. Transgenic insecticidal corn: Beyond insecticidal toxicity to ecological complexity. *BioScience* 51:353-361.
  15. Stanley-Horn, D.E., G.P. Dively, R.L. Hellmich, H.R. Mattila, M.K. Sears, R. Rose, L.C.H. Jesse, J.E. Losey, J.J. Obrycki, and L. Lewis. 2001. Assessing the impact of Cry1Ab-expressing corn pollen on monarch butterfly larvae in field studies. *Proceedings of the National Academy of Sciences* 98: 11931-11936.

12. Harmon J.P., A.R. Ives, J.E. Losey, A.C. Olson, and K.S. Rauwald. 2000. *Coleomegilla maculata* DeGeer (Coleoptera: Coccinellidae) predation on pea aphids promoted by proximity to dandelions. *Oecologia* 125:543-548.
11. Losey, J.E., L.S. Rayor, and M.E. Carter. 1999. Transgenic pollen harms monarch larvae. *Nature* 399:214.
5. Losey, J.E., A.R. Ives, J. Harmon, F. Ballantyne, and C. Brown. 1997. Maintenance of an aphid color polymorphism through a balance of parasitism and predation. *Nature* 388: 269-272.

## GRANTS RECEIVED

*Summary: Over \$7 million in funding support in PI or co-PI projects since 2003.*

- [amount to Losey - compiled from OSP portal]
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- USDA/NIFA – Smith-Lever. 2019-2022. \$88,335. Ladybugs and garden-based learning: A multi-county 4H CCE project. (Losey, J)
- Department of Energy – SETO National Laboratory Call DE-LC-000L044. 2019-2022. \$2,997,561 [\$108,000]. InSPIRE 2.0: Facilitating Low-Impact Solar Development through Data and Analysis for Environmental Resiliency and Compatibility. (PI: Jordan Macknick, National Renewable Energy Laboratory, CoPIs: H. Hartmann, Argonne National Laboratory, S. Herbert, University of Massachusetts, S. Ravi, Temple University, G. Barron-Gafford, University of Arizona, M. Lehan, Hyperion, A. Knapp, Colorado State University, J. Losey, Cornell University, A. Garrett, Oregon State University)
- USDA/NIFA – Hatch/Multistate NE1332. 2015-2018. \$90,000 [\$90,000]. Biological Control of Arthropod Pests and Weeds. (Losey, J.)
- National Science Foundation – ISE. 2011-2015. \$2,491,912 [\$2,260,078]. Broad implementation of the lost ladybug project: Integrating new places and new faces into a national lifelong learning opportunity (Losey, J., L. Hesler, and K. Tilmon)
- USDA – NEIPM. 2011-2012. \$19,923 [\$400]. Native pollinators of eastern apple orchards and how to conserve them. (Losey, J, A. Agnello, B. Danforth, D. Biddinger and E. Rajotte)
- National Science Foundation – ISE. 2008-2012. \$1,983,354 [\$1,361,145]. Have you spotted me: Learning Lessons by Looking for Ladybugs (Losey, J., L. Allee, L. Hesler, M. Catangui, and J. Pickering)
- USDA – Hatch. 2007-2010. \$60,000 [\$60,000]. *Harmonia axyridis* boon or bane: Assessing the positive and negative impacts of an introduced ladybeetle. (Losey, J., L. Allee)
- USDA – NEIPM. 2006-2008. \$79,740 [\$7,488]. Reducing Potato Leafhopper (PLH) Impacts on Alfalfa through PLH-resistant Cultivars intercropped with Perennial Forage Grass (Viands, Waldron, Losey, Hanchar, and Hansen)
- NE Soybean Board. 2005-2006. \$10,000 [\$10,000]. Evaluation of Economic Injury Level, Biological Control, and Host Plant Resistance for Soybean Aphid in NY (Losey, J., K. Waldron, and A. Hajek)
- NE Soybean Board. 2004-2005. \$15,979 [\$15,979]. Evaluation of Economic Injury Level, Biological Control, and Host Plant Resistance for Soybean Aphid in NY (Losey, J., K. Waldron, and A. Hajek)
- USDA – BRAP. 2003. \$249,000: Beyond biodiversity: ecological function assessment in the Bt corn system. (Losey J., DiTommaso, J. Esnard, J. Thies, D. Peck, L. Allee, and M. Devare)
- Innovation in Teaching Grants Program. 2001. \$60,000. Integrated pest management at Cornell: Using electronic media to enhance and extend learning and practice. (P. Trutmann, P. Arneson, A. DiTommaso, and Losey)

