

Faculty Publications

2014 (*undergraduate student)

Jacobsen, A.L., R.B. Pratt, **S.D. Davis**, and M.F. Tobin. 2014. Geographic and seasonal variation in chaparral vulnerability to cavitation. *Madrono*, In Press

Logan A. Schmitz*, Kim A. Gerling*, **Joseph M. Fritsch**, David B. Green, "Combining FTIR spectroscopy and the Vernier gas chromatograph: Analysis of a Binary Mixture" *The Chemical Educator* 2014, 19, 14-17.

Gary M. Bucciarelli, Amy Li*, Lee B. Kats, **David.B. Green** "Quantifying tetrodotoxin levels in the California newt using a non-destructive sampling method" *Toxicon* 2014, 80, 87-93.

Logan A. Schmitz*, Kim A. Gerling*, Joseph M. Fritsch, **David B. Green**, "Combining FTIR spectroscopy and the Vernier gas chromatograph: Analysis of a Binary Mixture" *The Chemical Educator* 2014, 19, 14-17.

Gary M. Bucciarelli, Amy Li*, **Lee B. Kats**, David.B. Green "Quantifying tetrodotoxin levels in the California newt using a non-destructive sampling method" *Toxicon* 2014, 80, 87-93.

Martin, K. L. 2014. Review paper: Theme and variations: amphibious air-breathing intertidal fishes. *Journal of Fish Biology* 84, 577-602. doi: 10.1111/jfb.12270

Martin, K. L. 2014. *Beach-Spawning Fishes: Reproduction in an Endangered Ecosystem*. Oxford, UK: Taylor & Francis Group, CRC Press. Ten chapters of a Book, coming in September, 2014.

Martin, K. L., J. Dugan, D. Hubbard, J Passarelli, G Wang, R Wilson, C. LaBarbiera, C Nelsen, D Cooper, D Pryor, C Cartwright, L Adams, M Studer, H Helling, J Engel, J Steers, N. Schooler. 2014. "Developing A New Method for Citizen Scientists to Assess Sandy Beach Ecosystems." *Bulletin, Southern California Academy of Sciences* 113: in press.

2013 (*undergraduate student)

Davis, C.L., R. Wahid, F.R. Toapanta, J.K. Simon, M.B. Szein, and D. Levy. 2013. Applying mathematical tools to accelerate vaccine development: modeling *Shigella* immune dynamics. *PLoS ONE* 8(4):e59465.

Davis, C.L., and F.R. Adler. 2013. Mathematical models of memory CD8+ T-cell repertoire dynamics in response to viral infections. *Bulletin of Mathematical Biology* 75(3):491-522.

Carr, K.S., **S.D. Davis**, S. Erbes, C.M. Fulmer, L.B. Kats, M.U. Teetzel. 2013. Developing first-year students as scholars. *CURQuarterly* 33(4): 8-15.

Ishibashi, C.D., A.R. Shaver, D.P. Perrault*, **S.D. Davis**, and R.L. Honeycutt. 2013. Isolation of microsatellite markers in a chaparral species endemic to southern California, *Ceanothus megacarpus* (Rhamnaceae). *Applications in Plant Sciences* 1(5):1200393.

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Paddock III, W.A.S., **S.D. Davis**, R.B. Pratt, A.L. Jacobsen, M.F. Tobin, Jorge Lopez-Portillo, and F.W. Ewers. 2013. Factors determining mortality of adult chaparral shrubs in an extreme drought year in California. *Aliso* 31:49-57.

Rezayee, N.M., K.A. Gerling*, A.L. Rheingold, and **J.M. Fritsch**. 2013. Synthesis and structures of tridentate ketoiminate zinc complexes bearing trifluoromethyl substituents that act as L-lactide ring opening polymerization initiators. *Dalton Transactions* 42(15):5573-5586.

Ishibashi, C.D., A.R. Shaver, D.P. Perrault*, S.D. Davis, and **R.L. Honeycutt**. 2013. Isolation of microsatellite markers in a chaparral species endemic to southern California, *Ceanothus megacarpus* (Rhamnaceae). *Applications in Plant Sciences* 1(5):1200393.

