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VITAL STATISTICS:

Date of birth: March 10, 1954

Place of birth: New York, New York Citizen: United States of America

EDUCATION:

1970-1974: State University of New York at Stony Brook, B.S. 1974-1980: University of California at Santa Barbara, M.A., Ph.D.

POST-PhD PROFESSIONAL EXPERIENCE:

1980: Senior biologist, Henningson, Durham and Richardson, Santa Barbara

1980-1981: Postdoctoral fellow, Ohio State University1981-1982: Postdoctoral fellow, Michigan State University

1982: Postdoctoral fellow, University of California at Berkeley

1982-1987: Assistant professor, University of Kentucky 1987-1991: Associate professor, University of Kentucky

1991-2001 Professor, University of Kentucky

1998-2001 Director, Center for Ecology, Evolution and Behavior, University of Kentucky 1999-2001 Marshall Hahn Sr. Endowed Professor of Biology, University of Kentucky

2001-2006 Chair, Department of Environmental Sci & Policy, University of California, Davis

2001- Professor, Dept Environmental Sci & Policy, U. California, Davis

2011- Distinguished Professor, Dept Environmental Sci & Policy, U. California, Davis

POST-PhD HONORS AND AWARDS RECEIVED:

Murray F. Buell Award of the Ecological Society of America
Ohio State University Postdoctoral Fellowship
National Science Foundation Postdoctoral Fellowship
University of Kentucky University Research Professorship
President, Animal Behavior Society
1997-2001

4-year track: 2nd president elect, 1st president elect, president, past president

ISI Current Contents 'Highly Cited Researcher' in Ecology/Environmental Science

Fellow, World Innovation Foundation, 2008

Fellow, Animal Behavior Society, 2007

Quest Award, Animal Behavior Society, 2011

PUBLICATIONS:

- Chang, A.T. and A. Sih. Multi-level selection and effects of keystone hyper-aggressive males on mating success and behavior in stream water striders. Submitted to Behavioral Ecology.
- Hammond, J., B. Luttbeg and A. Sih. Influences of resources, risk and prey size on the interactive predator-prey space use game. Submitted to Behavioral Ecology.
- Sih, A. Understanding variation in behavioural responses to human-induced rapid environmental change: a conceptual overview. Submitted to Animal Behaviour.
- Pearse, I.S., D.J. Harris, R. Karban and A. Sih. Predicting novel herbivore-plant interactions. Submitted to Ecological Applications.
- Ferrari, M.C.O., Ranaker, L., Weinersmith, K.L., Young, M.J., Sih, A. and Conrad, J.L. Effects of turbidity and invasive waterweed on predation by introduced largemouth bass. Submitted to Transactions of the American Fisheries Society.
- Jandt, J.M., Bengston, S., Pinter-Wollman, N., Pruitt, J., Raine, N.E., Dornhaus, A., and A. Sih. Behavioral syndromes and social insects: multiple levels of personality. Submitted to Biological Reviews.
- 165. Blonder, B., Wey, T.W., Dornhaus, A., James, R. and A. Sih. 2012. Temporal dynamics and network analysis. Methods in Ecology and Evolution, in press.
- 164. Sih, A., A. Bibian, N. DiRienzo, X.X. Meng, P-O. Montiglio and K. Ringelman. 2012. On the benefits of studying mechanisms underlying behavior. In press in P. Crowley, T. Zentall, eds., Comparative decision making. Oxford University Press.
- 163. Sih, A. 2012. Cognitive biases: a behavioral ecological view. In press in P. Crowley, T. Zentall, eds., Comparative decision making. Oxford University Press.
- 162. Sih, A. 2012. A behavioral ecology view of decision making: something old, something borrowed, something new. In press in P. Crowley, T. Zentall, eds., Comparative decision making. Oxford University Press.
- 161. Sih, A. 2012. Frontiers on the interface between behavioral syndromes and social behavioral ecology. In press in C. Carere and D. Maestripieri, eds. Animal Personalities: Behavior, Physiology, and Evolution. University of Chicago Press.
- 160. Sih, A and M. Del Giudice. 2012. Linking behavioural syndromes and cognition: a behavioural ecology perspective. Philosophical Transactions of the Royal Society, in press.
- 159. Cote, J., S. Fogarty and A. Sih. 2012. Individual sociability and choosiness between shoal types. Animal Behaviour, in press.

- 158. Ferrari, M.C.O., Manassa, R., Dixson, D.L., Munday, P.L., McCormick, M.I., Meekan, M.G., Sih, A. & Chivers, D.P. 2012. Effects of ocean acidification on learning in coral reef fishes PLoS ONE 7(2): e31478. doi:10.1371/journal.pone.0031478.
- 157. Sih, A., J. Cote, M. Evans, S. Fogarty and J. Pruitt. 2012. Ecological implications of behavioral syndromes. Ecology Letters 15:278-289.
- 156. Hammond, J., B. Luttbeg, T. Brodin and A. Sih.2012. Spatial scale influences the outcome of the predator-prey space race between tadpoles and predatory dragonflies. Functional Ecology 26:522-531.
- 155. Kerby, J.L., Wehrmann, A. and A. Sih.2012. Impacts of the insecticide diazinon on the behavior of predatory fish and amphibian prey. Journal of Herpetology, in press.
- 154. Pruitt, J.N., J.J. Stachowicz and A. Sih. 2012. Behavioral types of predator and prey jointly determine prey survival: potential implications for the maintenance of within-species behavioral variation. American Naturalist 179:217-227.
- 153. Godfrey, S.S., Bradley, J.K., Sih, A., and Bull, M. 2012. Lovers and fighters in sleepy lizard land: where do aggressive males fit in a social network? Animal Behaviour 83: 209-215.
- 152. Ferrari, M.C.O., Dixson, D.L., Munday, P.L., McCormick, M.I., Meekan, M.G., Sih, A. & Chivers, D.P. 2011. Intrageneric variation in antipredator responses of coral reef fishes affected by ocean acidification: implications for climate change projections on marine communities. Global Change Biology 17: 2980-2986.
- 151. Pruitt, JN, N DiRienzo, S. Kralj-Fiser, JC Johnson and A Sih. 2011. Individual- and condition-dependent effects on habitat choice and choosiness. Behavioral Ecology and Sociobiology 65: 1987-1995.
- 150. Cote, J, S Fogarty, T Brodin, K Weinersmith and A Sih. 2011. Personality-dependent dispersal in the invasive mosquitofish: group composition matters. Proceedings of the Royal Society London 278: 1670-1678.
- 149. Sih, A. 2011. Effects of early stress on behavioral syndromes: an integrated adaptive perspective. Neuroscience and Biobehavioral Reviews 35: 1452-1465.
- 148. Brenneis, V and A. Sih. 2011. Integration of an invasive consumer into an estuarine food web: direct and indirect effects of the New Zealand mud snail. Oecologia 167:169-179.
- 147. Fogarty, S, J Cote and A Sih. 2011. Social personality polymorphism and the spread of an invasive species: a model. American Naturalist 177:273-287.

