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## EDUCATION:

- 1992 Ph.D., Ecology and Evolution, University of Chicago (with Stevan J. Arnold)
- 1987 M.S., Zoology, Colorado State University (with Gary C. Packard)
- 1985 B.A., Biology (summa cum laude), North Central College (with Thomas A. Williams)

## PROFESSIONAL EXPERIENCE:

- 2013-15 Strengthening the Professoriate (Broader Impacts) Faculty Leader, ISU
- 2007-08 NSF ADVANCE Professor, ISU
- 2006-08 Chair, Interdepartmental Genetics Graduate Program, ISU
- 2004-06 Associate Chair, Interdepartmental Genetics Graduate Program, ISU
- 2004-08 Curator, Amphibian and Reptile Research Collection, ISU
- 2004 Courtesy Research Associate, Center for Ecology & Evolutionary Biology, University of Oregon
- 2005-now Full Professor, Department of Ecology, Evolution, & Organismal Biology, College of Agriculture & Life Sciences (CALs), ISU
- 2000-05 Associate Professor (as above)
- 1994-00 Assistant Professor (as above, but instead in Department of Zoology & Genetics)
- 1998-99 Visiting Assistant Researcher, Department of Ecology and Evolutionary Biology, University of California-Irvine
- 1992-94 Center for Population Biology Postdoctoral Fellow, Section of Evolution and Ecology, University of California-Davis
- 1992 Visiting Professor, "Tropical Biology: An Ecological Approach", Course #92-1, Organization for Tropical Studies, Costa Rica

## HONORS and RECOGNITION:

- 2018 Meritorious Teaching and Mentoring Award in Herpetology, The Herpetologists' League, the Society for the Study of Amphibians and Reptiles, and the American Society of Ichthyologists and Herpetologists
- 2015 Outstanding Achievement in Research Award, CALS
- 2014 Member, NSF DEB Evolutionary Ecology Grant Review Panel
- 2012 Outstanding Alumni Award, North Central College
- 2011 Honorary Bingzhi Professor, Institute of Zoology, Chinese Academy of Sciences
- 2009 Inspiring Mentor Award, Undergraduate Biology & Genetics Programs, ISU
- 2007 Outstanding Achievement in Teaching Award, both CALS and ISU
- 2005 Invited participant, NSF-funded workshop on turtle genetics, Harvard University
- 2003 Member, first NSF DEB Evolutionary and Population Ecology Grant Review Panel
- 2003 Invited participant, NSF Biological Directorate workshop on undergraduate research
- 2002 Invited participant, NSF workshop on undergraduate mentoring in environ. biology
- 2001 Member, NSF DEB Population Biology Program Grant Review Panel
- 2000 Member, NSF DEB Doctoral Dissertation Improvement Grant Review Panel
- 1994 Young Investigator Prize, American Society of Naturalists
- 1993 Marc Perry Galler Prize for Best Ph.D. Dissertation, University of Chicago
- 1992 1st place, Award for Graduate Research, Herpetologists' League
- 1991-92 William Rainey Harper Dissertation Fellow, University of Chicago
- 1990 Participant, "Tropical Biology: An Ecological Approach", Course #90-1, Organization for Tropical Studies, Costa Rica
- 1988 1st place, Best Student Paper, Division of Ecology, American Society of Zoologists

## PUBLICATIONS (\*=Invited, =Janzen Lab, =Other Student) (ORCID: 0000-0002-5919-196X):

## Peer-reviewed journal articles (Google Scholar–Citations 8800; h-index 48; i10-index 125):

2018

150. Cordero, G. A.<sup>s</sup>, H. Liu<sup>†</sup>, K. Wimalanathan<sup>†</sup>, R. C. Weber<sup>s</sup>, K. Quinteros<sup>s</sup>, and F. J. Janzen. 2018. Gene network variation and alternative paths to convergent evolution in turtles. **Evolution & Development** 20: (doi: 10.1111/ede.12264).
149. Janzen, F. J., L. A. Hoekstra<sup>s</sup>, R. J. Brooks, D. M. Carroll, J. W. Gibbons, J. L. Greene, J. B. Iverson, J. D. Litzgus, E. D. Michael, S. G. Parren, W. M. Roosenburg, G. F. Strain, J. K. Tucker, and G. R. Ultsch. 2018. Altered spring phenology of North American freshwater turtles and the importance of representative populations. **Ecology and Evolution** 8:5815–5827.
148. Li, S.-R., X. Hao, Y. Wang, B.-J. Sun, J.-H. Bi, Y.-P. Zhang, F. J. Janzen, and W.-G. Du. 2018. Female lizards choose warm, moist nests that improve embryonic survivorship and offspring fitness. **Functional Ecology** 32:416–423.
147. McGlashan, J. K.<sup>†</sup>, M. B. Thompson, F. J. Janzen, and R.-J. Spencer. 2018. Environmentally-induced phenotypic plasticity explains hatching synchrony in the freshwater turtle *Chrysemys picta*. **Journal of Experimental Zoology** 329: in press.
146. \*Mitchell, T. S.<sup>s</sup>, F. J. Janzen, and D. A. Warner. 2018. Quantifying the effects of embryonic phenotypic plasticity on adult phenotypes in reptiles: a review of current knowledge and major gaps. **Journal of Experimental Zoology** 329: (doi: 10.1002/jez.2187).
145. Polich, R. L.<sup>s</sup>, B. L. Bodensteiner<sup>s</sup>, C. I. M. Adams<sup>s</sup>, and F. J. Janzen. 2018. Effects of augmented corticosterone in painted turtle eggs on offspring development and behavior. **Physiology and Behavior** 183:1–9.
144. Sethuraman, A., F. J. Janzen, M. Rubio<sup>†</sup>, Y. Vasquez<sup>†</sup>, and J. J. Obrycki. 2018. Demographic histories of three predatory lady beetles reveal complex patterns of diversity and population size change in the United States. **Insect Science** 25: (doi: 10.1111/1744-7917.12481).

2017

143. Delaney, D. M.<sup>s</sup>, F. J. Janzen, and D. A. Warner. 2017. Nesting stage and distance to refuge influence terrestrial nesting behavior of Painted Turtles (*Chrysemys picta*). **Canadian Journal of Zoology** 95:837–841.
142. Edge, C., N. Rollinson, R. J. Brooks, J. D. Congdon, J. B. Iverson, F. J. Janzen, and J. D. Litzgus. 2017. Phenotypic plasticity of nest timing in a post-glacial landscape: how do reptiles adapt to seasonal time constraints? **Ecology** 98:512–524.
141. Mitchell, T. S.<sup>s</sup>, J. M. Refsnider<sup>s</sup>, A. Sethuraman<sup>s</sup>, D. A. Warner<sup>s</sup>, and F. J. Janzen. 2017. Experimental assessment of winter conditions on turtle nesting behaviour. **Evolutionary Ecology Research** 18:271–280.
140. Telemeco, R. S.<sup>s</sup>, E. J. Gangloff<sup>†</sup>, G. A. Cordero<sup>s</sup>, R. L. Polich<sup>s</sup>, A. M. Bronikowski, and F. J. Janzen. 2017. Physiology at near-critical temperatures, but not critical limits, varies between two lizard species that partition the thermal environment. **Journal of Animal Ecology** 86:1510–1522.
139. Warner, D. A.<sup>s</sup>, T. S. Mitchell<sup>s</sup>, B. L. Bodensteiner<sup>s</sup>, and F. J. Janzen. 2017. The effect of hormone manipulations on sex ratios varies with environmental conditions in a turtle with temperature-dependent sex determination. **Journal of Experimental Zoology** 327:172–181.