López-Fernández, H., J.H. Arbour, K.O. Winemiller, and **R.L. Honeycutt**. 2013. Testing for ancient adaptive radiations in Neotropical cichlid fishes. *Evolution* 67(5):1321-1337.

Janečka, J. E., M. E. Tewes, L. Laack, A. Caso, L. I. Grassman, and **R. L. Honeycutt**. 2013. Loss of genetic diversity among ocelots in the United States during the 20th century linked to human induced population reductions. *PLoS ONE* 9(2):e89384.

Williford, D., R. W. DeYoung, **R.L. Honeycutt**, L. A. Brennan, and F. Hernández. 2013. Phylogeography of the scaled quail in the American southwest. *Western North American Naturalist* 74(1):18-32.

Williford, D., R. W. DeYoung, **R. L. Honeycutt**, L. A. Brennan, F. Hernández, J. R. Hefflefinger, and L. A. Harveson. 2013. Phylogeography of the Gambel's quail-California quail (*Callipepla gambelii*-*C. californica*) complex of western North America. *Wilson Journal of Ornithology* 126(2):218-235.

Carr, K.S., S.D. Davis, S. Erbes, C.M. Fulmer, **L.B. Kats**, M.U. Teetzel. 2013. Developing first-year students as scholars. *CURQuarterly* 33(4): 8-15.

Garrett, K., and **K. Killpatrick**. 2013. A relationship between balanced modular tableaux and k-ribbon shapes. *ARS Combinatoria* CVIII (January 2013):209-215.

K. Killpatrick 2013. "Symmetry and Log-Concavity Results for Statistics on Fibonacci Tableaux", *Annals of Combinatorics: Volume 17, Issue 4 (2013)*, pg. 603-618.

Timothy A. Lucas, Garrett Johns*, Wancen Jiang*, and Lucie Yang. A population model of chaparral vegetation response to frequent wildfires. *Bulletin of Mathematical Biology*, 75(12):2324-2345, 2013.

Brian Fisher, **Timothy A. Lucas**, and Araksi Galstyan*. The role of iPads in constructing collaborative learning spaces. *Technology, Knowledge and Learning*, 18(3):165-178, 2013.

Martin K.L., and A.L. Carter. 2013. Brave new propagules: Terrestrial embryos in anamniotic eggs. *Integrative and Comparative Biology* 53:doi:10.1093/icb/ict018.

Martin, K. L., K. A. Hieb, and D. A. Roberts. 2013. A southern California icon surfs north: local ecotype of California Grunion *Leuresthes tenuis* (Atherinopsidae) revealed by multiple approaches during temporary habitat expansion into San Francisco Bay. *Copeia* 2013: 729-739. Doi 10.1643/CI-13-036.

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Harris, M.E., G. Meyer, **T. Vandergon**, and V.O. Vandergon. 2013. Loss of the acetyl-CoA carboxylase (*accD*) gene in Poales. *Plant Molecular Biology Reporter* 32:21-31.

2012 (*undergraduate student)

Pratt, R.B., A.L. Jacobsen, J. Hernandez, F.W. Ewers, G.B. North, and **S.D. Davis**. 2012. Allocation tradeoffs among chaparral shrub seedlings with different life history types (Rhamnaceae). *American Journal Botany* 24:70-81.

Ramirez, A.R., B.R. Pratt, A.L. Jacobsen, and **S.D. Davis**. 2012. Exotic deer diminish post-fire resilience of native shrub communities on Santa Catalina Island, southern California. *Plant Ecology* 213:1037-1047.

Wiens, D., L. Allphin, M. Wall, M.R. Slaton, **S.D. Davis**. 2012. Population decline in *Adenostoma sparsifolium* (Rosaceae): an ecogenetic hypothesis for background extinction. *Biological Journal of the Linnean Society*. 105:269-292.

Roberts, C.C., B.R. Barnett, D.B. Green, and **J.M. Fritsch**. 2012. Synthesis and structures of tridentate ketoiminate zinc complexes that act as L-lactide ring-opening polymerization catalysts. *Organometallics* 31(11):4133-4141.