- 146. Sih, A. 2011. Behavioral syndromes: a behavioral ecologist's view on the evolutionary and ecological implications of animal personalities. Pgs. 313-336 in A. Weiss, J.E. King and L. Murray, eds. Personality and Temperament in Nonhuman Primates. Springer, New York
- 145. Pintor, LM and A Sih. 2011. Scale dependent effects of native prey diversity, prey biomass and natural disturbance on the invasion success of an exotic predator. Biological Invasions 13: 1357-1366.
- 144. Lankau, R., PS Jorgensen, DJ Harris and A Sih. 2011. Incorporating evolutionary principles into improved environmental management and policy. Evolutionary Applications 4:315-325.
- 143, Sih, A, MCO Ferrari and DJ Harris. 2011. Evolution and behavioural responses to human-induced rapid environmental change. Evolutionary Applications 4:367-387.
- 142. Hendry, AP, MT Kinnison, M Heino, T Day, TB Smith, G Fitt, C Bergstrom, J Oakeshott, PS Jorgensen, M Zalucki, S Southeron, A Sih, RF Denison and SP Carroll. 2011. Evolutionary principles and their practical application. Evolutionary Applications 4:159-183.
- 141. Orrock, JL, LM Dill, A. Sih, JH Grabowski, SD Peacor, BL Peckarsky, EL Preisser, JR Vonesh and EE Werner. 2011. Predator effects in predator-free space: the remote effects of predators on prey. Open Ecology, in press.
- 140. Sih, A. 2011. Foraging theory. In press in S. Scheiner and M. Willig, eds., Theory of Ecology. University of Chicago Press.
- 139. Conrad, JL, KL Weiner-Smith, T Brodin, JB Saltz and A. Sih. 2011. Behavioural syndromes in fishes: a review of the biology and implications for ecology and fisheries management. Journal of Fish Biology 78: 395-435.
- 138. Luttbeg, B and A. Sih. 2010. Risk, resources and state-dependent adaptive behavioral syndromes. Philosophical Transactions of the Royal Society 365:3977-3990.
- 137. Cote, J., J. Clobert, T. Brodin, S. Fogarty and A. Sih. 2010. Personality-dependent dispersal: characterization, ontogeny and consequences for spatially structured populations. Philosophical Transactions of the Royal Society 365:4065-4076.
- 136. Sih, A, J Stamps, LH Yang, R McElreath and M Ramenofsky. 2010. Grand challenges: behavior as key component of integrative biology in a human-altered world. Integrative and Comparative Biology 50: 936-944.
- 135. Brenneis, VE, A. Sih and C.E. deRivera. 2010. Coexistence in the intertidal: Interactions between the non-indigenous New Zealand mud snail (*Potamopyrgus antipodarum*) and the native estuarine isopod (*Gnorimosphaeroma insular*). Oikos 11:1755-1764.

- 134. Cote, J. S. Fogarty, K. Weinersmith, T. Brodin and A. Sih. 2010. Personality traits and dispersal tendency in the invasive mosquitofish (*Gambusia affinis*). Proceedings Royal Society London B 277:1571-1579.
- 133. MacNally, R. Thomson, J.R., Kimmerer, W.J., Feyrer, F., Newman K.B., Sih, A. Bennett, W.A., Brown, L., Fleishman, E., Culberson, S.D. and Castillo, G. 2010. An analysis of pelagic species decline in the upper San Francisco Estuary using Multivariate Autoregressive modelling (MAR). Ecological Applications 20:1417-1430.
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- 131. Sih, A, AM Bell and JC Johnson. 2010. Behavioral syndromes. Pgs. 516-530 in DF Westneat and C. Fox, eds., Evolutionary Behavioral Ecology. Oxford University Press.
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- 128. Bell, A., R.B. Rader, S.L. Peck and A. Sih. 2009. The positive effects of negative interactions: can avoidance of competitors or predators increase resource sampling by prey? Theoretical Population Biology 76:52-58.
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- 126. Pintor, L.M., A. Sih and J.L. Kerby. 2009. Behavioral correlations provide a mechanism for explaining high invader density and increased impacts on native prey. Ecology 90:581-587.
- 125. Sih, A. S. Hanser, K. McHugh. 2009. Social network theory: new insights and issues for behavioral ecologists. Behavioral Ecology and Sociobiology 63:975-988.
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- 120. Orrock, JL, LM Dill, JH Grabowski, SD Peacor, BL Peckarsky, EL Preisser, A. Sih and EE Werner. 2008. Consumptive and non-consumptive effects of predators on meta-communities of competing prey. Ecology 89:2426-2435.
- 119. McCarthy, T.M. and A. Sih. 2008. Relatedness of mates influences mating behaviour and reproductive success of the hermaphroditic freshwater snail Physa gyrina. Evolutionary Ecology Research 10: 77-94.
- 118. Bell, A.M. and A. Sih. 2007. Exposure to predation generates personality in threespined sticklebacks (Gasterosteus aculeatus). Ecology Letters 10:828-834.
- 117. McElreath R, Luttbeg B, Fogarty SP, Brodin T and A Sih. 2007. Evolution of animal personalities Nature 450: E5.
- 116. Vance-Chalcraft, HD, JR Vonesh, JA Rosenheim, CW Osenberg and A Sih. 2007. The influence of intraguild predation on prey suppression and prey release: a meta-analysis. Ecology 88:2689-2696..
- 115. Sih, A. and A.M. Bell. 2007. Insights from behavioral syndromes for the evolutionary genetics of personality. European Personality Reviews 21:626-628.
- 114. Johnson, J.C. and A. Sih. 2007. Fear, food, sex and parental care: a syndrome of boldness in the fishing spider (Dolomedes triton). Animal Behaviour 74:1131-1138.
- 113. Hammond, JI, BT Luttbeg and A. Sih. 2007. Predator and prey space use: dragonflies and tadpoles in an interactive game. Ecology 88:1525-1535.
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- 111. Rohr, J.R., J.L. Kerby and A. Sih 2006. Community ecology as a framework for predicting contaminant effects. Trends in Ecology and Evolution 21:606-613.
- 110. Sih, A,. and J.V. Watters. 2005. The mix matters: behavioural types and group dynamics in water striders. Behaviour 142:1417-1431.
- 109. Gabriel, W., B. Luttbeg, A. Sih and R. Tollrian. 2005. Environmental tolerance, heterogeneity and the evolution of reversible plastic responses. American Naturalist 166:339-353.

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- 107. Sih, A. 2005. Predator-prey space use as an emergent outcome of a behavioral response race. Pgs. 240-255 in The Ecology of Predator-Prey Interactions, edited by P. Barbosa and I. Castellanos. Oxford University Press.
- 106. Caro, T., J. Eadie, A. Sih. 2005. Use of substitute species in conservation biology. Conservation Biology 19:1821-1830.
- 105. Rehage JS, BK Barnett, A Sih. 2005. Foraging behaviour and invasiveness: do invasive Gambusia exhibit higher feeding rates and broader diets than their noninvasive relatives? Ecology of Freshwater Fish 14: 352-360.
- 104. Sih, A., A.M. Bell, J.C. Johnson. 2004. Reply to Neff and Sherman. Behavioral syndromes versus Darwinian algorithms. Trends in Ecology and Evolution 19:622-623.
- 103. Rehage, J.S., Barnett, B. K. and A. Sih. 2004. Behavioral responses to novel predation and competition in invasive mosquitofish and their non-invasive relatives (*Gambusia* sp.). Behavioral Ecology and Sociobiology 57:256-266.
- 102. Sih, A., J. Kerby, A. Bell and R. Relyea. 2004. Response to Schmidt. Pesticides, mortality and population growth rate. Trends in Ecology and Evolution 19:480-481.
- 101. Garcia, T.S., J. Stacy and A. Sih. 2004. Color change, refuge use and depth choice: plastic responses to ultraviolet radiation in two species of salamander larvae, *Ambystoma barbouri* and *A. texanum*. Ecological Applications 14:1055-1064.
- 100. Sih, A., A.M. Bell, J.C. Johnson, and R.E. Ziemba. 2004. Behavioral syndromes: an integrative overview. Quarterly Review of Biology 79:241-277.
- 99. Rehage, J.S. and A. Sih. 2004. Dispersal characteristics and boldness: a comparison of Gambusia species of varying invasiveness. Biological Invasions 6:379-391.
- 98. Rohr, J.R., A.A. Elskus, B.S. Shepherd, P.H. Crowley, T.M. McCarthy, J.H. Niedzwiecki, T. Sager, A. Sih and B.D. Palmer. 2004. Multiple stressors and streamside salamanders: effects of the herbicide atrazine and food limitation. Ecological Applications 14:1028-1040.
- 97. Sih, A., A.M. Bell and J.L. Kerby. 2004. Two stressors are far worse than one. Trends in Ecology and Evolution 19:274-276.
- 96. Sih, A., A.M. Bell and J.C. Johnson. 2004. Behavioral syndromes: an ecological and evolutionary overview. Trends in Ecology and Evolution 19:372-378.