2016

138. Mitchell, S. M.<sup>s</sup>, B. L. Bodensteiner<sup>s</sup>, J. T. Strickland, J. K. Quick<sup>†</sup>, and F. J. Janzen. 2016. Habitat alteration and survival rates of the ornate box turtle. **Journal of Wildlife Management** 80:1503–1508.
137. \*Refsnider, J. M., and F. J. Janzen. 2016. Temperature-dependent sex determination under rapid anthropogenic environmental change: evolution at a turtle's pace? **Journal of Heredity** 107:61–70.
136. Santos, R. G., H. T. Pinheiro, F. Coelho, A. S. Martins, P. Riul, S. C. Bruno, F. J. Janzen, and C. C. Ioannou. 2016. The anti-predator role of within-nest emergence synchrony in sea turtle hatchlings. **Proceedings of the Royal Society of London B** 283: (doi: 10.1098/rspb.2016.0697).

135. Schwanz, L. E., G. A. Cordero<sup>s</sup>, E. L. Charnov, and F. J. Janzen. 2016. Sex-specific survival to maturity and the evolution of environmental sex determination. **Evolution** 70:329–341.
134. Telemeco, R. S.<sup>s</sup>, E. J. Gangloff<sup>r</sup>, G. A. Cordero<sup>s</sup>, T. S. Mitchell<sup>s</sup>, B. L. Bodensteiner<sup>s</sup>, K. G. Holden<sup>r</sup>, S. M. Mitchell<sup>s</sup>, R. L. Polich<sup>s</sup>, and F. J. Janzen. 2016. Reptile embryos lack the opportunity to thermoregulate by moving within the egg. **American Naturalist** 188:E13–E27.
133. Voves, K. C.<sup>s</sup>, T. S. Mitchell<sup>s</sup>, and F. J. Janzen. 2016. Does natural visual camouflage reduce turtle nest predation? **American Midland Naturalist** 176:176–182.
132. Warner, D. A.<sup>s</sup>, A. M. Bronikowski, D. A. W. Miller, and F. J. Janzen. 2016. Decades of field data reveal that turtles senesce in the wild. **Proceedings of the National Academy of Sciences USA** 113:6502–6507.
- 2015
131. Bodensteiner, B. L.<sup>s</sup>, T. S. Mitchell<sup>s</sup>, J. T. Strickland, and F. J. Janzen. 2015. Hydric conditions during incubation influence phenotypes of neonatal reptiles in the field. **Functional Ecology** 29:710–717.
130. McGaugh, S. E., A. M. Bronikowski, C.-H. Kuo, D. M. Reding, E. A. Addis, L. E. Flagel, F. J. Janzen, and T. S. Schwartz<sup>r</sup>. 2015. Rapid molecular evolution across amniotes of the IIS/TOR network. **Proceedings of the National Academy of Sciences USA** 112:7055–7060.
129. Mitchell, T. S.<sup>s</sup>, J. A. Maciel<sup>s</sup>, and F. J. Janzen. 2015. Maternal effects influence phenotypes and survival during early life stages in an aquatic turtle. **Functional Ecology** 29:268–276.
128. Refsnider, J. M.<sup>s</sup>, A. M. Reedy<sup>r</sup>, D. A. Warner<sup>s</sup>, and F. J. Janzen. 2015. Do trade-offs between predation pressures on females versus nests drive nest-site choice in painted turtles? **Biological Journal of the Linnean Society** 117:847–855.
127. Sethuraman, A.<sup>s</sup>, F. J. Janzen, and J. Obrycki. 2015. Population genetics of the predatory lady beetle *Hippodamia convergens*. **Biological Control** 84:1–10.
- 2014
126. Cordero, G. A.<sup>s</sup>, and F. J. Janzen. 2014. An enhanced developmental staging table for the painted turtle, *Chrysemys picta* (Testudines: Emydidae). **Journal of Morphology** 275:442–455.
125. Jergenson, A. M.<sup>s</sup>, D. A. W. Miller, L. A. Neuman-Lee<sup>s</sup>, D. A. Warner<sup>s</sup>, and F. J. Janzen. 2014. Swimming against the tide: resilience of a riverine turtle to recurrent extreme environmental events. **Biology Letters** 10: (doi: 10.1098/rsbl.2013.0782).
124. Refsnider, J. M.<sup>s</sup>, C. L. Milne-Zelman, D. A. Warner<sup>s</sup>, and F. J. Janzen. 2014. Population sex ratios under differing local climates in a reptile with environmental sex determination. **Evolutionary Ecology** 28:977–989.
123. Sethuraman, A.<sup>s</sup>, S. E. McGaugh<sup>s</sup>, M. L. Becker<sup>s</sup>, C. H. Chandler<sup>s</sup>, J. L. Christiansen, S. Hayden, A. LeClere<sup>s</sup>, J. Monson-Miller<sup>s</sup>, E. M. Myers<sup>s</sup>, R. T. Paitz<sup>s</sup>, J. M. Refsnider<sup>s</sup>, T. VanDeWalle, and F. J. Janzen. 2014. Population genetics of Blanding’s turtle (*Emys blandingii*) in the midwestern United States. **Conservation Genetics** 15:61–73.
122. Spencer, R.-J.<sup>s</sup>, and F. J. Janzen. 2014. A novel hypothesis for the adaptive maintenance of environmental sex determination in a turtle. **Proceedings of the Royal Society of London B** 281: (doi: 10.1098/rsbl.2014.0831).
121. Warner, D. A.<sup>s</sup>, E. Addis, W.-G. Du, T. Wibbels, and F. J. Janzen. 2014. Exogenous application of estradiol to eggs unexpectedly induces male development in two turtle species with temperature-dependent sex determination. **General and Comparative Endocrinology** 206:16–23.
- 2013
120. Cordero, G. A.<sup>s</sup>, and F. Janzen. 2013. Does life history affect molecular evolutionary rates? **Nature Education Knowledge** 4(4):1.
119. Mitchell, T. S.<sup>s</sup>, J. A. Maciel<sup>s</sup>, and F. J. Janzen. 2013. Does sex-ratio selection influence nest-site choice in a reptile with temperature-dependent sex determination? **Proceedings of the Royal Society of London B** 280: (doi: 10.1098/rspb.2013.2460) [highlighted as Editors’ Choice in Science].
118. Mitchell, T. S.<sup>s</sup>, D. A. Warner<sup>s</sup>, and F. J. Janzen. 2013. Phenotypic and fitness consequences of maternal nest-site choice across multiple early life stages. **Ecology** 94:336–345.

