

# Publications

## Sharon Lawler

### Journals

1. 1988 John-Alder, Henry B., Peter J. Morin, and Sharon Lawler. Thermal physiology, phenology, and distribution of tree frogs. *The American Naturalist*, 132(4): 506-520.
2. 1988 Morin, Peter Jay, Sharon P. Lawler and Elizabeth A. Johnson. Competition between aquatic insects and vertebrates: interaction strength and higher order interactions. *Ecology*, 69(5): 1401-1409.
3. 1989 Lawler, Sharon P. Behavioural responses to predators and predation risk in four species of larval anurans. *Animal Behaviour*, 38: 1039-1047.
4. 1990 Morin, P.J., S.P. Lawler and E.A. Johnson. Breeding phenology and the ecology of larval *Hyla andersonii*: the disadvantages of breeding late. *Ecology*, 71: 1590-1598.
5. 1993 Lawler, Sharon P., Morin, Peter J. Food web architecture and population dynamics in laboratory microcosms of protists. *The American Naturalist*, 141(5): 675-686.
6. 1993 Lawler, Sharon P. and Peter J. Morin. Temporal overlap, competition, and priority effects in larval anurans. *Ecology*, 74(1): 174-182.
7. 1993 Lawler, Sharon P. Species richness, species composition and population dynamics of protists in experimental microcosms. *Journal of Animal Ecology*, 62: 711-719.
8. 1993 Lawler, Sharon P. Direct and indirect effects in microcosm communities of protists. *Oecologia*, 93: 184-190.
9. 1993 Lawton, J. H., S. Naeem, R. M. Woodfin, V. K. Brown, A. Gange, H. J. C. Godfray, P.A. Heads, S. Lawler, D. Magda, C. D. Thomas, L. J. Thompson and S. Young. The Ecotron: a controlled environmental facility for the investigation of population and ecosystem processes. *Philosophical Transactions of the Royal Society of London Series B*, 341: 181-194.
10. 1994 Naeem, Shahid, Lindsey J. Thompson, Sharon P. Lawler, John H. Lawton and Richard M. Woodfin. Declining biodiversity can alter the performance of ecosystems. *Nature (Letters)*, 368: 734-737.

11. 1994 Naeem, Shahid, Lindsey J. Thompson, Sharon P. Lawler, John H. Lawton and Richard M. Woodfin. Biodiversity in model ecosystems - reply. *Nature*, 371: 565.
12. 1995 Balciunas, Dalius and Sharon P. Lawler. Effects of Basal resources, predation, and alternative prey in microcosm food chains. *Ecology*, 76(4): 1327-1336.
13. 1995 Naeem, Shahid, Lindsey J. Thompson, Sharon P. Lawler, John H. Lawton and Richard M. Woodfin. Empirical evidence that declining species diversity may alter the performance of terrestrial ecosystems. *Philosophical Transactions of the Royal Society of London Series B*, 347: 249-262.
14. 1995 Morin, Peter J. and Sharon P. Lawler. Food web architecture and population dynamics: Theory and empirical evidence. *Annual Review of Ecology and Systematics*, 26: 505-529.
15. 1995 Power, Mary E., David Tilman, Stephen R. Carpenter, Nancy Huntly, Mathew Leibold, Peter Morin, Bruce A. Menge, James A. Estes, Paul R. Ehrlich, Mark Hixon, David M. Lodge, Mark A. Mcpeek, John E. Fauth, David Reznick, Larry B. Crowder, Sally J. Holbrook, Barbara L. Peckarsky, Douglas E. Gill, Janis Antonovics, Gary A. Polis, David B. Wake, Gordon Orians, Ellen D. Ketterson, Elizabeth Marschall and Sharon P. Lawler. The role of experiments in Ecology. *Science (Letters)*, 270: 561.
16. 1995 Naeem, Shahid, John H. Lawton, Lindsey J. Thompson, Sharon P. Lawler and Richard M. Woodfin. Biotic diversity and ecosystem processes: using the Ecotron to study a complex relationship. *Endeavour*, 19: 58-63.
17. 1996 Morin, Peter J. and Sharon P. Lawler. Effects of food chain length and omnivory on population dynamics in experimental food webs. *Food Webs - Integration of Patterns & Dynamics*, 218-230.
18. 1996 Naeem, Shahid, Lindsey J. Thompson, T. Hefin Jones, John H. Lawton, Sharon P. Lawler, and Richard M. Woodfin. Changing community composition and elevated CO<sub>2</sub>. *Carbon Dioxide, Populations, and Communities*, 93-100.
19. 1996 Holyoak, Marcel and Sharon P. Lawler. Persistence of an extinction-prone predator-prey interaction through metapopulation dynamics. *Ecology*, 77(6): 1867-1879.
20. 1996 Holyoak, Marcel and Sharon P. Lawler. The role of dispersal in predator-prey metapopulation dynamics. *Journal of Animal Ecology*, 65: 640-652.
21. 1998 Lawler, Sharon P. Ecology in a bottle. *Experimental Ecology - Issues and Perspectives*, 236-253.