- 95. Luttbeg, B.T. and A. Sih. 2004. Predator and prey habitat selection games: the effects of how prey balance foraging and predation risk. Israel Journal of Zoology 50: 233-254.
- 94. Sih, A. 2004. A behavioral ecological view of phenotypic plasticity. Pgs 112-125 in TJ DeWitt and S. Scheiner (eds), Phenotypic Plasticity: Fuctional and Conceptual Approaches. Oxford University Press.
- 93. Rohr, J.R., A.A. Elskus, B.S. Shepherd, P.H. Crowley, T.M. McCarthy, J.H. Niedzwiecki, A. Sih and B.D. Palmer. 2003. Lethal and sublethal effects of atrazine, carbaryl, endosulfan, and octylphenol on the streamside salamander, *Ambystoma barbouri*. Environmental Toxicology and Chemistry 22:2385-2392.
- 92. Garcia. T.S., R. Straus and A. Sih. 2003. Temperature and ontogenetic effects on color change in the larval salamander species, *Ambystoma barbouri* and *Ambystoma texanum*. Canadian Journal of Zoology 81:710-715.
- 91. Garcia, T.S. and A. Sih. 2003. Color change and color-dependent behavior in response to predation risk in the salamander sister species, *Ambystoma barbouri* and *Ambystoma texanum*. Oecologia 137:131-139.
- 90. Sih, A., L.B. Kats and E.F. Maurer. 2003. Behavioral correlations across situations and the evolution of antipredator behavior in a sunfish-salamander system. Animal Behaviour 65:29-44.
- 89. Sih, A., M.Lauer and J.J. Krupa. 2002. Path analysis and relative importance of male-female conflict, female choice and male-male competition in water striders. Animal Behaviour 63:1079-1089.
- 88. Sih, A. and T.M. McCarthy. 2002. Prey responses to pulses of risk versus pulses of safety: testing the risk allocation hypothesis. Animal Behaviour 63: 437-443.
- 87. Rehage, J.S., S.G. Lynn, A. Sih, B.D. Palmer, and J.I. Hammond. 2002. Effects of larval exposure to triphenyltin on the survival, growth, and behavior of larval and juvenile *Ambystoma barbouri*. Environmental Toxicology and Chemistry 21:807-815.
- 86. Sih, A. and J.M. Mateo. 2001. Punishment and persistence pay: a new model of territory establishment and space use. Trends in Ecology and Evolution 9:477-479.
- 85. Sih, A. and B. Christensen. 2001. Optimal diet theory: when does it work and when and why does it fail? Animal Behaviour 61:379-390.
- 84. Sih, A., L.B. Kats and E.F. Maurer. 2000. Does phylogenetic inertia explain the evolution of ineffective antipredator behavior in a sunfish-salamander system? Behavioral Ecology and Sociobiology 49:48-56.

- 83. Sih, A., B.G. Jonsson, and G. Luikhart. 2000. Habitat loss: ecological, evolutionary and genetic consequences. Trends in Ecology and Evolution 15:132-134.
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- 81. Krupa, J.J. and A. Sih. 1999. Comparison of antipredator responses of two related water striders to a common predator. Ethology 105: 1019-1033.
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- 79. Sih, A., G. Englund and D. Wooster. 1998. Emergent impacts of multiple predators on prey. Trends in Ecology and Evolution 13:350-355.
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- 69. Moore, R.D, B. Newton and A. Sih. 1996. Delayed hatching as a response of streamside salamander eggs to chemical cues from predatory sunfish. Oikos 77:331-335.
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- 44. Crowley, P.H., S.E. Travers, M.C. Linton, S.L. Cohen, A. Sih, and R.C. Sargent. 1991. Mate density, predation risk and the seasonal sequence of mate choices: a dynamic game. American Naturalist 137:567-596.
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- 38. Sih, A., J. Krupa and S. Travers. 1990. An experimental study on the effects of predation risk and feeding regime on the mating behavior of the water strider, *Gerris remigis*. American Naturalist 135:284-290.
- 37. Sih, A. and R.D. Moore. 1990. Interacting effects of predator and prey behavior in determining diets. Pgs 771-796 in R.N. Hughes, ed., Behavioural mechanisms of food selection. NATO ASI Series. Springer-Verlag, Heidelberg, New York.
- 36. Krupa, J.J., W.R. Leopold and A. Sih. 1990. Avoidance of male giant water striders by females. Behaviour 115:247-253.
- 35. McNeely, D.R., B.N. Futrell and A. Sih. 1990. Experimental studies on the effects of crayfish on bass-sculpin interactions. Oecologia 85:69-73.
- 34. Huang, C. and A. Sih. 1990. Experimental studies on behaviorally-mediated indirect interactions through a shared predator. Ecology 71:1515-1522.
- 33. Sih, A. 1989. Lake community ecology: complex interactions in lake communities. (Invited book review). Trends in Ecology and Evolution 4:356-358.
- 32. Sih, A. and J.W. Petranka. 1989. Optimal diets: a test of a model including simultaneous search and handling of multiple prey loads. Behavioral Ecology and Sociobiology 23:335-339.
- 31. Sih, A. and K. Nishikawa. 1988. Do men and women really differ in publication rate and contentiousness? An empirical survey. Bulletin of the Ecological Society of America 69:15-18.
- 30. Sih, A. 1988. The effects of predators on habitat use, activity and mating behaviour of a semi-aquatic bug. Animal Behaviour 36:1846-1848.
- 29. Kats, L.B., J.W. Petranka and A. Sih. 1988. Antipredator responses and the persistence of amphibian larvae with fishes. Ecology 69:1865-1870.
- 28. Sih, A. 1988. On analyzing complex relationships between behavior, state and fitness. Behavioral and Brain Sciences 11:148-149.

