

Mark Bagley, Senior Research Scientist, in EPA's National Exposure Research Laboratory

Systems Exposure Division

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Area of Expertise: My past research has focused on analyses of population genetic methods in environmental assessments, involving primarily fish and aquatic macroinvertebrates, and the use of these methods to assess assumptions behind insect resistance management models that form the basis of USEPA's biotechnology risk assessments. My current interests are in population, species, and community level mechanisms that influence the vulnerability and resilience of aquatic ecosystems

Select Publications:

Bagley, M, Steinberg, S, Newman et al. (27 coauthors). Empowering citizen scientists to protect aquatic biodiversity through government partnerships and targeted technology development. PLoS Biology. In review.

Oswald KJ, French BW, Nielson C, Bagley M. 2012. Assessment of Fitness Costs in Cry3Bb1 Resistant and Susceptible Western Corn Rootworm (Coleoptera: Chrysomelidae) Laboratory Colonies. J. Appl. Entom. 136, 730-740.

Blum, MJ, Bagley, MJ, Walters DM, Jackson, SA, Daniel, FB, Chaloud, DJ, Cade, BS. 2012. Genetic diversity and species diversity of stream fishes covary across a land-use gradient. Oecologia 168, 83-95.

Oswald KJ, French BW, Nielson C, Bagley M. 2011. Selection for Cry3Bb1 resistance in a genetically diverse population of nondiapausing western corn rootworm (Coleoptera: Chrysomelidae). J Econ Entomol. 104:1038-44.

Pilgrim, EM, Jackson, JA, Swenson, S, Turcsanyi, I, Friedman, E, Weigt, L, Bagley, MJ. 2011. Incorporation of DNA barcoding into a large-scale biomonitoring program: opportunities and pitfalls. J Nor. Am. Benth.Soc. 30: 217-231.

Markert, J.A., D. Champlin, R. Gobell, J. S. Grear, A. Kuhn, T. J. McGreevy, A. Roth, M. Bagley and D. Nacci (2010). Population genetic diversity and fitness in multiple environments. BMC Evolutionary Biology 2010, 10: 205. doi:10.1186/1471-2148-10-205.

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Education:

- Ph.D. in Genetics, 1996, University of California, Davis

- M.S. in Animal Science (Aquaculture), 1992, University of California, Davis
- B.A in Ecology, Behavior and Evolution, 1984, University of California, San Diego

Professional Experience:

- Director, USEPA, ORD/NERL/EERD, 2010- 2015
- Chief, USEPA, ORD/NERL/EERD, MERB, 2004 to 2010
- Research Biologist, USEPA, ORD/NERL, 1999 to 2004
- Research Associate, University of California-Davis, 1998 to 1999
- Postdoctoral Research Fellow, University of North Carolina-Wilmington, 1996 to 1998

Honors and Awards:

- USEPA/ORD, Bronze Medal for Commendable Service, 2006
- USEPA/NERL, NERL Teamwork Award, 2011