117. Refsnider, J. M.<sup>§</sup>, B. L. Bodensteiner<sup>§</sup>, J. L. Reneker<sup>§</sup>, and F. J. Janzen. 2013. Nest depth may not compensate for sex ratio skews caused by climate change in turtles. **Animal Conservation** 16:481–490 [[cover feature](#) and [featured article](#)].
116. Refsnider, J. M.<sup>§</sup>, B. L. Bodensteiner<sup>§</sup>, J. L. Reneker<sup>§</sup>, and F. J. Janzen. 2013. Experimental field studies of species' responses to climate change: challenges and future directions. **Animal Conservation** 16:498–499.
115. Refsnider, J. M.<sup>§</sup>, D. A. Warner<sup>§</sup>, and F. J. Janzen. 2013. Does shade cover availability limit nest-site choice in two populations of a turtle with temperature-dependent sex determination? **Journal of Thermal Biology** 38:152–158.
114. Shaffer, H. B., P. Minx, D. E. Warren, A. M. Shedlock, R. C. Thomson, N. Valenzuela, J. Abramyan, C. T. Amemiya, D. Badenhorst, K. K. Biggar, G. M. Borchert, C. W. Botka, R. M. Bowden, E. L. Braun, A. M. Bronikowski, B. G. Bruneau, L. T. Buck, B. Capel, T. A. Castoe, M. Czerwinski, K. D. Delehaunty, S. W. Edwards, C. C. Fronick, M. K. Fujita, L. Fulton, T. A. Graves, R. E. Green, W. Haerty, R. Hariharan, O. Hernandez, L. W. Hillier, A. K. Holloway, D. Janes, F. J. Janzen, C. Kandoth, L. Kong, A. P. J. de Koning, Y. Li, R. Literman, S. E. McGaugh<sup>§</sup>, L. Mork, M. O'Laughlin, R. T. Paitz, D. D. Pollock, C. P. Ponting, S. Radhakrishnan, B. J. Raney, J. M. Richman, J. St. John, T. Schwartz, A. Sethuraman<sup>§</sup>, P. Q. Spinks, K. B. Storey, N. Thane, T. Vinar, L. M. Zimmerman, W. C. Warren, E. R. Mardis, and R. K. Wilson. 2013. The western painted turtle genome, a model for the evolution of extreme physiological adaptations in a slowly evolving lineage. **Genome Biology** 14:R28.
113. Telemeco, R. S.<sup>§</sup>, K. C. Abbott, and F. J. Janzen. 2013. Modeling the effects of climate change-induced shifts in reproductive phenology on temperature-dependent traits. **American Naturalist** 181:637–648.
112. Telemeco, R. S.<sup>§</sup>, D. A. Warner<sup>§</sup>, M. K. Reida<sup>§</sup>, and F. J. Janzen. 2013. Extreme developmental temperatures result in morphological abnormalities in painted turtles (*Chrysemys picta*): a climate change perspective. **Integrative Zoology** 8:197–208.
- 2012
111. Chandler, C. H.<sup>§</sup>, G. E. Chadderdon<sup>§</sup>, P. C. Phillips, I. Dworkin, and F. J. Janzen. 2012. Experimental evolution of the *Caenorhabditis elegans* sex determination pathway. **Evolution** 66:82–93 [[highlighted on NSF web site](#)].
110. Refsnider, J. M.<sup>§</sup>, and F. J. Janzen. 2012. Behavioural plasticity may compensate for climate change in a long-lived reptile with temperature-dependent sex determination. **Biological Conservation** 152:90–95.
109. Refsnider, J. M.<sup>§</sup>, J. Strickland, and F. J. Janzen. 2012. Home range and site fidelity of imperiled ornate box turtles (*Terrapene ornata*) in northwestern Illinois. **Chelonian Conservation and Biology** 11:78–83.
108. Steen, D. A.<sup>‡</sup>, J. P. Gibbs, K. A. Buhlmann, J. L. Carr, B. W. Compton, J. D. Congdon, J. S. Doody, J. C. Godwin, K. L. Holcomb, D. R. Jackson, F. J. Janzen, G. Johnson, M. T. Jones, J. T. Lamer, T. A. Langen, M. V. Plummer, J. W. Rowe, R. A. Saumure, J. K. Tucker, and D. S. Wilson. 2012. Terrestrial habitat requirements of nesting freshwater turtles. **Biological Conservation** 150:121–128.
107. Wheelwright, N. T., J. P. Sinclair<sup>‡</sup>, C. Hochwender<sup>‡</sup>, and F. J. Janzen. 2012. Leaf size in three generations of a dioecious tropical tree, *Ocotea tenera* (Lauraceae): sexual dimorphism and changes with age. **American Journal of Botany** 99:1–6.
- 2011
106. Bowden, R. M.<sup>§</sup>, R. T. Paitz<sup>§</sup>, and F. J. Janzen. 2011. The ontogeny of postmaturation resource allocation in turtles. **Physiological and Biochemical Zoology** 84:204–211.
105. McGaugh, S. E.<sup>§</sup>, R. M. Bowden<sup>§</sup>, C.-H. Kuo<sup>§</sup>, and F. J. Janzen. 2011. Field-measured heritability of the threshold for sex determination in a turtle with temperature-dependent sex determination. **Evolutionary Ecology Research** 13:75–90.
104. McGaugh, S. E.<sup>§</sup>, and F. J. Janzen. 2011. Effective heritability of targets of sex-ratio selection under environmental sex determination. **Journal of Evolutionary Biology** 24:784–794.
103. Neuman-Lee, L. A.<sup>§</sup>, and F. J. Janzen. 2011. Atrazine exposure impacts behavior and survivorship of neonatal turtles. **Herpetologica** 67:23–31.

102. Neuman-Lee, L. A.<sup>s</sup>, S. E. McGaugh<sup>s</sup>, M. Pfrender, and F. J. Janzen. 2011. Using mitochondrial DNA to determine the identity and origin of a gartersnake found in Alaska. **Journal of Herpetology** 45:63–65.
101. Refsnider, J. M.<sup>s</sup>, T. S. Mitchell<sup>s</sup>, H. M. Streby<sup>r</sup>, J. T. Strickland, D. A. Warner<sup>s</sup>, and F. J. Janzen. 2011. A generalized method to determine detectability of rare and cryptic species using the ornate box turtle as a model. **Wildlife Society Bulletin** 35:93–100.
100. \*Spencer, R.-J., and F. J. Janzen. 2011. Hatching behavior in turtles. **Integrative and Comparative Biology** 51:100–110.
- 2010
99. Colbert, P. L.<sup>s</sup>, R.-J. Spencer<sup>s</sup>, and F. J. Janzen. 2010. Mechanism and cost of synchronous hatching. **Functional Ecology** 24:112–121.
98. McGaugh, S. E.<sup>s</sup>, L. E. Schwanz<sup>s</sup>, R. M. Bowden<sup>s</sup>, J. E. Gonzalez<sup>s</sup>, and F. J. Janzen. 2010. Inheritance of nesting behaviour across natural environmental variation in a turtle with temperature-dependent sex determination. **Proceedings of the Royal Society of London B** 277:1219–1226.
97. Mitchell, N. J., and F. J. Janzen. 2010. Temperature-dependent sex determination and contemporary climate change. **Sexual Development** 4:129–140.
96. \*Refsnider, J. M.<sup>s</sup>, and F. J. Janzen. 2010. Putting eggs in one basket: ecological and evolutionary hypotheses for variation in oviposition-site choice. **Annual Review of Ecology, Evolution, and Systematics** 41:39–57.
95. Schwanz, L. E.<sup>s</sup>, F. J. Janzen, and S. R. Proulx. 2010. Sex allocation based on relative and absolute condition. **Evolution** 64:1331–1345.
94. Schwanz, L. E.<sup>s</sup>, R.-J. Spencer<sup>s</sup>, R. M. Bowden<sup>s</sup>, and F. J. Janzen. 2010. Climate and predation dominate juvenile and adult recruitment in a turtle with temperature-dependent sex determination. **Ecology** 91:3016–3026.
93. Spencer, R.-J.<sup>s</sup>, and F. J. Janzen. 2010. Demographic consequences of adaptive growth and the ramifications for conservation of long-lived organisms. **Biological Conservation** 143:1951–1959.
92. Strickland, J.<sup>s</sup>, P. Colbert<sup>s</sup>, and F. J. Janzen. 2010. Experimental analysis of effects of markers and habitat structure on predation of turtle nests. **Journal of Herpetology** 44:467–470.
91. Strickland, J. T.<sup>s</sup>, and F. J. Janzen. 2010. Impacts of anthropogenic structures on predation of painted turtle (*Chrysemys picta*) nests. **Chelonian Conservation and Biology** 9:131–135.
90. Warner, D. A.<sup>s</sup>, C. Jorgenson<sup>r</sup>, and F. J. Janzen. 2010. Maternal and abiotic effects on egg mortality and hatchling size of turtles: temporal variation in selection over seven years. **Functional Ecology** 24:857–866.
- 2009
89. Chandler, C. H.<sup>s</sup>, and F. J. Janzen. 2009. The phylogenetic position of the snapping turtles (Chelydridae) based on nucleotide sequence data. **Copeia** 2009:209–213.
88. Chandler, C. H.<sup>s</sup>, P. C. Phillips, and F. J. Janzen. 2009. The evolution of sex-determining mechanisms: lessons from temperature-sensitive mutations in sex determination genes in *Caenorhabditis elegans*. **Journal of Evolutionary Biology** 22:192–200.
87. Janzen, F. J., and D. A. Warner<sup>s</sup>. 2009. Parent-offspring conflict and selection on egg size in turtles. **Journal of Evolutionary Biology** 22:2222–2230.
86. Schwanz, L. E.<sup>s</sup>, R. M. Bowden<sup>s</sup>, R.-J. Spencer<sup>s</sup>, and F. J. Janzen. 2009. Nesting ecology and offspring recruitment in a long-lived turtle. **Ecology** 90:1709.
- 2008
85. Bowen, K. D.<sup>s</sup>, and F. J. Janzen. 2008. Human recreation and the nesting ecology of a freshwater turtle (*Chrysemys picta*). **Chelonian Conservation and Biology** 7:95–100.
84. McGaugh, S. E.<sup>s</sup>, C. M. Eckerman<sup>s</sup>, and F. J. Janzen. 2008. Molecular phylogeography of *Apalone spinifera* (Reptilia, Trionychidae). **Zoologica Scripta** 37:289–304.
83. Schwanz, L. E.<sup>s</sup>, and F. J. Janzen. 2008. Climate change and temperature-dependent sex determination: can individual plasticity in nesting phenology prevent extreme sex ratios? **Physiological and Biochemical Zoology** 81:826–834.
82. Tucker, J. K., G. L. Paukstis, and F. J. Janzen. 2008. Does predator swamping promote synchronous emergence of turtle hatchlings among nests? **Behavioral Ecology** 19:35–40.