Brereton, K.R*, and **D.B. Green**. 2012. Isolation of saccharides in dairy and soy products by solid-phase extraction coupled with analysis by ligand-exchange chromatography. *Talanta* 100:384-390.

Roberts, C.C., B.R. Barnett, **D.B. Green**, and J.M. Fritsch. 2012. Synthesis and structures of tridentate ketoiminate zinc complexes that act as L-lactide ring-opening polymerization catalysts. *Organometallics* 31(11):4133-4141.

Henisey, K.B., O.M. Blaes, and P.C. Fragile. 2012. Variability from nonaxisymmetric fluctuations interacting with standing shocks in tilted black hole accretion disks. *The Astrophysical Journal* 761(1):18.

Honeycutt, R.L. 2012. Phylogenetics of caviomorph rodents and genetic perspectives on the evolution of sociality and mating systems in the Caviidae. Pp. 61-81 in *Capybara: Biology, Use and Conservation of an Exceptional Neotropical Species* (J.R. Moreira, K.M.P.M.B. Ferraz, E.A. Herrera, and D.W. Macdonald, eds.). Springer, New York, NY, 416 pp.

Holbrook, J.D., R.W. DeYoung, J.E. Janečka, M.E. Tewes, **R.L. Honeycutt**, and J.H. Young. 2012. Genetic diversity, population structure, and movement of mountain lions, *Puma concolor*, in Texas. *Journal of Mammalogy* 93(4):989-1000.

López-Fernández, H., K.O. Winemiller, C. Montaña, and **R.L. Honeycutt**. 2012. Diet-morphology correlations in the radiation of South American geophagine cichlids (Perciformes: Cichlidae: Cichlinae). *PLoS ONE* 7(4): e33997.

Kats, L.B., G.M. Bucciarelli, D.E. Schlais*, A.R. Blaustein, and B.A. Han. 2012. Ultraviolet radiation influences perch selection by a neotropical poison-dart frog. *PLoS ONE* 7(4):e51364.

Hickman, Jr., C.L., **L.B. Kats**, and S. Keen. 2012. *Laboratory Studies in Animal Diversity*. 6th Edition. McGraw-Hill Publishers.

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Killpatrick, K. 2012. On the parity of certain coefficients for a q-analogue of the catalan numbers. *Electronic Journal of Combinatorics* 19(4):27.

Johnston, D.T., P.A. Deuster, W.S. Harris, **H.S-H. MacRae**, and M.N. Dretsch. 2012. Red blood cell omega-3 fatty acid levels and neurocognitive performance in deployed U.S. servicemembers. *Nutritional Neuroscience* 16(1):30-38.

Francis, K.L., **P.G. MacRae**, W.W. Spirduso, and T. Eakin. 2012. The effects of age on precision pinch force control across five days of practice. *Current Aging Science* 5(1):2-12.

Strong, D. 2012. A nickel and dime example for introducing several important linear algebra ideas on day one. *IMAGE* 49:40-42.

2011 (*undergraduate student)

Brewster, J.L. 2011. *A Life in Science*, Review of: Breaking Through the Spiral Ceiling: An American Woman Becomes a DNA Scientist, by Laura L. Mays Hoopes, 2010. *CBE Life Sciences Education* 10:237-238.

Murphy, L.A.* , E.A. Ramirez* , V.T. Trinh* , A.M. Herman* , V.C. Anderson* , and **J.L. Brewster**. 2011. Endoplasmic reticulum stress or mutation of an EF-hand Ca(2+)-binding domain directs the FKBP65 rotamase to an ERAD-based proteolysis. *Cell Stress and Chaperones* 16(6):607-619.

Feltner, M.E., and P.G. MacRae. 2011. Time course of changes in novice jumpers' countermovement vertical jump performance. *Perceptual and Motor Skills* 112(1):228-242.