- 27. Sih, A., J.W. Petranka and L.B. Kats. 1988. The dynamics of prey refuge use: a model and tests with sunfish and salamander larvae. American Naturalist 132:463-483.
- 26. Sih, A. 1988. Complex interactions in benthic and littoral communities. (Invited symposium review). Bulletin of the Ecological Society of America 69:226-228.
- 25. Sih, A. 1987. Prey refuges and predator-prey stability. Theoretical Population Biology 31:1-12.
- 24. Petranka, J.W., L.B. Kats and A. Sih. 1987. Predator-prey interactions among fish and amphibians: the use of chemical cues to detect predatory fish. Animal Behaviour 35:420-425.
- 23. Petranka, J.W., A. Sih, L.B. Kats and J.R. Holomuzki. 1987. Stream drift, size-selective predation and the evolution of ovum size in an amphibian. Oecologia 71:624-630.
- 22. Petranka, J.W. and A. Sih. 1987. Habitat duration, length of the larval period and the evolution of a complex life cycle of an amphibian. Evolution 41:1347-1356.
- 21. Sih, A. and M-S. Baltus. 1987. Patch size, pollinator behavior and pollinator limitation in catnip. Ecology 68:1679-1690.
- 20. Kerfoot, W.C. and A. Sih. (Eds.). 1987. Predation: direct and indirect impacts on aquatic communities. University Press of New England, Hanover, NH.
- 19. Sih, A. 1987. Predators and prey lifestyles: an evolutionary and ecological overview. Pgs. 203-224 in Predation: direct and indirect impacts on aquatic communities, eds., W.C. Kerfoot and A. Sih. University Press of New England, Hanover, NH.
- 18. Sih, A. 1987. Nutritional ecology of aquatic insect predators. Pgs. 579-607 in Nutritional ecology of insects, mites and spiders, eds. F. Slansky and J.G. Rodriguez. Wiley Press.
- 17. Petranka, J.W. and A. Sih. 1986. Environmental instability, competition and density-dependent growth and survivorship of a stream-dwelling salamander. Ecology 67:729-736.
- 16. Sih, A. 1986. Antipredator responses and the perception of danger by mosquito larvae. Ecology 67:434-441.
- 15. Sih, A. 1985. Evolution, predator avoidance and unsuccessful predation. American Naturalist 125:153-157.
- 14. Sih, A. and K.A. Milton. 1985. Optimal diet theory: should the !Kung eat mongongos? American Anthropologist 87:395-401.

- 13. Sih, A., P. Crowley, M. McPeek, J. Petranka and K. Strohmeier. 1985. Predation, competition and prey communities: a review of field experiments. Annual Review of Ecology and Systematics 16:269-311.
- 12. Sih, A. 1984. The behavioral response race between predator and prey. American Naturalist 123:143-150.
- 11. Sih, A. 1984. Optimal behavior and density-dependent predation. American Naturalist 123:314-326.
- 10. Sih, A. 1982. Foraging strategies and the avoidance of predation by an aquatic insect, *Notonecta hoffmanni*. Ecology 63:786-796.
- 9. Sih, A. 1982. Optimal patch use: variations in selective pressure for efficient foraging. American Naturalist 120:666-685.
- 8. Sih, A. and J. Dixon. 1981. Tests of some predictions of the MacArthur-Levins models: a critique. American Naturalist 117:550-559.
- 7. Sih, A. 1981. Stability, prey density and age-dependent interference in an aquatic insect predator, *Notonecta hoffmanni*. Journal of Animal Ecology 50:625-636.
- 6. Sih, A. 1980. Optimal foraging: partial consumption of prey. American Naturalist 116:281-290.
- 5. Sih, A. 1980. Optimal behavior: can foragers balance two conflicting demands? Science 210:1041-1043.
- 4. Sih, A. 1979. Stability and prey behavioural responses to predator density. Journal of Animal Ecology 48:79-89.
- 3. Sih, A. 1979. Optimal diet: the relative importance of the parameters. American Naturalist 113:460-463.
- 2. Murdoch, W.W. and A. Sih. 1978. Age-dependent interference in a predatory insect. Journal of Animal Ecology 47:581-592.
- 1. Sih, A. 1977. Optimal foraging theory used to deduce the energy available in the environment. Biotropica 9:216.

GRANTS

"Dissertation Research: Reciprocal interactions between host behaviors, steroid hormones, and parasites"

NSF-DDIG September 1, 2011- August 31, 2012 (PI with Kelly Weinersmith) \$14,300

"Dissertation Research: Behavioral and quantitative genetic mechanisms for the development and evolution of individual differences in Drosophila aggression"

NSF-DDIG July 1, 2011 – June 30, 2012 (PI with Julia Saltz) \$10,916

"Impacts of largemouth bass on Delta smelt in the Sacramento-San Joaquin Delta: influences of water quality and submerged aquatic vegetation on largemouth bass distribution, abundance, and diet composition"

Bureau of Reclamation

September 2010- August 2012 (PI with Louise Conrad, Peter Moyle) \$173,214

"Can salinity variability be a tool for managing fish populations? Effects of salinity on recruitment of age-0 largemouth bass"

Bureau of Reclamation

July 2010- June 2013 (Co-PI; PI: Fred Feyrer; other co-PIs: Swee The, James Hobbs and Louise Conrad; budget shown is for my lab's component) \$91,302

"Behavioral types, social plasticity and the effects of variation in social situations on sexual selection"

NSF IOS 0952132 – May 2010- April 2013

\$125,000

"Behavioural syndromes and social networks in sleepy lizards"

Australian Research Council

Jan 1 2010 - Dec 31 2012 (co-PI; PI: Michael Bull)

\$375,000

"Interdisciplinary Solutions to Evolutionary Challenges in Food, Health and the Environment" NSF U.S.-Australia Workshop – January 2010 (PI; Co-PI: Scott Carroll) \$31,790

"Developing molecular tools for the study of population genetics, kinship and heritability of behavioral types in wild and captive red octopus, *Octopus maya*"

UC MEXUS August 2009 – August 2011 (PI with CR Vazquez) \$25,000

"Impacts of largemouth bass on the Delta ecosystem"

Interagency Ecological Program

July 2008- June 2010 (PI with Peter Moyle and Pete Klimley) \$742, 031

"Understanding predator-prey space use as an interactive game"

NSF IOB-0446276 March 2005- March 2010 \$390,000 REU supplements \$12,000

"Aquatic nuisance species: a multi-stage approach to understanding the invasion ecology of exotic crayfish in northern and southern California"

National Sea Grant July 2003- June 2005 (Co-PI with Lee Kats) \$258,929

"Pre-copulatory sexual cannibalism: the ecology of an extreme sexual conflict" NSF Doctoral Dissertation Improvement Grant for J. Chad Johnson

\$9,612 August 2002 – July 2004 "Key traits underlying invasion success: a comparison of Gambusia species" NSF Doctoral Dissertation Improvement Grant for Jennifer Rehage May 2002 – April 2004 \$9,944 "Models and mechanisms: understanding multiple stressor effects on an amphibian population" EPA/STAR (Co-PI with P. Crowley, A. Elskus, B. Palmer, B. Shepherd) December 2001-November 2004) \$522,832 "Examining genetic similarity, mating behavior, and fitness consequences in a simultaneous hermaphrodite" NSF Doctoral Dissertation Improvement Grant for Thomas McCarthy June 2001 – May 2003 \$10,275 "Behavioral carryovers, tradeoffs and performance correlations across situations" NSF IBN-0078033 September 2000- August 2005 \$326,844 3 REU supplements \$15,750 "Effects of predation risk and individual condition on multiple behavioral mechanisms underlying mating patterns in a stream-dwelling isopod" (PI: Timothy Sparkes) NSF-IBN September 1998- August 1999 \$33,000 "Identifying and characterizing case studies of the successful use of basic ecological concepts to solve applied problems" National Center for Ecological Analysis and Synthesis July 1997- June 2000 \$88,533 "Joint evolution of behavioral and morphological plasticity in multiple predation regimes" (co-PI: E.D. Brodie III and T.J. DeWitt) NSF-DEB 9618702 March 1997- February 2001 \$347,000 2 REU supplements \$10,000

"Ecological factors and behavioral mechanisms underlying sexual selection in a stream water strider with male-female conflict" (co-PI: James Krupa)

NSF-IBN 95-14142 April 1996- March 2000 \$160,115 3 REU supplements \$12,250

\$783,500

"Graduate training in evolutionary ecology at the University of Kentucky" (10 co-PIs)