2007

81. \*Alacs, E. A.<sup>s</sup>, F. J. Janzen, and K. T. Scribner. 2007. Genetic issues in freshwater turtle and tortoise conservation. **Chelonian Research Monographs** 4:107–123.
80. Janzen, F. J., J. K. Tucker, and G. L. Paukstis. 2007. Experimental analysis of an early life-history stage: direct or indirect selection on body size of hatchling turtles? **Functional Ecology** 21:162–170.
79. Paitz, R. T.<sup>s</sup>, H. K. Harms<sup>s</sup>, R. M. Bowden<sup>s</sup>, and F. J. Janzen. 2007. Experience pays: offspring survival increases with female age. **Biology Letters** 3:44–46.
78. St. Juliana, J. R.<sup>s</sup>, and F. J. Janzen. 2007. Can natural phenotypic variances be estimated reliably under homogeneous laboratory conditions? **Journal of Evolutionary Biology** 20:1406–1414.

2006

77. Janzen, F. J., and P. C. Phillips. 2006. Exploring the evolution of environmental sex determination, especially in reptiles. **Journal of Evolutionary Biology** 19:1775–1784.
76. Mullins, M. A.<sup>s</sup>, and F. J. Janzen. 2006. Phenotypic effects of thermal means and variances on smooth softshell turtle (*Apalone mutica*) embryos and hatchlings. **Herpetologica** 62:27–36.
75. Myers, E. M.<sup>s</sup>, F. J. Janzen, D. C. Adams, and J. K. Tucker. 2006. Quantitative genetics of plastron shape in slider turtles (*Trachemys scripta*). **Evolution** 60:563–572 [cover feature].
74. Spencer, R.-J.<sup>s</sup>, F. J. Janzen, and M. B. Thompson. 2006. Counterintuitive density-dependent growth in a long-lived vertebrate after removal of nest predators. **Ecology** 87:3109–3118.

2005

73. Bowen, K. D.<sup>s</sup>, and F. J. Janzen. 2005. Rainfall and depredation of nests of the painted turtle, *Chrysemys picta*. **Journal of Herpetology** 39:649–652.
72. Bowen, K. D.<sup>s</sup>, R.-J. Spencer<sup>s</sup>, and F. J. Janzen. 2005. A comparative study of environmental factors that affect nesting in Australian and North American freshwater turtles. **Journal of Zoology** 267:397–404.
71. Harms, H. K.<sup>s</sup>, R. T. Paitz<sup>s</sup>, R. M. Bowden<sup>s</sup>, and F. J. Janzen. 2005. Age and season impact resource allocation to eggs and nesting behavior in the painted turtle. **Physiological and Biochemical Zoology** 78:996–1004.
70. Krenz, J. G.<sup>s</sup>, G. J. P. Naylor, H. B. Shaffer, and F. J. Janzen. 2005. Molecular phylogenetics and evolution of turtles. **Molecular Phylogenetics and Evolution** 37:178–191.
69. Willette, D. A. S.<sup>s</sup>, J. K. Tucker, and F. J. Janzen. 2005. Linking climate and physiology at the population level for a key life-history stage of turtles. **Canadian Journal of Zoology** 83:845–850.

2004

68. Bowden, R. M.<sup>s</sup>, H. K. Harms<sup>s</sup>, R. T. Paitz<sup>s</sup>, and F. J. Janzen. 2004. Does optimal egg size vary with demographic stage because of a physiological constraint? **Functional Ecology** 18:522–529.
67. Bowen, K. D.<sup>s</sup>, P. L. Colbert<sup>s</sup>, and F. J. Janzen. 2004. Survival and recruitment in a human-impacted population of ornate box turtles, *Terrapene ornata*, with recommendations for conservation and management. **Journal of Herpetology** 38:562–568.
66. Kuo, C.-H.<sup>s</sup>, and F. J. Janzen. 2004. Genetic effects of a persistent bottleneck on a natural population of ornate box turtles (*Terrapene ornata*). **Conservation Genetics** 5:425–437.
65. St. Juliana, J. R.<sup>s</sup>, R. M. Bowden<sup>s</sup>, and F. J. Janzen. 2004. The impact of behavioral and physiological maternal effects on offspring sex ratio in the common snapping turtle, *Chelydra serpentina*. **Behavioral Ecology and Sociobiology** 56:270–278.

2003

64. Ashmore, G. M.<sup>s</sup>, and F. J. Janzen. 2003. Phenotypic variation in smooth softshell turtles (*Apalone mutica*) from eggs incubated in constant versus fluctuating temperatures. **Oecologia** 134:182–188.
63. Kuo, C.-H.<sup>s</sup>, and F. J. Janzen. 2003. BottleSim: a bottleneck simulation program for long-lived species with overlapping generations. **Molecular Ecology Notes** 3:669–673. (Software available at <http://www.arches.uga.edu/~chkuo/setsoft.html>)
62. Morjan, C. L.<sup>s</sup>, and F. J. Janzen. 2003. Nest temperature is not related to egg size in a turtle with temperature-dependent sex determination. **Copeia** 2003:366–372.