Barnett, B.R.* , A.L. Evans* , C.C. Roberts* , and **J.M. Fritsch**. 2011. Batch reactor kinetic studies on the reductive dechlorination of chlorinated ethylenes by *tetrakis*-(4-sulfonatophenyl) porphyrin cobalt. *Chemosphere* 82(4):592-596.

Evans, A.L.* , R.E. Messersmith* , D.B. Green, and **J.M. Fritsch**. 2011. Degradation of environmental contaminants with water-soluble cobalt catalysts: An integrative inorganic chemistry investigation. *Journal of Chemical Education* 88(2):204-208.

Green, D.B. and **J.M. Fritsch**. 2011. CSI:Pepperdine! A Case of collaboration between an ACS student chapter and local high school students. *inChemistry Magazine* April/May:5-6.

Clark, A.J.* , J.L. Calvillo* , M.S. Roosa, D.B. Green, and **J.A. Ganske**. 2011. Degradation product emission from historic and modern books by headspace SPME/GC-MS: evaluation of lipid oxidation and cellulose hydrolysis. *Analytical and Bioanalytical Chemistry* 399(10):3589-3600.

Clark, A.J.* , J.L. Calvillo* , M.S. Roosa, **D.B. Green**, and J.A. Ganske. 2011. Degradation product emission from historic and modern books by headspace SPME/GC-MS: evaluation of lipid oxidation and cellulose hydrolysis. *Analytical and Bioanalytical Chemistry* 399(10):3589-3600.

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Evans, A.L. *, R.E. Messersmith*, **D.B. Green**, and J.M. Fritsch. 2011. Degradation of environmental contaminants with water-soluble cobalt catalysts: An integrative inorganic chemistry investigation. *Journal of Chemical Education* 88(2):204-208.

Green, D.B. and J.M. Fritsch. 2011. CSI:Pepperdine! A case of collaboration between an ACS student chapter and local high school students. *In Chemistry Magazine* April/May:5-6.

Gilad, O., J.E. Janečka, F. Armstrong, M.E. Tewes, and **R.L. Honeycutt**. 2011. Cougars in Guadalupe Mountains National Park, Texas: Estimates of occurrence and distribution using analysis of DNA. *The Southwestern Naturalist* 56(3):297-304.

Whiting, Jr., R.M., D. Ransom, Jr., C.E. Comer, K.A. Connell, and **R.L. Honeycutt**. 2011. Genetic variation among gravid female American woodcock in eastern Texas during winter. *Proceedings of the American Woodcock Symposium* 10:129-134.

Janečka, J.E., M.E. Tewes, L.L. Laack, A. Caso, L.I. Grassman, Jr., A.M. Haines, D.B. Shindle, B.W. Davis, W.J. Murphy, and **R.L. Honeycutt**. 2011. Reduced genetic diversity and isolation of remnant ocelot populations occupying a severely fragmented landscape in southern Texas. *Animal Conservation* 14(6):608-619.

Meredith, R.W., J.E. Janečka, J. Gatesy, O.A. Ryder, C.A. Fisher, E. C. Teeling, A. Goodbla, E. Eizirik, T.L.L. Simão, T. Stadler, D.L. Rabosky, **R.L. Honeycutt**, J.J. Flynn, C.M. Ingram, C. Steiner, T.L. Williams, T.J. Robinson,

A. Burk-Herrick, M. Westerman, N.A. Ayoub, M.S. Springer, W.J. Murphy. 2011. Impacts of the cretaceous terrestrial revolution and KPg extinction on mammal diversification. *Science* 334:521-524.

Sena, L., M.P.C. Schneider, B.B. Brenig, **R.L. Honeycutt**, D.A. Honeycutt, J.E. Womack, and L.C. Skow.

2011. Polymorphism and gene organization of water buffalo *MHC-DQB* genes show homology to *BoLA DQB* region. *Animal Genetics* 42(4):378-385.

Winemiller, K.O., D.J. Hoeinghaus, A.A. Pease, P.C. Esselman, **R.L. Honeycutt**, D. Gbanaador, E. Carrera, and J. Payne. 2010. Stable isotope analysis reveals food web structure and watershed impacts along the fluvial gradient of a Mesoamerican coastal river. *River Research and Applications* 27(6):791-803.