22. 1999 Lawler, Sharon P., Deborah Dritz, Terry Strange and Marcel Holyoak. Effects of introduced mosquitofish and bullfrogs on the threatened California red-legged frog. *Conservation Biology*, 13(3): 613-622.
23. 1999 Jensen, Truls, Lawler, Sharon P., Dritz, Deborah A. Effects of ultra-low volume pyrethrin, malathion, and permethrin on nontarget invertebrates, sentinel mosquitoes, and mosquitofish in seasonally impounded wetlands. *Journal of the American Mosquito Control Association*, 15(3): 330-338.
24. 1999 Lawler, Sharon P., Jensen, Truls, Dritz, Deborah A., Wichterman, Geroge. Field efficacy and nontarget effects of the mosquito larvicides temephos, methoprene, and *Bacillus thuringiensis* var. *israelensis* in Florida mangrove swamps. *Journal of the American Mosquito Control Association*, 15(4): 446-452.
25. 2000 Chae, Joon-Seok, Nicola Pusterla, Eileen Johnson, Elfriedge Derock, Sharon P. Lawler and John E. Madigan. Infection of aquatic insects with trematode metacercariae carrying *Ehrlichia risticii*, the cause of Potomac horse fever. *Journal of Medical Entomology*, 37(4): 619-625.
26. 2000 Madigan, J. E., N. Pusterla, E. Johnson, J.-S. Chae, J. Berger Pusterla, E. Derock and S. P. Lawler. Transmission of *Ehrlichia risticii*, the agent of Potomac horse fever, using naturally infected aquatic insects and helminth vectors: Preliminary report. *Equine Veterinary Journal*, 32(4): 275-279.
27. 2000 Lawler, S.P., Dritz, D.A., Jensen, T. Effects of sustained-release methoprene and a combined formulation of liquid methoprene and *Bacillus thuringiensis israelensis* on insects in salt marshes. *Archives of Environmental Contamination and Toxicology*, 39(2): 177-182.
28. 2000 Holyoak, M., S.P. Lawler and P.H. Crowley. Predicting extinction: Progress with an individual-based model of protozoan predators and prey. *Ecology*, 81(12): 3312-3329.
29. 2001 Lawler, S.P. Rice fields as temporary wetlands: A Review. *Israeli Journal of Zoology*, 47(4): 513-528.
30. 2001 Hector, A., J. Joshi, S.P. Lawler, E.M. Spehn, and A. Wilby. Conservation implications of the link between biodiversity and ecosystem functioning. *Oecologia*, 129: 624-628.
31. 2001 Dritz, D.A., S.P. Lawler, J. Albertson, W. Hamersky, J.R. Rusmisl. The impact of bti on the survival of the endangered tadpole shrimp *Lepidurus*

packardi. Proceedings and Papers of the 69th Annual Congerence of the Mosquito and Vector Control Assiocation of California, 88-91.