- USDA – BRAP. 2001. \$276,554. Assessing the comparative risk of CRW transgenic corn and chlorpyrifos to the soil microbial community. (J.E. Thies, J. Duxbury, M. Devare, J. Esnard, Losey, Allee)
- NE Soybean Board. 2001. \$12,746. Survey and assessment of the soybean aphid in New York. (Losey, J., K. Waldron, and E.R. Hoebeke)
- Towards Sustainability Foundation. 2001. \$2,000. Incorporating bats into an organic program to manage the European corn borer, *Ostrinia nubilalis*. (E. Stephens – grad student, Losey)
- USDA – BRAP. 2000. \$210,000: Assessing risk of Bt corn to Nontarget Soil Arthropods: Direct and Indirect Effects. (Losey/Villani)
- USDA – NEIPM. 2000. \$155,055: . Inoculative releases of *Trichogramma ostriniae* for control of European corn borer in field corn. (Losey and M. Hoffmann)
- USDA – NEIPM. 2000. \$90,818. Incorporating Bt-corn hybrids into field crop IPM programs. (D.D. Calvin – Penn State, PI; \$8,700 to Losey)
- USDA. 2000. \$20,000: Regional monitoring and field level experiments to determine the risk posed to monarch butterflies from Bt corn (Losey)
- NYS IPM Program. 2000. \$2,225: Transect sampling to enhance efficiency of corn rootworm monitoring. (Losey, J. K. Waldron, and P. Arneson)

### **TEACHING OVERVIEW (30%FTE)**

My teaching efforts focus on integrated pest management (IPM) and insect conservation biology. I see these two areas as logical complements to one another. Many of the same ecological principles and models are utilized in conservation biology and IPM - the main difference being the goals of the two endeavors. The IPM courses I teach deal primarily with the suppression of insect pest populations while the insect conservation biology course focuses on the preservation and facilitation of rare or endangered populations.

### **SUMMARY OF EXTENSION AND OUTREACH ACTIVITIES (10% FTE)**

In response to our own findings on the impact of agricultural practices on beneficial insects, their overall decline, and the lack of public appreciation of the importance of these we expanded our Lost Ladybug Project in 2008. In May 2008, the Lost Ladybug Project was awarded almost two million dollars from the National Science Foundation to expand this program in New York and then extend it to a national level.

#### **Presentations** (\* = invited presentation; † = international conference; first listing = presenter)

†\* J. Losey. 2018. Lessons from the Lost Ladybug Project: Citizen scientists facilitate finding causes, consequences, and opportunities for coccinellid conservation. 2018 ESA, ESC and ESBC Joint Annual Meeting

†\* J. Losey. 2018. Global decline in ladybird beetle diversity: Citizen scientists facilitate finding causes, consequences, and opportunities for conservation. Invited Presentation. Wageningen, The Netherlands.

†\* J. Losey. 2018. How to develop and nurture a citizen science program: Lessons from the Lost Ladybug Project. Workshop. Wageningen, The Netherlands.

†\* J. Losey. 2017. Global decline in ladybird beetle diversity: Causes, consequences, and opportunities for conservation. 3<sup>rd</sup> Annual Meeting: Center for Ecology, Evolution, and Environmental Changes. Scientific Complex, University of the Azores, Ponta Delgada, Sao Miguel, Azores.