61. Starkey, D. E., H. B. Shaffer, R. L. Burke, M. R. J. Forstner, J. B. Iverson, F. J. Janzen, A. G. J. Rhodin, and G. R. Ultsch. 2003. Molecular systematics, phylogeography, and the effects of Pleistocene glaciation in the painted turtle (*Chrysemys picta*) complex. **Evolution** 57:119–128.
60. Valenzuela, N., D. C. Adams, and F. J. Janzen. 2003. Pattern does not equal process: exactly when is sex environmentally determined? **American Naturalist** 161:676–683.
- 2002
59. Filoramo, N. I.<sup>s</sup>, and F. J. Janzen. 2002. An experimental study of the influence of embryonic water availability, body size, and clutch on survivorship of neonatal red-eared sliders, *Trachemys scripta elegans*. **Herpetologica** 58:67–74.
58. Janzen, F. J., J. G. Krenz<sup>s</sup>, T. S. Haselkorn<sup>s</sup>, E. D. Brodie Jr., and E. D. Brodie III. 2002. Molecular phylogeography of common garter snakes (*Thamnophis sirtalis*) in western North America: implications for regional historical forces. **Molecular Ecology** 11:1739–1751.
57. Janzen, F. J., and C. L. Morjan<sup>s</sup>. 2002. Egg size, incubation temperature, and posthatching growth in painted turtles (*Chrysemys picta*). **Journal of Herpetology** 36:308–311.
56. Janzen, F. J., M. E. Wilson<sup>r</sup>, J. K. Tucker, and S. P. Ford. 2002. Experimental manipulation of steroid concentrations in circulation and in egg yolks of turtles. **Journal of Experimental Zoology** 293:58–66.
55. Kolbe, J. J.<sup>s</sup>, and F. J. Janzen. 2002. Spatial and temporal dynamics of turtle nest predation: edge effects. **Oikos** 99:538–544.
54. Kolbe, J. J.<sup>s</sup>, and F. J. Janzen. 2002. Experimental analysis of an early life-history stage: water loss and migrating hatchling turtles. **Copeia** 2002:220–226.
53. Kolbe, J. J.<sup>s</sup>, and F. J. Janzen. 2002. Impact of nest-site selection on nest success and nest temperature in natural and disturbed habitats. **Ecology** 83:269–281.
52. Packard, G. C., M. J. Packard, C. L. Morjan<sup>s</sup>, and F. J. Janzen. 2002. Cold-tolerance of hatchling painted turtles (*Chrysemys picta bellii*) from the southern limit of distribution. **Journal of Herpetology** 36:300–304.
51. Pearse, D. E.<sup>r</sup>, F. J. Janzen, and J. C. Avise. 2002. Multiple paternity, sperm storage, and reproductive success of female and male painted turtles (*Chrysemys picta*) in nature. **Behavioral Ecology and Sociobiology** 51:164–171.
- 2001
50. Janzen, F. J., and C. L. Morjan<sup>s</sup>. 2001. Repeatability of microenvironment-specific nesting behaviour in a turtle with environmental sex determination. **Animal Behaviour** 62:73–82.
49. Kolbe, J. J.<sup>s</sup>, and F. J. Janzen. 2001. The influence of propagule size and maternal nest-site selection on survival and behaviour of neonate turtles. **Functional Ecology** 15:772–781.
48. Pearse, D. E.<sup>r</sup>, C. M. Eckerman<sup>s</sup>, F. J. Janzen, and J. C. Avise. 2001. A genetic analogue of “mark-recapture” methods for estimating local population size: an approach based on molecular parentage assessments. **Molecular Ecology** 10:2711–2718.
47. Pearse, D. E.<sup>r</sup>, F. J. Janzen, and J. C. Avise. 2001. Genetic markers substantiate long-term storage and utilization of sperm by female painted turtles. **Heredity** 86:378–384.
46. Tucker, J. K., G. L. Paukstis, and F. J. Janzen. 2001. Short-term water potential fluctuations and eggs of the red-eared slider (*Trachemys scripta elegans*). **Transactions of the Illinois State Academy of Science** 94:27–35.
45. Valenzuela, N.<sup>s</sup>, and F. J. Janzen. 2001. Nest-site philopatry and the evolution of temperature-dependent sex determination. **Evolutionary Ecology Research** 3:779–794.
- 2000
44. Janzen, F. J., J. K. Tucker, and G. L. Paukstis. 2000. Experimental analysis of an early life-history stage: avian predation selects for larger body size of hatchling turtles. **Journal of Evolutionary Biology** 13:947–954.
43. Janzen, F. J., J. K. Tucker, and G. L. Paukstis. 2000. Experimental analysis of an early life-history stage: selection on size of hatchling turtles. **Ecology** 81:2290–2304.
42. Weisrock, D. W.<sup>s</sup>, and F. J. Janzen. 2000. Comparative molecular phylogeography of North American softshell turtles (*Apalone*): implications for regional and wide-scale historical evolutionary forces. **Molecular Phylogenetics and Evolution** 14:152–164.

1999

41. Filoramo, N. I.<sup>s</sup>, and F. J. Janzen. 1999. Effects of hydric conditions during incubation on overwintering hatchlings of the red-eared slider turtle (*Trachemys scripta elegans*). **Journal of Herpetology** 33:29–35.
40. O'Steen, S.<sup>r</sup>, and F. J. Janzen. 1999. Embryonic temperature affects metabolic compensation and thyroid hormones in hatchling snapping turtles. **Physiological and Biochemical Zoology** 72:520–533.
39. Paukstis, G. L., J. K. Tucker, A. M. Bronikowski, and F. J. Janzen. 1999. Survivorship of aerially-exposed zebra mussels (*Dreissena polymorpha*) under laboratory conditions. **Journal of Freshwater Ecology** 14:511–517.
38. Reed, W. L.<sup>s</sup>, and F. J. Janzen. 1999. Natural selection by avian predators on size and colour of a freshwater snail (*Pomacea flagellata*). **Biological Journal of the Linnean Society** 67:331–342.
37. Tucker, J. K., N. I. Filoramo<sup>s</sup>, and F. J. Janzen. 1999. Size-biased mortality due to predation in a nesting freshwater turtle, *Trachemys scripta*. **American Midland Naturalist** 141:198–203.
36. Weisrock, D. W.<sup>s</sup>, and F. J. Janzen. 1999. Thermal and fitness-related consequences of nest location in painted turtles (*Chrysemys picta*). **Functional Ecology** 13:94–101.

1998

35. Janzen, F. J., and H. S. Stern. 1998. Logistic regression for empirical studies of multivariate selection. **Evolution** 52:1564–1571.  
(Software available at <http://www.public.iastate.edu/~fjanzen/software/regress.htm>)
34. Janzen, F. J., M. E. Wilson<sup>r</sup>, J. K. Tucker, and S. P. Ford. 1998. Endogenous yolk steroid hormones in turtles with different sex-determining mechanisms. **General and Comparative Endocrinology** 111:306–317.
33. Tucker, J. K., N. I. Filoramo<sup>s</sup>, G. L. Paukstis, and F. J. Janzen. 1998. Residual yolk in captive and wild-caught hatchlings of the red-eared slider turtle (*Trachemys scripta elegans*). **Copeia** 1998:488–492.
32. Tucker, J. K., N. I. Filoramo<sup>s</sup>, G. L. Paukstis, and F. J. Janzen. 1998. Response of red-eared slider, *Trachemys scripta elegans*, eggs to slightly differing water potentials. **Journal of Herpetology** 32:124–128.
31. Tucker, J. K., and F. J. Janzen. 1998. Order of oviposition and egg size in the red-eared slider turtle (*Trachemys scripta elegans*). **Canadian Journal of Zoology** 76:377–380.
30. Tucker, J. K., F. J. Janzen, and G. L. Paukstis. 1998. Variation in carapace morphology and reproduction in the red-eared slider *Trachemys scripta elegans*. **Journal of Herpetology** 32:294–298.
29. Tucker, J. K., G. L. Paukstis, and F. J. Janzen. 1998. Annual and local variation in reproduction in the red-eared slider, *Trachemys scripta elegans*. **Journal of Herpetology** 32:515–526.
28. Weisrock, D. W.<sup>s</sup>, T. S. Haselkorn<sup>s</sup>, and F. J. Janzen. 1998. Lack of genetic variation in cytochrome *b* in a population of smooth softshell turtles. **Journal of the Iowa Academy of Sciences** 105:158–160.