32. 2002 Miles, A.K., S.P. Lawler, D.A. Dritz, and S. Spring. Effects of mosquito larvicide on mallard ducklings and prey. *Wildlife Society Bulletin*, 30: 675-682.
33. 2003 Lawler, S.P., Dritz, D.A., Godfrey, L.D. Effects of the agricultural insecticide lambda-cyhalothrin (Warrior™) on mosquitofish (*Gambusia affinis*). *Journal of the American Mosquito Control Association*, 19(4): 430-432.
34. 2004 Orland, M.C. and S.P. Lawler. Resonance inflates carrying capacity in protist populations with periodic resource pulses. *Ecology*, 85(1): 150-157.
35. 2004 Srivastava, D.S, Kolasa, J., Bengtsson, A. Gonzalez, Lawler, S.P., Miller, T.E., Munguia, T, Romanuk, , Schneider, D.C., Trzcinski, M.K. Are natural microcosms useful model systems for ecology? *Trends in Ecology & Evolution*, 19(7): 379-384.
36. 2004 Leyse, K.E., S.P. Lawler and T. Strange. Effects of an alien fish, *Gambusia affinis*, on an endemic California fairy shrimp, *Linderiella occidentalis*: implications for conversation of diversity in fishless waters. *Biological Conservation*, 118: 57-65.
37. 2005 Holyoak, M. H. and S. P. Lawler. The contribution of laboratory experiments on protists to understanding population and metapopulation dynamics. *Advances in Ecological Research*, 37: 245-271.
38. 2005 Lawler, S.P. and G.C. Lanzaro. Managing mosquitoes on the farm. University of California Division of Agriculture and Natural Resources Publication 8158, 19.
39. 2005 Lawler, S.P. and D.A. Dritz. Straw and winter flooding benefit mosquitoes and other insects in a rice agroecosystem. *Ecological Applications*, 15: 2052-2059.
40. 2006 Lawler, S.P. and D.A. Dritz. Effects of straw and water management on riceland mosquitoes. *Journal of Medical Entomology*, 43: 828-832.
41. 2007 Lawler, S.P., D.A. Dritz, J.A. Christiansen and A. Cornel. Effects of lambda-cyhalothrin on mosquito larvae and predatory aquatic insects. 63: 234-240.
42. 2007 Lawler, S.P., L. Reimer, T. Thiemann, J. Fritz, K. Parise, D. Feliz and D. Elnaiem. Effects of vegetation control on mosquitoes in seasonal

freshwater wetlands. *Journal of the American Mosquito Control Association*, 23: 66-70.