- † Allee, L., and J. Losey. 2016. How has global diversity of predacious coccinellids changed over time? International Congress of Entomology, Orlando Florida.
- † Smyth, R., and J. Losey. 2016. Implications for loss of coccinellid diversity and “service” at local, regional, and global levels: Predictions and plans for conservation. International Congress of Entomology, Orlando Florida.
- † Losey, J., L. Allee, T. Ugine, and R. Smyth. 2016. Establishing a coccinellid specialist group in the International Union for Conservation of Nature – Species Survival Commission (IUCN SSC). International Congress of Entomology, Orlando Florida.
- Losey, J., L. Allee, P. Brown, M. Gardiner, A. Grez, L. Hesler, G. Hooker, H. Gill, L. Jost, H. Roy, and, R. Smyth. 2015. Decline in global coccinellid diversity: Implications for pest suppression and food security. Entomological Society of America annual meeting, Minneapolis, MN.
- †DiTommaso, A., and J.E. Losey. 2014. What’s a weed worth?: Integrating the full costs and benefits into control decision-making for common milkweed (*Asclepias syriaca* L.). Joint Annual Meeting of the Weed Science Society of America and Canadian Weed Science Society. Vancouver, Canada.
- Losey J., L.S. Hesler, J. Lai, K. Fothergill, L.M. Diepenbrock, K.V. Tindall, and D.L. Finke. 2013. Competition, compression and exclusion: Impact of palearctic coccinellids on nearctic natives. Entomological Society of America annual meeting, Austin, TX.
- Ugine, T., and J. Losey. 2013. Why coccinellids eat plants: Omnivory enhances virility. Entomological Society of America annual meeting, Austin, TX.
- Stellwag, L., and J. Losey. 2013. Allopatric versus sympatric interspecific mating in coccinellids: Familiarity breeds contempt. Entomological Society of America annual meeting, Austin, TX.
- Hoki, E., T. Ugine, and J. Losey. 2013. Consumptive and non-consumptive effects on pea aphids, *Anthrosiphon pisum*, by native and invasive lady beetles. Entomological Society of America annual meeting, Austin, TX.
- Park, M.G., R. Raguso, J.E. Losey, B.N. Danforth. 2013. Effectiveness and importance of wild bees for apple pollination. Entomological Society of America annual meeting, Austin, TX.
- Allee, L., J. Losey, R.R. Smyth, and L.S. Hesler. 2013. Native coccinellid range changes based on citizen scientist spotter submissions to the Lost Ladybug Project. Entomological Society of America annual meeting, Austin, TX.
- Smyth, R.R., J. Losey, L. Allee, and L.S. Hesler. 2013. Introduced coccinellid range changes based on citizen scientist spotter submissions to the Lost Ladybug Project. Entomological Society of America annual meeting, Austin, TX.
- \*Losey, J. 2013. What’s a weed worth?: Integrating full costs and benefits into control decision-making for milkweed. *Invited presentation in:* Department of Crop and Soil Sciences, Cornell University: Seminar Series.
- \*Losey, J., and A. DiTommaso. 2013. Linking control and conservation: Integrating ecosystem services into IPM decision-making. *Invited presentation in symposium:* Assessing the Value of Diversity in Agroecosystems. Entomological Society of America: Eastern Branch meeting, Lancaster, PA.
- †\*Losey, J.E., L. Stellwag, and T. Ugine. 2013. Lady beetle distribution in North America: The role of reproduction in invasion and exclusion. *Invited presentation in:* 13<sup>th</sup> International Congress of Invertebrate Reproduction and Development, Detroit, MI
- †Stellwag, L. and J.E. Losey. 2012. The mating behavior of three congeneric coccinellids, *Coccinella novemnotata*, *C. septempunctata* and *C. transversoguttata*: is hybridization possible? International Society for Behavioral Ecology, Lund, Sweden.



- \*L. L. Allee, <sup>[L]</sup><sub>[SEP]</sub>R. Smyth, <sup>[L]</sup><sub>[SEP]</sub>J. Losey, M. Gardiner, <sup>[L]</sup><sub>[SEP]</sub>P. Brown, H. Roy. 2012. Comparisons of ladybug data from US and UK citizen science programs and from scientific surveys. Public Participation in Science and Research Conference. Ecological Society of America Annual Meeting. Seattle, WA
- \*Losey, J.E., L. Allee, R. Smyth, J. Kopco and J. Lai. 2011. Discoveries from the lost ladybug project facilitated by citizen scientists. Entomological Society of America Annual meeting, Reno, NV.
- Stellwag, L. and J.E. Losey. 2011. The mating behavior of two congeneric coccinellids, *Coccinella novemnotata* and *Coccinella septempunctata*: is hybridization possible?. Entomological Society of America Annual meeting, Reno, NV.
- Allee, L., J.E. Losey, and R. Smyth. 2011. The Lost Ladybug Project. Entomological Society of America Annual meeting, Reno, NV.
- Losey, J.E., L. Allee, R. Smyth, and L. Stellwag. 2010. Competition between a native (*Coccinella novemnotata*) and introduced (*C. septempunctata*) coccinellid: Impact on prey population growth and predator fitness. Entomological Society of America Annual meeting, San Diego, CA.
- Allee, L., R. Smyth, and J.E. Losey. 2010. The Lost Ladybug Project. Entomological Society of America Annual meeting, San Diego, CA.
- Fothergill, K., K.V. Tindall, J.E. Losey, and R. Smyth. 2010. Distribution of lady beetles in Missouri. Entomological Society of America Annual meeting, San Diego, CA.
- Stellwag, L. and J.E. Losey. 2010. Separating the sexes: Sexual dimorphism in the genus *Coccinella* and the implications for conservation research. Entomological Society of America Annual meeting, San Diego, CA.
- Park, M. and J.E. Losey. 2010. Per-visit effectiveness of native bees in apple pollination. Entomological Society of America Annual meeting, San Diego, CA. (*Winner of Presidents Prize in Student Paper Competition*)
- Ramsey, D.R. and J.E. Losey. 2010. Biting behavior of beneficial beetles: Quantification of coccinellids. Entomological Society of America Annual meeting, San Diego, CA. (*Winner of Presidents Prize in Student Paper Competition*)
- \*Losey, J.E. 2010. The Lost Ladybug Project: Integrating Research and Outreach. Jugatae Seminar Series. October 25, 2010.
- \*Losey, J.E. 2010. Ladybugs. *In: The Wild Wild World series*. American Museum of Natural History. New York, NY.
- \*Losey, J.E. L. Allee, and R. Smyth. 2009. The Lost Ladybug Project. Educators Professional Development Day workshop session. Ithaca, NY.
- \*Losey, J.E. 2009. Why should scientists get involved in informal science education? Presentation on panel for: What science do people ACTUALLY learn in informal environments? Boyce Thompson Institute. Cornell University, Ithaca, NY.
- \*Losey, J.E. 2009. The economic value of insect services with a spot-light on ladybeetle. CALS Distinguished Seminar Series in Sustainable Pest Management. Department of Entomology, University of Wisconsin, Madison, WI.
- Losey, J.E. L. Allee, and R. Smyth. 2009. The Lost Ladybug Project. Entomological Society of America Annual meeting, Indianapolis, IN.
- Losey, J. E. 2008. Shifting coccinellid composition and its impacts on aphid populations. Aphid Day: Cornell and Boyce Thompson Institute, Boyce Thompson Institute.
- \*Losey, J. E. 2008. Pollinator Conference: Information for Action. Cross-pollination: Integrating Pollinator and Natural Enemy Conservation. USFWS, Amherst, MA.