1997

27. Paukstis, G. L., F. J. Janzen, and J. K. Tucker. 1997. Comparative survivorship of sympatric native North American gastropods (*Anguispira*, *Mesodon*, *Physella*, *Pleurocera*) and an introduced bivalve (*Dreissena*) exposed to freezing temperatures. **Veliger** 40:67–70.
26. Tucker, J. K., and F. J. Janzen. 1997. Incidence of twinning in turtles. **Copeia** 1997:166–173.
25. Tucker, J. K., F. J. Janzen, and G. L. Paukstis. 1997. Response of embryos of the red-eared turtle (*Trachemys scripta elegans*) to experimental exposure to water-saturated substrates. **Chelonian Conservation and Biology** 2:345–351.
24. Tucker, J. K., C. H. Theiling, F. J. Janzen, and G. L. Paukstis. 1997. Sensitivity to aerial exposure: potential of system-wide drawdowns to manage zebra mussels in the Mississippi River. **Regulated Rivers: Research & Management** 13:479–487.

1996

23. Brodie, E. D., III, and F. J. Janzen. 1996. On the assignment of fitness values in statistical analyses of selection. **Evolution** 50:437–442.
22. Packard, G. C., and F. J. Janzen. 1996. Interpopulational variation in the cold-tolerance of hatchling painted turtles. **Journal of Thermal Biology** 21:183–190.



21. Paukstis, G. L., F. J. Janzen, and J. K. Tucker. 1996. Response of aerially-exposed zebra mussels (*Dreissena polymorpha*) to subfreezing temperatures. **Journal of Freshwater Ecology** 11:513–519.
20. Tucker, J. K., F. J. Janzen, and G. L. Paukstis. 1996. Laboratory survivorship of aerially exposed pond snails (*Physella integra*) from Illinois. **Transactions of the Illinois State Academy of Science** 89:225–231.

1995

19. Brodie, E. D., III, and F. J. Janzen. 1995. Experimental studies of coral snake mimicry: generalized avoidance of banded snake patterns by free-ranging avian predators. **Functional Ecology** 9:186–190.
18. Brodie, E. D., III, A. J. Moore, and F. J. Janzen. 1995. Visualizing and quantifying natural selection. **Trends in Ecology and Evolution** 10:313–318.
17. Janzen, F. J. 1995. Experimental evidence for the evolutionary significance of temperature-dependent sex determination. **Evolution** 49:864–873. (Corrigendum: **Evolution** 50:1368).
16. Janzen, F. J., J. C. Ast, and G. L. Paukstis. 1995. Influence of the hydric environment and clutch on eggs and embryos of two sympatric map turtles. **Functional Ecology** 9:913–922.
15. Janzen, F. J., and E. D. Brodie III. 1995. Visually-oriented foraging in a natural population of herbivorous lizards (*Ctenosaura similis*). **Journal of Herpetology** 29:132–136.

Pre-1995

14. Janzen, F. J. 1994. Vegetational cover predicts the sex ratio of hatchling turtles in natural nests. **Ecology** 75:1593–1599.
13. Janzen, F. J. 1994. Climate change and temperature-dependent sex determination in reptiles. **Proceedings of the National Academy of Sciences USA** 91:7487–7490.
12. Janzen, F. J. 1993. An experimental analysis of natural selection on body size of hatchling turtles. **Ecology** 74:332–341.
11. Janzen, F. J. 1993. The influence of incubation temperature and family on eggs, embryos, and hatchlings of the smooth softshell turtle (*Apalone mutica*). **Physiological Zoology** 66:349–373.
10. Paukstis, G. L., and F. J. Janzen. 1993. The status and biogeography of the three-toed box turtle, *Terrapene carolina triunguis*, in Illinois. **Transactions of the Illinois State Academy of Science** 86:173–177.
9. Janzen, F. J. 1992. Heritable variation for sex ratio under environmental sex determination in the common snapping turtle (*Chelydra serpentina*). **Genetics** 131:155–161.
8. Janzen, F. J., G. L. Paukstis, and E. D. Brodie III. 1992. Observations on basking behavior of hatchling turtles in the wild. **Journal of Herpetology** 26:217–219.
7. Janzen, F. J., and G. L. Paukstis. 1991. A preliminary test of the adaptive significance of environmental sex determination in reptiles. **Evolution** 45:435–440.
6. Janzen, F. J., and G. L. Paukstis. 1991. Environmental sex determination in reptiles: ecology, evolution, and experimental design. **Quarterly Review of Biology** 66:149–179.
5. Janzen, F. J., G. C. Packard, M. J. Packard, T. J. Boardman, and J. R. zumBrunnen. 1990. Mobilization of lipid and protein by embryonic snapping turtles in wet and dry environments. **Journal of Experimental Zoology** 255:155–162.
4. Janzen, F. J., and E. D. Brodie III. 1989. Tall tails and sexy males: sexual behavior of rough-skinned newts (*Taricha granulosa*) in a natural breeding pond. **Copeia** 1989:1064–1067.
3. Paukstis, G. L., R. D. Shuman, and F. J. Janzen. 1989. Supercooling and freeze tolerance in hatchling painted turtles (*Chrysemys picta*). **Canadian Journal of Zoology** 67:1082–1084.
2. Paukstis, G. L., and F. J. Janzen. 1988. An additional specimen of *Terrapene carolina triunguis* (Reptilia: Testudines) from southern Illinois. **Transactions of the Illinois State Academy of Science** 81:283–286.
1. McAuliffe, J. R., and F. J. Janzen. 1986. Effects of intraspecific crowding on water uptake, water storage, apical growth, and reproductive potential in the sahuaro cactus, *Carnegiea gigantea*. **Botanical Gazette** 147:334–341.

**Book chapters:**

5. Miller, D. A. W., F. J. Janzen, G. M. Fellers, P. M. Kleeman, and A. M. Bronikowski. 2014. Biodemography of ectothermic tetrapods provides insights into the evolution and plasticity of mortality patterns. Pp. 295–314 in M. Lane and M. Weinstein (eds.), “Sociality, Hierarchy, Health: Comparative Biodemography: Papers from a Workshop.” National Academies Press, Washington, DC.
4. \*Warner, D. A.<sup>s</sup>, and F. J. Janzen. 2010. Diversity of sex-determining mechanisms. Pp. 81–83 in D. F. Westneat and C. W. Fox (eds.), “Evolutionary Behavioral Ecology.” Oxford University Press, New York, NY. [cover photo]
3. \*Janzen, F. J. 2008. Sex determination in *Chelydra*. Pp. 146–157 in A. C. Steyermark, M. S. Finkler, and R. J. Brooks (eds.), “Biology of the Snapping Turtle (*Chelydra serpentina*).” Johns Hopkins University Press, Baltimore, MD.
2. \*Janzen, F. J., and J. G. Krenz<sup>s</sup>. 2004. Phylogenetics: Which was first, TSD or GSD? Pp. 121–130 in N. Valenzuela and V. A. Lance (eds.), “Temperature-Dependent Sex Determination in Vertebrates.” Smithsonian Books, Washington, DC.
1. \*Janzen, F. J. 2002. Temperature and sex. Pp. 116–117 in T. Halliday and K. Adler (eds.), “The New Encyclopedia of Reptiles & Amphibians.” Oxford University Press, Oxford.