Winemiller, K.O., S.C. Zeug, C.R. Robertson, C. Saenz, B.K. Winemiller, L. Kelso-Winemiller, and **R.L. Honeycutt**. 2011. Food web structure of coastal streams in Costa Rica revealed by dietary and stable isotope analyses. *Journal of Tropical Ecology* 27:463-476.

Faux, M.G., **K.M. Iga**, and G.D. Landweber. 2011. Dimensional enhancement via supersymmetry. *Advances in Mathematical Physics* doi:10.1155/2011/259089.

Joyner, P.M., A.L. Waters*, R. B. Williams, D.R. Powell, N.B. Janakiram, C.V. Rao, and R.H. Cichewicz. 2011. Briarane diterpenes diminish COX-2 expression in human colon adenocarcinoma cells. *Journal of Natural Products* 74(4):857-861.

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Joyner, P.M., and R.H. Cichewicz. 2011. Bringing natural products into the fold – exploring the therapeutic lead potential of secondary metabolites for the treatment of protein-misfolding-related neurodegenerative diseases. *Natural Product Reports* 28:26-47.

Bancroft, B., B. Han, C. Searle, L. Biga, D. Olson, **L. Kats**, J. Lawler, and A. Blaustein. 2011. Species-level correlates of susceptibility to the pathogenic amphibian fungus *Batrachochytrium dendrobatidis* in the United States. *Biodiversity and Conservation* 20(9):1911-1920.

Blaustein, A.R., B.A. Han, R.A. Relyea, P.T.J. Johnson, J.C. Buck, S.S. Gervasi, and **L.B. Kats**. 2011. The complexity of amphibian population declines: understanding the role of cofactors in driving amphibian losses. *Annals of the New York Academy of Sciences* 1223(*The Year in Ecology and Conservation Biology*):108-119.

Garrett, K.C., and **K. Killpatrick**. 2011. A sign-reversing involution on Bimahonian generating functions. *ARS Combinatoria* 100:225-237.

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Lucas, T.A., and J. Spivey. 2011. A transition course from advanced placement to college calculus. *Primus* July 2, 2011.

Feltner, M.E., and **P.G. MacRae**. 2011. Time course of changes in novice jumpers' countermovement vertical jump performance. *Perceptual and Motor Skills* 112(1):228-242.

Martin, K.L., K. Bailey*, C.L. Moravek, and K. Carlson*. 2011. Taking the plunge: California grunion embryos emerge rapidly with environmentally cued hatching. *Integrative and Comparative Biology* 51(1):26-37.

Martin, K.L., K.M. Warkentin, and R.R. Strathmann. 2011. Environmentally cued hatching across taxa: Embryos Choose a Birthday Symposium. *Integrative and Comparative Biology* 51(1):14-127.

Martin, K.L.M., C.L. Moravek, A.D. Martin*, and R.D. Martin. 2011. Community based monitoring improves management of essential fish habitat for beach spawning California grunion. *Bulletin de L'Institut Scientifique (Rabat) Section Sciences de la Vie* 6:65-72.

Martin, K.L.M., C.L. Moravek, and A.J. Walker*. 2011. Waiting for a sign: extended incubation postpones larval stage in the beach spawning California grunion *Leuresthes tenuis* (Ayres). *Environmental Biology of Fishes* 91(1):63-70.

Moravek, C.L., and **K.L. Martin**. 2011. Life goes on: delayed hatching, extended incubation, and heterokairy in development of embryonic California grunion, *Leuresthes tenuis*. *Copeia* 2011(2): 308-314.

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Perkins, C., S.L. Dunn, K. Gallington*, K. Carlson*, and A. Uhrinak. 2011. Gestational weight gain relative to Institute Of Medicine recommendations in hispanic women. *Medicine & Science in Sports & Exercise* 43(5):794.

Anderson, K.* , A. Burt* , W. Cousins* , B. Hancock* , and **D. Strong**. 2011. A Sinkhorn-Knopp fixed point problem. *Pi Mu Epsilon Journal* 13(5):257-267.