NSF Graduate Research Traineeships

July 1994- July 1999

"Behavioral ecology and comparative neurobiology" (11 co-PIs)

National Institute of Mental Health Research Training Grant

October 1994- August 1999 \$375,000

"Ecological variation and mate choice in a freshwater isopod: combining physiological and ecological approaches" (co-PI - Timothy Sparkes) NSF Doctoral Dissertation Improvement Grant July 1994- December 1995 \$3,853 "Behavioral and ecological factors influencing the mating dynamics of a semi-aquatic insect" (co-PI - James Krupa) NSF IBN 92-21697 July 1993- June 1996 \$236,000 **REU** supplement \$3,000 "Developing a center for evolutionary ecology at the University of Kentucky" (co-P.I. with P. Crowley, S. Gleeson, R.C. Sargent and D. Westneat) NSF-KY-EPSCoR EHR 91-08764 January 1992 - January 1995 \$815,000 "The influence of competing demands on the mating dynamics of a semi-aquatic insect" (co-P.I. - James Krupa) NSF BSR 90-20870 January 1991 - July 1993 \$200,000 "Undergraduate research experience in aquatic ecology at the University of Kentucky" (co-P.I. with P. Crowley, C. Barton, M. Barton and C. Sargent) NSF DIR 89-00163 April 1989- March 1992 \$120,000 "Prey behavior and predator-prey coexistence in a patchy environment" NSF BSR 88-18028 January 1989- June 1991 \$120,000 "Undergraduate research experience in aquatic ecology at the University of Kentucky" (co-P.I. with P. Crowley, C. Barton, M. Barton and C. Sargent) NSF BBS 88-04517 June 1988- May 1989 \$40,000 "The effect of predation by smallmouth bass on shelter use by mottled sculpins and crayfish" NSF EPSCoR Regional Universities Visiting Scholars Program P.I.- David McNeely (Morehead State University; I was the host faculty member) May 1988- September 1988 \$8,915 "Impact of predation on the microhabitat preferences of a headwater cyprinodontiform fish, Fundulus catenatus" NSF EPSCoR Regional Universities Visiting Scholars Program P.I.- Christine Barton, Michael Barton (Centre College; I was the host faculty member. May 1987- September 1987 \$10,700 "A facility for aquatic field experiments" (co-P.I.- P.H. Crowley, J. Calkins, D. Harris and R.C. Sargent)

\$219,684

NSF EPSCoR 86-10671-11 October 1986- October 1991

"History, natural selection and the traits and distribution of a salamander"

(co-P.I.- James Petranka)

NSF BSR 85-00329 June 1985- June 1988

\$128,000

INVITED RESEARCH SEMINARS (1990 on):

1990: Department of Zoology, University of British Columbia

Department of Animal Ecology, University of Umea, Sweden (series of 5 seminars)

Department of Integrative Biology, University of California at Berkeley

Department of Zoology, University of Oxford

Department of Zoology, Uppsala University

Department of Zoology, University of Helsinki

School of Biological Sciences, Queen Mary College, University of London

Department of Zoology, University of Bristol

Department of Zoology, University of Glasgow

Department of Zoology, University of Edinburgh

Centre for Population Biology, Silwood Park, Imperial College

1991: Center for Population Biology, University of California at Davis

Department of Integrative Biology, University of California at Berkeley

Department of Biological Sciences, Florida State University

Section of Ecology and Systematics, Cornell University

Conference on Animal Behavior and Learning, Dept of Psychology, U. Kentucky

Nordic Short Course in Antipredator Behavior, University of Jyvaskyla, Finland

1992: Department of Biological Sciences, Dartmouth College

Nordic Short Course in Life History Theory, University of Bergen, Norway

Department of Animal Ecology, University of Umea, Sweden

Department of Entomology, University of Kentucky

1993: Department of Biological Sciences, University of California at Santa Barbara

Department of Ecology and Evolutionary Biology, University of California at Irvine

Department of Biology, Miami University, Florida

Midwest Population Biology Conference, University of Kansas

1994: Department of Biological Sciences, State University of New York at Binghamton

Fisheries Society of the British Isles, full-length invited seminar

Department of Biological Sciences, Rutgers University

Department of Biology, Eastern Kentucky University

Department of Biology, Indiana University

1995: Department of Zoology, Ohio State University

Animal Behavior Society, invited talk at a symposium on game theory

European Society for Evolutionary Biology, Edinburgh, Scotland

Department of Biological Sciences, University of Bristol, England

Institute for Ecology and Evolution, University of Leiden, Netherlands,

1996: Winter Animal Behavior Conference (32 invited participants), Jackson Hole, Wyoming

Department of Zoology, University of Toronto

Department of Zoology, University of Maryland

Eminent Ecologist Lecture Series, Kellogg Biological Station

Department of Biology, University of Louisville

Department of Life Sciences, Indiana State University

Department of Biology, University of Missouri at St. Louis

1997: Ecological Society of America, invited talk at a symposium on multiple predators

Department of Biological Sciences, Purdue University

Department of Biological Sciences, Florida International University

Department of Entomology, University of Kentucky

1998: Illinois Natural History Survey, University of Illinois

Department of Entomology, University of Maryland

National Center for Ecological Analysis and Synthesis, Santa Barbara

Center for Population Biology, University of California at Davis (5 lectures)

Department of Ecology, Lund University, Sweden (3 seminars)

1999: Department of Ecology and Systematics, University of Helsinki

Department of Biology, Washington University

Department of Biology, University of California at Santa Cruz

Department of Zoology, University of Tennessee

2000: The Griswold Lecture (an endowed lecture series), Cornell University

Department of Biology, Stanford University

Department of Animal Ecology, Lund University, Sweden

Department of Biology, University of Illinois, Chicago

Department of Biology, University of Oregon

Department of Biology, Duke University

Department of Environmental Science and Policy, University of California at Davis

2001: Winter Animal Behavior Conference, Jackson Hole, WY

National Center for Ecological Analysis and Synthesis, Santa Barbara, CA

Midwest Animal Behavior Conference, plenary talk, University of Missouri

Department of Biological Sciences, State University of New York at Binghamton

Department of Biology, Dartmouth College

Department of Zoology, University of Florida

Quebec Animal Behavior Conference, Trois Rivieres, opening plenary talk

Department of Neurobiology, Physiology & Behavior, University of California at Davis

Community Ecology seminar series, University of California at Davis

2002: Center for Population Biology, University of California at Davis

Department of Evolution, Population and Organismal Biology, U. Colorado

Department of Biological Sciences, U. Nevada at Reno

Department of Animal Ecology, University of Zurich, Switzerland

2003: Winter Animal Behavior Conference, Jackson Hole, WY

Department of Biological Sciences, California State University, Chico

Department of Biology, San Francisco State University

Department of Biological Sciences, Texas Tech University

Department of Ecology and Evolutionary Biology, University of Minnesota

Department of Zoology, Oregon State University

Department of Ecology and Evolutionary Biology, University of Michigan

2004: Winter Animal Behavior Conference, Breckinridge, CO

Department of Ecology and Evolution, University of Chicago

Institute of Mind and Biology, University of Chicago

Ecological Society of America, invited symposium talk, Portland, OR

European Congress for Behavioral Biology, invited symposium talk

Department of Environmental & Evolutionary Biology, University of Glasgow, Scotland