**Popular articles, notes, book reviews, commentaries, obituaries, reports:**

19. Mitchell, T. S.<sup>s</sup>, K. R. Rand<sup>s</sup>, and F. J. Janzen. 2014. *Chrysemys picta belli* (Western Painted Turtle). Predation. **Herpetological Review** 45:482–483.
18. Mitchell, T. S.<sup>s</sup>, C. Hinsley<sup>s</sup>, and F. J. Janzen. 2012. Effects of overwintering conditions on nesting behavior of painted turtles. Iowa State University Horticulture Research Station Reports 12-36:74–75.
17. \*Janzen, F. J. 2011. Review of “Turtles: The Animal Answer Guide.” **Quarterly Review of Biology** 86:361–362.
16. Warner, D. A.<sup>s</sup>, T. S. Mitchell<sup>s</sup>, and F. J. Janzen. 2010. The effects of egg-incubation temperature on growth and survival of hatchling painted turtles. Iowa State University Horticulture Research Station Reports 10-36:84–86.
15. Bird, S. R., F. A. Hamrick, K. P. Constant, F. J. Janzen, and J. A. Powell-Coffman. 2008. Iowa State University ADVANCE collaborative transformation project: enhancing departmental cultures, practices and structures. Pp. 4 in “National Science Foundation ADVANCE IT and PAID Co-PI Meetings.” Alexandria, VA: ADVANCE Portal Website, Virginia Tech University.
14. \*Huey, R. B., and F. J. Janzen. 2008. Climate warming and environmental sex determination in tuatara: the Last of the Sphenodontians? **Proceedings of the Royal Society of London B** 275:2181–2183.
13. \*McGaugh, S. E.<sup>s</sup>, and F. J. Janzen. 2008. The status of *Apalone atra* populations in Cuatro Ciénegas, Coahuila, Mexico: preliminary data. **Chelonian Conservation and Biology** 7:88–95.
12. Janzen, F. J., and J. K. Tucker. 2007. Gary L. Paukstis (1953–2007). **Herpetological Review** 38:387–388.
11. \*Kuo, C.-H.<sup>s</sup>, and F. J. Janzen. 2007. Linnaeus Fund Research Report: Longevity, overlapping generations, and conservation of turtle populations. **Turtle and Tortoise Newsletter** 11:18–23.
10. \*Janzen, F. J. 2005. Voice of the turtle. Review of “Sea Turtles: A Complete Guide to Their Biology, Behavior, and Conservation.” **Science** 307:211.
9. Janzen, F. J. 2004. Molecular conservation genetics and adaptation. **Frontiers in Ecology and the Environment** 2:234.
8. \*Janzen, F. J. 2001. Review of “Evolutionary Genetics: From Molecules to Morphology.” **Quarterly Review of Biology** 76:351–352.
7. \*Janzen, F. J., S. L. Hoover<sup>r</sup>, and H. B. Shaffer. 1997. Molecular phylogeography of the western pond turtle (*Clemmys marmorata*): preliminary results. **Chelonian Conservation and Biology** 2:623–626.

6. \*Janzen, F. J. 1996. Is temperature-dependent sex determination in reptiles adaptive? **Trends in Ecology and Evolution** 11:253.
5. Tucker, J. K., F. J. Janzen, and G. L. Paukstis. 1995. Oxytocin induced nesting behavior in female red-eared turtles, *Trachemys scripta elegans*, without oviductal eggs. **Herpetological Review** 26:138.
4. Yu, C., and F. J. Janzen (eds.). 1991. Translation from Chinese, "Temperature-induced sex determination in *Chinemys reevesii*" original author, Hou Ling. **Bulletin of the Chicago Herpetological Society** 26:266.
3. Janzen, F. J., and S. O'Steen. 1990. An instance of male combat in the common snapping turtle (*Chelydra serpentina*). **Bulletin of the Chicago Herpetological Society** 25:11.
2. Paukstis, G. L., and F. J. Janzen. 1990. Sex determination in reptiles: summary of effects of constant temperatures of incubation on sex ratios of offspring. **Smithsonian Herpetological Information Service** 83:1-28.
1. Janzen, F. J., and G. L. Paukstis. 1988. Environmental sex determination in reptiles. **Nature** 332:790.

Note that this compilation does not enumerate the 68 additional publications by students and postdocs on which Janzen was not a listed co-author.

#### SELECTED COMPETITIVE GRANT SUPPORT (\*=Active):

- 2018 \***Department of Defense SERDP Grant (RC18-C2-1021), co-PI with PI A. Carter, "Using Unmanned Aerial Systems to Model Spatially-mediated Heterogeneity in 3D Microclimate Landscapes", \$199,999; (10/18-9/19)**
- 2017 Iowa Science Foundation (17-16), PI with co-PI J. Judson, "The Importance of Precopulatory Female Choice in Intersexual Selection: Do Female Painted Turtles Choose Mates?", \$4995; (7/17-6/18)
- \***National Science Foundation REU Grant (DEB-1719544), PI, \$17,160; (4/17-8/19)**
- \***National Science Foundation RAHSS Grant (DEB-1719543), PI, \$13,890; (5/17-8/19)**
- 2016 Iowa Science Foundation (16-04), PI with co-PI D. Flores, "Epigenetic Responses to Environmental Variation under Environmental Sex Determination: Epigenetic Inheritance", \$4956; (7/16-6/17)
- National Science Foundation REU Grant (DEB-1620370), PI, \$12,290; (5/16-4/17)
- National Science Foundation RAHSS Grant (DEB-1620348), PI, \$13,970; (5/16-4/17)
- 2015 National Science Foundation REU Grant (IOS-1539813), PI, \$7090; (8/15-7/16)
- Iowa Science Foundation (15-16), PI with co-PI R. Polich, "Transgenerational Effects of Maternal Stress in the Painted Turtle, *Chrysemys picta*", \$1000; (7/15-6/16)
- \***National Institutes of Health (R01-AG049416-01), co-PI with PI A. Bronikowski, "Biodemography and Senescence in Long-lived Painted Turtles", \$1,056,930; (6/15-5/19)**
- National Science Foundation REU Grant (DEB-1519911), PI, \$11,540; (5/15-4/16)
- National Science Foundation RAHSS Grant (DEB-1519904), PI, \$15,770; (5/15-4/16)
- Iowa Department of Natural Resources Wildlife Diversity Program, PI with co-PI C. Adams, "Environmental DNA - A New Tool for Population Monitoring", \$2438; (4/15-3/16)
- 2014 National Science Foundation REU Grant (DEB-1415474), PI, \$11,440; (5/14-4/15)
- National Science Foundation RAHSS Grant (DEB-1415470), PI, \$18,320; (5/14-4/15)
- 2013 \***National Science Foundation (IOS-1257857), PI with co-PI D. Warner, "Climate Change and Environmental Sex Determination in a Geographically-widespread Species", \$723,650; (5/13-4/19)**