- #43. 2007 Boyce, WM, Lawler, SP, Schultz, JM, McCauley, SJ, Kimsey, LS, Niemela, MK, Nielsen, CF, Reisen, WK. Nontarget effects of the mosquito adulticide pyrethrin applied aerially during a West Nile virus outbreak in an urban California environment. *Journal of the American Mosquito Control Association*, 23(3): 335-9.
- #44. 2008 Piechnik, D.A., S.P. Lawler and N.D. Martinez. Food-web assembly during a classic biogeographic study: species' trophic breadth corresponds to colonization order. *Oikos*, 117: 665- 674.
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- \*@45. 2008 Lawler, SP, Dritz, DA, Johnson, CS, Wolder, M. Does synergized pyrethrin applied over wetlands for mosquito control affect *Daphnia magna* zooplankton or *Callibaetis californicus* mayflies? *Pest Management Science*, 64(8): 843-7.
- \*x+@46. 2008 Pope, K. L., J.M. Garwood, H. H. Welsh and S.P. Lawler. Evidence of indirect impacts of introduced trout on native amphibians via facilitation of a shared predator. *Biological Conservation*, 141: 1321-1331.
- \*x+@47. 2009 Pope, K.L., J. Piovio-Scott and S. P. Lawler. Changes in aquatic insect emergence in response to whole-lake experimental manipulations of introduced trout. *Freshwater Biology*, 54(5): 982-993.
- \*x+@48. 2010 Epanchin, PN, Knapp, RA, Lawler, SP. Nonnative trout impact an alpine-nesting bird by altering aquatic-insect subsidies. *Ecology*, 91(8): 2406-15.
- \*x+@49. 2011 Piovio-Scott, J. K. L. Pope, S. P. Lawler, E. M. Cole and J. E. Foley. Factors related to the distribution and prevalence of the fungal pathogen *Batrachochytrium dendrobatidis* in *Rana cascadae* and other amphibians in the Klamath Mountains. *Biological Conservation*, 144(12): 2913-2921.
- \*+@50. 2011 Joseph, M., J. Piovio-Scott, S. Lawler and K. Pope. Indirect effects of introduced trout on Cascades frogs (*Rana cascadae*) via shared aquatic prey. *Freshwater Biology*, 56: 828-838.
- @51. 2011 Dritz, D. A., S. P. Lawler, C. Evkhanian, P. Graham, V. Baracosa and G. Dula. Control of mosquito larvae in seasonal wetlands on a wildlife

refuge using VectoMax™ CG. Journal of the American Mosquito Control Association, 27(4): 398-403.

**Footnotes:**

#43. In Press last action. #44. In press last action.

**Notations:**

\* = Publication included in the packet. x = Most significant works. + = Major mentoring role. @ = Refereed.

## Journals In Press

1. 2013 Roth, T., J. Worth, J. Piovio-Scott, J. Foley, K. Pope and S. Lawler. Bacterial flora on Cascades frogs in the Klamath Mountains of California. *Comparative Immunology, Microbiology and Infectious Diseases*. \*\* IN PRESS \*\*
2. 2013 Hartman, Rosemary, Karen Pope and Sharon Lawler. Multiple factors mediate co-occurrence between an economically-valuable introduced predator and its native prey. *Conservation Biology*. \*\* IN PRESS \*\*
3. 2013 Lawler, Sharon P. and D. A. Dritz. Efficacy of spinosad (Natular®) in control of larval *Culex tarsalis* and chironomid midges, and its non-target effects. *Journal of the American Mosquito Control Association*, 29(4). \*\* IN PRESS \*\*

## Book Chapters

1. 2001 Lawler, S.P., J.J. Armesto and P. Kareiva: How relevant to conservation are studies linking biodiversity and ecosystem functioning?, D. Tilman, A. Kinzig and S. Pacala, (ed), *Biodiversity and Ecosystem Functioning; empirical and theoretical analysis of the relationship*, Princeton University Press, Princeton, NJ. 294-313.
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## Books Reviewed

1. 2006 Lawler, S. P. The farmer and the conservationist should be friends: finding common ground for invertebrates. *Conservation Biology*, 20: 923-925.
  2. 2007 Lawler, S. P. Structure and diversity in food web research. *Ecology*, 88: 1335-1336.
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3. 2009 M. L. Cain, W. D. Bowman and S. D. Hacker. *Ecology. Quarterly Review of Biology*, 84(1): 88.