Department of Zoology, University of Cambridge, Great Britain

Netherlands Insitute of Ecology, Wageningen, Netherlands

Workshop on Evolution of Human and Animal Personalities, Wageningen

Department of Biology, University of Groningen, Netherlands

Department of Ecology and Evolution, University of California, Los Angeles

2005: Winter Animal Behavior Conference, Steamboat Springs, CO

Department of Integrative Biology, Brigham Young University

Ecology and Evolution Seminar Series, University of California at Davis

School of Biological Sciences, Washington State University

Initiative in Organismal Interactions, WSU/U. Idaho, keynote speaker

Animal Behavior Society, Snowbird, Utah, invited talk

Hopkins Marine Laboratory, Stanford University

2006: Winter Animal Behavior Conference, Steamboat Springs, CO

Department of Ecology and Evolutionary Biology, U. California at Santa Cruz

Gordon Conference on Genes and Behavior, opening plenary talk

Center for Insect Science, University of Arizona

Department of Biological Sciences, Northern Arizona University

Department of Entomology, University of California, Davis

International Society for Behavioral Ecology, Tours, France, symposium talk

Animal Behavior Society, symposium talk

Department of Biology, Bowling Green University

Department of Biological Sciences, University of Kentucky

2007: Department of Integrative Biology, University of California, Berkeley

Behavioral Ecology Graduate Group, State Univ of NY, Stony Brook

Department of Ecology and Evolutionary Biology, Rice University

International Ethological Conference, Halifax, N.S., symposium talk

Ecological Society of America, San Jose, CA, symposium talk

Department of Integrated Natural Sciences, Arizona State University - West

Department of Ecology, Evolution, Environmental Science, Arizona State University

Department of Biology, Texas State University, San Marcos

Department of Ecology and Evolution, Uppsala University, Sweden

2008: Winter Animal Behavior Conference, Steamboat Springs, CO

National Center for Ecological Analysis and Synthesis, Santa Barbara, CA

Information Center for the Environment, University of California, Davis

Department of Biological Sciences, University of Illinois, Chicago

Department of Biology, University of Montana

Department of Neurobiology and Behavior, Cornell University

Curso Bases Biológicas de la Conducta (UNAM), Tlaxcala, Mexico

Division of Behavioural Ecology, University of Bern, Switzerland

2009: Glaser Lecture Series, Department of Biology, Florida International University

Department of Ecology and Evolution, University of California, San Diego

Department of Animal Ecology, Lund University (Sweden)

Department of Ecology, Evolution and Behavior, University of Nebraska

International Ethological Conference, Rennes, France, invited symposium speaker

Department of Ecology and Evolutionary Biology, University of Toronto

Animal Personalities Workshop, Oxford University, plenary talk

2010: Applied Evolution Summit, Heron Island, Australia

Department of Biology, Florida State University

Department of Integrative Biology, University of Illinois

Division of Biological Sciences, Arizona State University

Eminent Ecologist Lecture Series, Kellogg Biological Station, Michigan State University

Workshop on Emergence of Animal Personalities, Bielefeld, Germany

Fellows Lecture, Plenary Talk, Animal Behavioral Society

Internat. Union for the Study of Social Insects, Copenhagen, invited symposium speaker

2011: Winter Animal Behavior Conference, Steamboat Springs, CO

Department of Environmental Science and Policy, University of California/Davis

Department of Biology, Stanford University

Bodega Marine Laboratory, University of California, Davis

Working group on evolutionary mismatch, NESCent, Duke University

Workshop on Comparative Decision Making, University of Kentucky

Kellogg Biological Station, Michigan State University

Evolution Institute, University of California, Berkeley

Department of Zoology and Physiology, University of Wyoming

Department of Biological Sciences, Simon Fraser University

2012: Royal Society of London Conference on Cognition, invited symposium talk

Department of Integrative Biology, University of Guelph

Department of Biological Sciences, Univesity of Alabama

Department of Ecology and Marine Biology, U. California, Santa Barbara

Invited symposium speaker, Animal Behavior Society

Workshop on animal personalities, University of Bern, Switzerland, invited speaker

Internat Society for Behavioral Ecology, invited symposium speaker (2 symposia)

Essig seminar series, University of California, Berkeley

Evolution and Ecology seminar series, University of California, Davis

INVITED PROFESSIONAL ACTIVITIES:

Panel member, National Science Foundation

Population Biology and Physiological Ecology panel - 1991

Conservation and Restoration Biology panel - 1992

Population Biology panel – 1996

Animal Behavior panel – 2000, 2002, 2010

National Center for Ecological Analysis and Synthesis

Consultant - 1992

National Center for Ecological Analysis and Synthesis, working groups

Ecology success stories, 1997-2000

Reversible plasticity, 2001

Ecology of fear, 2005-6

Marine predation, 2006-7

Pelagic organismal decline, 2007-9

National Evolution Synthesis Center, working groups

Evolutionary mismatch, 2011-12

Workshop participant, Metadata workshop, Cornell University – 2004

Workshop participant, ESA/NSF workshop on data sharing, Washington, DC – 2004

Workshop participant, Predation in the Clifton Court Forebay - 2005

Editorial Board, American Naturalist, 1997-2000

Editorial Board, Ecology, 2003-2009

Editorial Board, Research Letters in Ecology, 2007-2009

Editorial Board, International Journal of Ecology, 2008-2012

Editorial Board, Ecology Letters, 2009-

Associate Editor, Quarterly Review of Biology, 2010-

Guest Editor, Proceedings of the National Academy of Science, 2012

Outside reviewer for the National Science Foundation and several other funding agencies Reviewer of about 20 manuscripts per year for numerous journals: American Anthropologist, American Midland Naturalist, American Naturalist, Animal Behavior, Behavioral Ecology, Behavioral Ecology and Sociobiology, Behaviour, Bioscience, Biological Reviews, Biology Letters, Canadian Journal of Zoology, Copeia, Ecological Entomology, Ecology, Ecology Letters, Ecological Applications, Ethology, Freshwater Biology, Functional Ecology, Herpetelogica, Human Ecology, Hydrobiologia, Journal of Animal Ecology, Journal of Avian Biology, Journal of Comparative Psychology, Journal of the North American Benthological Society, Journal of Theoretical Biology, Journal of Evolutionary Biology, Nature, Oecologia, Oikos, PLOS Biology, Proceedings of the National Academy of Sciences, Science, Theoretical Population Biology, Trends in Ecology and Evolution

TEACHING EXPERIENCE

University of Kentucky

BIO 104 Animal Biology

BIO 152 Introductory Biology

BIO 325 Introductory Ecology

BIO 608 Behavioral Ecology and Life Histories

BIO 609 Population and Community Ecology

BIO 613 Behavioral Ecology and Comparative Neurobiology

BIO 660 Advanced Animal Ecology

University of California at Davis

ANB/PSY 218 Animal behavior graduate core course

ANB 230 Advanced topics in animal behavior

ESP 100 Introductory Ecology

PBG 200 Population Biology graduate core course

POSTDOCTORAL ASSOCIATES:

- Petranka, James, (Ph.D., 1982, University of Kentucky), September 1982-June 1986 Dr. Petranka and I worked together on various aspects of the evolutionary ecology of small-mouthed salamander larvae, *Ambystoma texanum*. Dr. Petranka is now a professor at the University of North Carolina at Asheville.
- Holomuzki, Joseph, (Ph.D., 1985, Arizona State University), February 1986-June 1987 Ecological consequences of behavioral responses of isopods to green sunfish. Dr. Holomuzki is now a professor at a branch of Ohio State University.
- Krupa, James (Ph.D., 1987, University of Oklahoma), April 1988-August 1996; Dr. Krupa worked on a NSF funded project examining the effects of competing demands on habitat use, activity and mating behavior of water striders, *Aquarius remigis* in a patchy stream environment. Jim is now an associate professor at the University of Kentucky.
- Rowe, Locke (Ph.D. 1992, Univeristy of British Columbia), January June 1993; Dr. Rowe was funded by his own Canadian NSERC postdoctoral fellowship. He worked on a blend of theoretical and experimental studies on water strider behavior and evolution of life cycle switch points. Dr. Rowe was a 1993 winner of the American Naturalist's Young Investigator Prize and is now a Canadian Research Professor at the University of Toronto.
- Dugatkin, Lee (Ph.D. 1990, SUNY/Binghamton), July 1992- June 1994; Dr. Dugatkin was funded by his own NSF postdoctoral fellowship. He worked on issues relating to behavioral choices (in particular, partner choice) at several levels of scale. Dr. Dugatkin won Young Investigator's Prizes from both the American Society of Naturalists and from the Animal Behavior Society. He is now a professor at the University of Lousiville.
- DeWitt, Thomas (Ph.D. 1995, SUNY/Binghamton), August 1995- March 1998; Dr. DeWitt and I were co-PIs on a NSF grant addressing the joint evolution of behavior and induced morphology, in response to multiple, conflicting selection pressures. DeWitt is now an associate professor at Texas A&M University.
- Maurer, Eric (Ph.D., University of Kansas), August 1995- June 1999; Dr. Maurer used a comparative approach to investigate behavioral and life history traits that underlie large differences among species within one genus (Gambusia, mosquito fish) in distributional range. Dr. Maurer is now the Director of the Environmental Studies program at the University of Cincinnati.
- Englund, Goran (Ph.D., University of Umea, Sweden), January 1996- June 1997; Dr. Englund was funded by a grant from the Swedish NSF to work with me on effects of scale and prey dispersal among patches on predator impacts in streams. He is now a professor at the University of Umea.
- Wooster, Dave (Ph.D., University of Kentucky), February 1997- June 1998. Dr. Wooster worked on the ecology of sexual selection in water striders. Wooster is now an associate professor position at a branch campus of Oregon State University.
- Tim Sparkes (Ph.D., University of Kentucky), September 1998- July 2000. Dr. Sparkes and I worked on a NSF grant to study effects of predation risk and individual condition on multiple behavioral mechanisms underlying mating patterns in a stream isopod. He is now an associate professor at DePaul University
- Karen Warkentin (Ph.D., University of Texas), September 1998- August 2001. Dr. Warkentin worked on the evolution and fitness consequences of variation in egg size and hatching behavior in amphibians. She is now an associate professor at Boston University.

- Robert Ziemba (PhD., Arizona State University), January 1999- July 2001. Dr. Ziemba worked on models and experiments on the ecology of sexual selection in water striders. Ziemba is now an associate professor at Centre College.
- Jason Watters (PhD, University of California at Davis), March 2003 September 2006. Dr. Watters worked on the social ecology of behavioral syndromes in water striders. He is now a senior behavioral scientist at the Brookfield Zoo, Chicago, IL.
- Alison Bell (PhD, University of California at Davis), October 2005 July 2006. Dr. Bell worked on conceptual aspects of behavioral syndromes, along with experiments on effects of predation risk and correlational selection on boldness and aggression in sticklebacks. Alison won the 2012 Outstanding New Investigator Award from the Animal Behavior Society. She is now an assistant professor at the University of Illinois.
- Barney Luttbeg (PhD, University of California at Davis), August 2003 July 2008. Dr. Luttbeg worked on models and experiments on the predator-prey space race, as well as on behavioral syndromes. Barney won the American Naturalist's Presidental Award for best paper of the year. He is now an assistant professor at Oklahoma State University.
- Shannon McCauley (PhD, University of Michigan). August 2006- August 2008. Dr. McCauley was the UCD-Center for Population Biology postdoc (co-sponsored with Sharon Lawler). She worked on phenotype-dependent dispersal in dragonflies. Dr. McCauley is now an assistant professor at the University of Toronto.
- Tomas Brodin, (PhD, University of Umea), March 2007 July 2009. Dr. Brodin worked on an assortment of projects on the interface between behavior and ecology of freshwater organisms. He is now an assistant professor at the University of Umea.
- Julien Cote (PhD, University of Paris), November 2007- February 2011. Dr. Cote led a team working on effects of behavioral type (sociality, boldness) on dispersal dynamics in mosquitofish. He also participated in modeling on this topic. Dr. Cote is now an assistant professor at U. Toulouse.
- Louise Conrad (PhD, University of California at Davis), July 2008 July 2010. Dr. Conrad worked on an IEP-DWR funded project on impacts of an invasive macrophyte on the ecology of largemouth bass in the Sacramento Delta. Dr. Conrad is now the chief aquatic ecologist for a division of the Department of Water Resources in Sacramento.
- Maud Ferrari (PhD, University of Saskatchewan), September 2009- March 2011. Dr. Ferrari was funded by a Canadian NSERC grant to work on several projects on the interface between predator-prey behavior and ecology, primarily on fish. Dr. Ferrari won a major prize for the best Canadian PhD in the life sciences and the 2011 Outstanding New Investigator Award from the Animal Behavior Society. She is now an assistant professor at U. Saskatchewan.
- Jonathan Pruitt (PhD, University of Tennessee), August 2010-August 2011. Dr. Pruitt was the UCD-Center for Population Biology postdoc working on several projects addressing the ecological implications of behavioral syndromes (co-sponsored by Jay Stachowicz). He is now an assistant professor at U. Pittsburgh.
- Tina Wey (PhD, UCLA), January 2011- on. Dr Wey received a NSF Bioinformatics postdoc to work on applying social network methods to analyze social interactions in water striders.

THESES AND DISSERTATIONS DIRECTED:

- Kats, Lee, Ph.D. (May 1989) Prey behavior and the predator-prey interaction between sunfish and salamander larvae. Dr. Kats is now a professor and Associate Dean at Pepperdine University.
- Travers, Steve, M.S. (May 1989) Effects of predation risk and hunger on mating duration of a bug. Steve is now an assistant professor at North Dakota State University.
- Huang, Chifu, M.S. (May 1990) Direct and indirect interactions between sunfish, salamander larvae and isopods. Now a research scientist at the University of Kentucky.
- Maurer, Eric, M.S. (May 1992) Evolution of feeding behavior and effects on feeding, growth and development of salamander larvae. Now the Director of the Environmental Studies program at the University of Cincinnati.
- Martin, Mike, M.S. (May 1992) Food, density and size-dependent behavior, growth and drift of small-mouthed salamander larvae. Now an engineer.
- Moore, Robert, M.S. (May 1993) Effects of predation risk on life history switch points of two species of aquatic salamander larvae: *Ambystoma barbouri* and *Ambystoma texanum*. Now a computer network specialist at the University of Nevada at Reno.
- Haskins, Kris, M.S. (December 1995) Mating interactions, antipredator behavior and the distribution of two species of stream water strider. Recently completed a PhD at Northern Arizona University. Now a research scientist at the Flagstaff Arboretum.
- Sparkes, Tim, PhD. (May 1996) The effects of size-dependent predation and physiological variation on the evolution of behavior and life history of freshwater isopods. Sparkes is now an associate professor at DePaul University.
- Lauer, Michael, PhD. (June 1996) Effects of ecological factors on male-female behavioral conflicts that govern water strider mating patterns. After not getting tenure at Viterbo College, Lauer left academia.
- Wooster, David, PhD. (January 1997) Prey behavior and interacting effects of vertebrate and invertebrate predators on stream benthic prey. Wooster is now an associate professor at a branch campus of Oregon State University.
- Storfer, Andrew, PhD. (September 1997) Gene flow and local adaptation in a salamander metapopulation. Storfer won the 1997 Allee award from the Animal Behavior Society. He is now an associate professor at Washington State University.
- Wolf, Jason, PhD. (April 1998) Models of indirect genetic effects and their influence on the evolution of social behavior. Jason won the 1999 Dobzhansky Prize from the Society for the Study of Evolution and the 2000 American Society of Naturalists Young Investigator Prize. Jason is now a professor at the University of Bath.
- Grill, Chris, PhD (April 1998) Genetics, maternal effects and phenotypic plasticity in the color of a ladybird beetle. Co-advised with Allen Moore. Chris left academia.
- Sadowski, Jen, PhD (December 1999) Evolution of sexually selected male characteristics and female preferences in the striped ground cricket. Co-advised with Allen Moore. Sadowski is now an assistant professor at Viterbo College.
- Garcia, Tiffany, PhD. (June 2002) Joint color and behavioral responses to multiple selection pressures: a comparison of sister species of salamanders. Tiffany is now an assistant professor at Oregon State University
- McCarthy, Tom, PhD (June 2003) Inbreeding and mate choice in hermaphroditic snails. Tom is now an assistant professor at Utica College.