- \*Losey, J. E. 2008. Genomics: Ecological and Evolutionary Aspects. *In: An UN-Natural History.* Cornell Alumni University: Cornell University.
- \*Losey, J. E. 2008. The Ladybug Connection. *In: An UN-Natural History.* Cornell Alumni University: Cornell University.
- \*Losey, J. E. 2008. The Role of Citizen Science in Invasive Species Outreach and Research, *In: Education: The Lynch Pin in Invasive Species Prevention and Management Efforts CCE-Invasive Species Outreach Program, NY Invasive Species Clearinghouse, Invasive Species Research Institute, Cornell Invasive Species Program Work Team: Ithaca, NY.*
- \*Losey, J. E. 2008. Have you spotted me?: Learning lessons looking for ladybugs. A Gathering of Naturalists: Ideas, Field Sampling, Photography, and Computers. National Biological Information Infrastructure, Elmira, NY.
- †Losey, J.E. 2004. The economic value of ecological services provided by invertebrates. *In: Expanding the ark: The emerging science and practice of invertebrate conservation.* American Museum of Natural History – Center for Biodiversity and Conservation. NY, NY.
- †Stephens, E, and J.E. Losey. 2004. Threatened or endangered status for a formerly common ladybeetle?: The case study of *Coccinella novemnotata*, the nine spot ladybeetle. *In: Expanding the ark: The emerging science and practice of invertebrate conservation.* American Museum of Natural History – Center for Biodiversity and Conservation. NY, NY
- J.E. Losey. 2003. The economic value of ecological services provided by invertebrates. The Entomological Society of America: Annual Meeting, Cincinnati, OH.
- L.L. Allee, and J.E. Losey. 2003. Soil insecticide, rootworm Bt corn, and beneficial beetles: Comparing the risks. The Entomological Society of America: Annual Meeting, Cincinnati, OH.
- Stephens, E, and J.E. Losey. 2003. Sexing *Harmonia* without dissection. The Entomological Society of America: Annual Meeting, Cincinnati, OH.
- DiTommaso, A. and J.E. Losey. 2003. Oviposition selection and larval feeding by Monarch butterflies on two invasive swallow-wort species. Presented at the 57th Annual Meeting of the Northeastern Weed Science Society, Baltimore, MD. January 6-9 2003.
- Stephens, E, and J.E. Losey. 2002. Documenting the decline of C-9: Current status and historical perspective on *Coccinella novemnotata*. The Entomological Society of America: Annual Meeting, Fort Lauderdale, FL.
- Losey, J.E., M.E. Carter, and S.A. Silverman. 2002. The affect of stem diameter on European corn borer behavior and survival: Consequences for IRM in Bt-corn. The Entomological Society of America: Annual Meeting, Fort Lauderdale, FL.
- Fuchsberg, J.R. and J.E. Losey. 2002. Effect of weeds and aphids on suppression of European corn borer by natural enemies in Central New York field corn. The Entomological Society of America: Annual Meeting, Fort Lauderdale, FL.
- Losey, J.E., L.L. Allee, and M. Villani. 2001. Assessing risk of Bt corn to nontarget soil arthropods. The Entomological Society of America: Annual Meeting, San Diego, CA.