## Limited Distribution

1. 1996 Lawler, Sharon P., Deborah A. Dritz and Marcel Holyoak. Assessing the direct and indirect effects of mosquitofish (*Gambusia affinis*) and bullfrogs (*Rana catesbeiana*) on tadpoles of a declining species of amphibian, the reg-legged frog (*Rana aurora draytonii*). Mosquito Control Research Annual Report 1996, pp 26-28.
2. 1996 Lawler, Sharon P., Truls Jensen, Deborah A. Dritz. Non-target effects of ULV mosquito adulticides on aquatic insects and fish. Mosquito Control Research Annual Report 1996, pp 55-57.
3. 1997 Lawler, Sharon P., Truls Jensen, Deborah A. Dritz. Non-target effects of mosquito larvicides used on national wildlife refuges. Mosquito Research Annual Report 1997, pp 34--35.
4. 1997 Lawler, S.P., T. Jensen and D.A. Dritz. Mosquito management on national wildlife refuges ecosystem effects study. Final report to the United States Fish and Wildlife Service, 102 pp.
5. 1998 Lawler, S.P., K. Miles, D.A. Dritz and S.E. Spring. Effects of golden bear oil on non-target aquatic organisms inhabiting salt marshes. Mosquito Control Research Annual Report 1998, pp 66-71.
6. 2000 Lawler, S.P. and D.A. Dritz. Effects of rice straw management on the dynamics of mosquito populations: A food web study. Mosquito Control Research Annual Report 1999, pp 44-47.
7. 2001 Lawler, S.P., D.A. Dritz, D. Brown, K. Knerl and D. Lemanager. Effects of rice straw management on the dynamics of mosquito populations: a food web study. Mosquito Control Research Annual Report 2000, pp 41-45.
8. 2001 Miles, A.K., S.P. Lawler, D.J. Hoffman. P.H. Albers. M.J. Melancon, D. Dritz, S. Spring and D.M. Buscemi. Experimental assessment of the toxicity of the mosquito larvicide Golden Bear Oil (GB-1111): (1) Field evaluations on ducklings, target and non-target prey survival; (2) Laboratory evaluations on reared mallard and bobwhite eggs, and wild redwing blackbird eggs. Final Report to the U.S. Fish and Wildlife Service Environmental Contaminants Program.
9. 2006 Lawler, S.P. and D.A. Fritz. Repeated applications of ULV synergized pyrethrin over wetlands have no detectable effects on *Daphnia magna* or larvae of *Callibaetis* mayflies. Mosquito Control Research Annual Report 2006.
10. 2006 Lawler, S.P. and K. Pope. Non-native fish in mountain lakes: effects on a declining amphibian and ecosystem subsidy. U.C. Center for Water Resources Annual Reports 2005-6.

## Abstracts

1. 2011 Piovio-Scott, J., K. Pope, S. Lawler and J. Foley. Evaluating the impact of a fungal pathogen on the Cascades frog (*Rana cascadae*) in the mountains of northern California. 96th Annual Meeting of the Ecological Society of America.

## **Presentations**

1. 2008 Mosquito larvicides' impacts on non-target organisms, American Mosquito Control Association Annual Meeting, Sparks, NV.
2. 2008 Insects linking ecosystems and ecosystem services, Entomological Society of America Annual Meeting 2008, Reno, NV.
3. 2011 August, Back to the frogs: population restorations, ecosystem subsidy and disease dynamics in the Trinity Alps., Ecology and Evolution Program, Rutgers University, New Brunswick, NJ.
4. 2013 February 27, Lawler, S.P. and D. A. Dritz. Efficacy and non-target effects of Natular 2EC and G30 formulations., American Mosquito Control Association 79th Annual Meeting, Atlantic City, NJ.

# **Publications: Additional Information**

**Sharon Lawler**

## **News & Magazine Articles/Radio Interviews**

Alerta acerca del consumo de pescado contaminado con mercurio., August 31, 2007, Noticias Radio interview, Alberto Hauffen.

For mortgages underwater, help swims in: tiny fish clean pools of foreclosed homes; eating up mosquitoes., Newspaper Article, May 9, 2008, Wall Street Journal.

Precauciones que deben tomarse en sitios de recreo acuatico., June 30, 2008, Noticias Radio interview, Alberto Hauffen.

Hungry mosquitofish--the defense against West Nile Virus--is also munching threatened frogs., Newspaper Article, September 25, 2008, San Jose Mercury News.

What actually stops bug bites?, Magazine Article, 2011, Redbook.