- Johnson, Chad, PhD (June 2003) Behavioral correlations and the evolution of sexual cannibalism in fishing spiders. Chad is now an assistant professor at Arizona State University-West.
- Rehage, Jennifer, PhD (June 2003) *Gambusia* as a model system for studying traits associated with narrow, non-invasive vs. broadly distributed, invasive species. Jenn is now an assistant professor at Florida International University.
- Crumrine, Patrick, PhD (June 2003) Intraguild predation and multiple predator effects on predator-prey behavior and predation rates in a fish-odonate system. Co-advised with Phil Crowley. Patrick is an assistant professor at Rowan University.
- Dickey, Brad, PhD (June 2004) An integrative approach to understanding dominance hierarachies: models and experiments. Co-advised with Phil Crowley. After a postdoc at the University of California at Davis, Brad elected to leave academia.
- Niedzwiecki, John, PhD (June 2005) Speciation and phylogenetic inertia associated with colonization of *Ambystoma* from ponds to streams. Co-advised with Phil Crowley. John is now an assistant professor at Belmont University.
- Kerby, Jake, PhD (Dec 2006) Pesticide effects on predator-prey behaviors and species interactions in a three trophic level aquatic community. Jake is now an assistant professor at the University of South Dakota.
- Pintor, Lauren, PhD (September 2007) Evolution, behavior and the invasion ecology of signal crayfish. Lauren is now an assistant professor at Ohio State University.
- Hammond, John, PhD (January 2008) Experimental and theoretical studies on the predator-prey space race. John is now a postdoc at the University of New Mexico.
- Conrad, Louise, PhD (July 2008) Behavioral syndromes and growth and dispersal of hatchery salmon. Louise is a now the head of the aquatic ecology division of the Department of Water Resources, Sacramento, CA.
- Brenneis, Valance, PhD (July 2009) Impacts of invasive New Zealand mudsnails on community and ecosystem dynamics. Co-advised with Charles Goldman. Val was funded by a NSF 3-year predoctoral fellowship. She is now an instructor at Portland State University.
- Saltz, Julia, PhD (December 2011) Genetics of social situation choice in Drosophila melanogaster. Julia was funded by a 3-year Department of Defense graduate fellowship. Julia won the Animal Behavior Society's Allee Award for best student talk in 2012, and the American Naturalist's award for best student paper in 2011. She is now a postdoc at the University of Southern California.
- Ajie, Beverly, PhD (on leave) Effects of multiple predators on the joint evolution of morphology, life history and behavioral syndromes in a freshwater snail. Beverly was funded by a NSF 3-year predoctoral fellowship.
- Iglesias, Teresa, PhD (began Fall 2004) Social information and behavioral responses to dead conspecifics. Co-advised with Gail Patricelli. Teresa was funded by a Gates Millenium Fellowship.
- Fogarty, Sean, PhD (began Fall 2006) Theoretical and experimental studies on the interface between behavioral syndromes and spatial ecology. Sean is funded by an ARCS fellowship.
- Weinersmith, Kelly, PhD (began Fall 2007) Behavioral syndromes and parasites in a fish-snail-trematode system. Kelly is funded by an Interagency Ecological Program grant, and by a fellowship from the American Association of University Women.

Ann Chang, PhD (began Fall 2007) – Behavioral types, social plasticity and sexual selection in a stream water strider. Ann was funded by a 3-year NSF predoctoral fellowship.

Dave Harris, PhD (began Fall 2008) – Statistical methods for predicting habitat or resource use in multi-species, multi-habitat, multi-resource communities. Dave is funded by a 3-year NSF predoctoral fellowship.

Kathy Hughes, PhD (began Fall 2010) – co-advised by Rick Karban. Kathy is funded by a 3-year NSF predoctoral fellowship and a 2-year Ford Foundation fellowship.

Julie Cotton, PhD (began Fall 2011) – exploring topics Sean Ehlman, PhD (beginning Fall 2012)

GRADUATE COMMITTEES –

University of Kentucky: I typically served on 15-20 graduate committees besides those of my own students.

University of California at Davis:

Animal Behavior Graduate Group: Ted Stankowich, Anne Leonard, Rodd Kelsey, Nick DiRienzo, Jamie Bunting

Center for Population Biology: Alison Bell, Mike Benard, Ben Fitzpatrick, Ian Wang Graduate Group in Ecology: Lisa Dorn, Kristing Hultgren, Mikaela Huntzinger, Evan Preisser, Brent Sewall, Alison Stover, Hilary Swarts, Jennifer Hunter, Rachel Mazur, Ryan Boyko, Kevin Ringleman, Amanda Newsom, Mari Reeves, Greta Wengert, Sarah Gravem, Tavis Forrester Entomology Graduate Group: Sara Diamond, Yao Hua Law, Meredith Cenzer

I have also served on the committees of students at other universities.

University of Indiana: Cerise Allen, Stephanie Welter

University of Louisville: Ryan Early

Bowling Green State University: Kelly Smith

Texas State University: Kristen Epp

UNDERGRADUATE RESEARCH PROJECTS DIRECTED (U. Kentucky):

Patricia Robertson, Beth Pierce, Julie Smoak, Laura Letson, Miriam Obedala, Karen Thompson, William Moore, Jill Willenbrink, Jay Craddock, Amie Dougherty, Kris Haskins, Tony Tramontin, Blake Newton, Amy Katz, Jenni Moses, Daniella Deman, John Trumbo, Anna-Liise Laine, Kathleen LaCasse, Michelle Martin, Jennifer Richardson, Beverly Barnett, Kendra Bauer, Tina LaDeur, Brian Black, Jennifer Benge, Erich Marks. Postdocs and graduate students in my laboratory have supervised over twenty other undergraduate research projects.

UC/Davis: Risa Naito, Beth Jay, Ryohei Hinokuma, Sabra Purdy, Winnie Ho, Neil Milan, Miko Echizen, Tracy Teach, Morgan Gray, Marina Kasa, Marissa Bauer, Susan Pike, Kari Fish, Debra Seiler, Megan Kruft, Alison Chan, Stephen Burkholder, Lauren Valverde, Brett Hanshew, Ryan Gilpin, Cara Allen, Bryn Evans, Matt Young, Blaise Tymen, Katie O'Neill, Stephanie Zableh, Susanna Soto, Alex Hunt, Kate Coolidge, Kevin Taniguchi, Shawna Kelley, Alec Perrin