- National Science Foundation (DEB-1310874), PI with co-PI A. Cordero, “Dissertation Research: Phylogenetic Patterns and Processes of Repeated Morphological Evolution in Turtles”, \$19,240; (6/13-5/15)
- 2012 National Science Foundation REU Grant (DEB-1314551), PI, \$16,480; (5/13-4/14)  
**\*National Science Foundation (DEB-1242510), PI, “LTREB Renewal: Long-term Research on Environmental Gender Determination in a Model System (*Chrysemys*)”, \$449,240; (9/12-8/19)**
- Iowa Science Foundation (12-02), PI with co-PI A. Cordero, “Development and Evolution of a Novel Body Plan: The Turtle’s Shell”, \$4900; (7/12-6/13)
- 2011 National Science Foundation REU Grant (DEB-1213285), PI, \$15,000; (5/12-2/13)  
 Iowa State University Center for Integrated Animal Genomics Grant, co-PI with PI A. Bronikowski, “Gene Expression Changes Across the Transcriptome with Stress and Aging”, \$15,000; (7/11-6/12)
- National Science Foundation REU Grant (DEB-1112321), PI, \$19,480; (5/11-4/12)  
 Iowa State University Diversity Grant, co-PI with PI D. Warner, “Turtle Camp Research and Education in Ecology Program (TREE)”, \$4960; (7/11-6/12)
- National Science Foundation RAHSS Grant (DEB-1137674), PI, \$15,903; (5/11-2/13)
- 2010 National Science Foundation REU Grant (DEB-1027262), PI, \$14,000; (5/10-4/11)  
 National Science Foundation RET Grant (DEB-1033069), PI, \$7805; (6/10-5/11)  
 National Science Foundation RAHSS Grant (DEB-1036976), PI, \$12,210; (6/10-5/11)
- 2009 Iowa Science Foundation (09-17), PI with co-PI J. Refsnider, “Can Maternal Nest-Site Choice Compensate for the Effects of Global Climate Change on Reptiles with Temperature-Dependent Sex Determination? A Common Garden Experiment Using a Model Species”, \$3900; (7/09-6/10)  
 National Science Foundation REU Grant (DEB-0924291), PI, \$11,400; (6/09-2/10)  
 National Science Foundation RAHSS Grant (DEB-0936009), PI, \$10,450; (6/09-5/10)
- 2008 Iowa Science Foundation (08-03), PI with co-PI C. Chandler, “Microevolution of Sex Determination Mechanisms: A Case Study of Within-Species Variation in *Caenorhabditis elegans*”, \$4949; (7/08-6/09)  
 National Science Foundation REU Grant (DEB-0822673), PI, \$8613; (6/08-2/09)  
 National Science Foundation RAHSS Grant (DEB-0833870), PI, \$8920; (6/08-5/09)  
 Ecological Society of American SEEDS Grant, PI, “Turtle Camp Research and Education in Ecology Program (TREE)”, \$3000; (5/08-9/09)
- 2007 National Science Foundation (DEB-0640932), PI, “LTREB: Long-term Research on Environmental Gender Determination in a Model System (*Chrysemys*): the Next Five Years”, \$448,160; (3/07-8/12)  
 National Science Foundation REU Grant (DEB-0735420), PI, \$7800; (6/07-5/08)  
 National Science Foundation RAHSS Grant (DEB-0735418), PI, \$9950; (6/07-5/08)  
 Ecological Society of American SEEDS Grant, PI, “Turtle Camp Research and Education in Ecology Program (TREE)”, \$5000; (5/07-4/08)
- Iowa State University Center for Integrated Animal Genomics Grant, PI, “Experimental Selection Lines to Assess Genomic Responses to Climate Change in a Model Nematode”, \$2640; (7/07-6/08)
- 2006 Iowa State University Center for Integrated Animal Genomics Grant, PI, “Experimental Selection Lines to Assess Genomic Responses to Climate Change in a Model Nematode”, \$5600; (1/06-6/06)  
 Iowa State University Center for Integrated Animal Genomics Grant, PI, “Support of Graduate Research Assistant in Experimental Evolutionary Genomics of a Model Nematode”, \$10,000; (1/06-6/06)
- 2005 National Science Foundation (DEB-0508665), PI with co-PI E. Myers, “DDIG: Reading Maps: Using Map Turtles (*Graptemys*) to Explore the Nature of Speciation and its Underlying Processes”, \$11,999; (5/05-4/08)

- Iowa State University Center for Integrated Animal Genomics Grant, PI, “Genomics Scholar: Engineering a Model Experimental System to Assess the Evolutionary Dynamics of Sex-Determining Mechanisms”, \$764; (1/05-12/05)
- 2004 McHenry County Conservation Foundation, PI, “Biology of Threatened Blanding’s Turtles in the Exner Marsh Area, McHenry, Illinois”, \$19,200; (5/04-12/07)
- 2002 National Science Foundation (IBN-0212935), PI with co-PI R. Bowden, “Understanding Maternal Effects in a Natural Population of a Long-lived Organism”, \$315,000; (8/02-7/06)
- Iowa State University Competitive Special Research Initiation Grant, PI with co-PI R. Bowden, “How Important are Maternal Effects in Nature?”, \$16,880; (1/02-12/02)
- National Aeronautics and Space Administration, Iowa Space Grant Consortium, PI with co-PI J. Christiansen (Drake Univ.), “Testing of Satellite Remote Sensing for Analysis of Semi-Aquatic Habitat for Salvage of a Threatened Species”, \$10,000; (2/02-12/02)
- 2001 National Science Foundation Supplement Grant (IBN-0134475), PI with co-PI C. Vleck, “UMEB: Environmental Endocrinology and Physiology”, \$2650; (9/01-2/02)
- U.S. Department of Agriculture (IFAFS MGET), Participant with S. Carpenter and C. Tuggle PIs, “Computational Biology in Animal Agriculture”, \$1,671,236; (8/01-7/05)
- National Science Foundation (DEB-0089680), PI, “LTREB: Long-term Research on Environmental Gender Determination in a Model System (*Chrysemys*)”, \$294,475; (3/01-2/07)
- 2000 National Science Foundation (IBN-0080194), PI with co-PIs E. Farrar, C. Vleck, and D. Vleck, “UMEB: Environmental Endocrinology and Physiology”, \$275,000; (9/00-8/04)
- 1999 National Science Foundation (IGERT) (DGE-9972653), Participant with D. Voytas PI, “Computational Molecular Biology Training Group”, \$2,400,000; (6/99-5/04)
- National Science Foundation REU Grant (DEB-9941689), PI, \$4500; (6/99-8/99)
- 1998 National Science Foundation REU Grant (DEB-9841830), PI, \$7500; (6/98-8/98)
- 1997 Iowa State University College of Agriculture Technology Advancement Grant, PI, “High-speed Personal Computers for Simulations and Data Analysis in Molecular Population and Quantitative Genetics”, \$5978; (6/97)
- Iowa State University Competitive Research Grant, PI, “Environmental Steroid Hormones and Sex Determination”, \$10,106; (7/97-6/98)
- National Science Foundation REU Grant (DEB-9741936), PI, \$3750; (6/97-12/97)
- Iowa State University Group Study Abroad Program, PI, “International Field Trips in Biology: Mainland Ecuador/Galápagos Islands Program”, \$1100; (1/97-5/97)
- 1996 National Science Foundation (DEB-9629529), PI, “Population Biology of Environmental Gender-Determination in *Chrysemys picta*”, \$85,000; (10/96-9/00)
- National Biological Service, co-PI with D. Weisrock, “The Western Hognose Snake, *Heterodon nasicus*”, \$3853; (2/96-10/97)
- 1995 Iowa State University Instructional Grant, co-PI with W. Dolphin, W. Rowley, and J. Raich, “A Proposal to Internationalize the Curriculum: International Field Trips in Biology”, \$12,500; (10/95-10/96)

#### SELECTED INVITED PRESENTATIONS:

- 2018 Lifelong Learning Society Endowed Professorship, Florida Atlantic University (2018 Frontiers in Science Public Lecture)
- Department of Biological Sciences, Florida Atlantic University
- 2017 Kellogg Biological Station, Michigan State University
- 2016 Department of Integrative Biology, University of South Florida
- Department of Biological Sciences, University of Rhode Island
- 2014 Iowa Lakeside Laboratory

- 2013 Climate Change Colloquium, University of Kansas  
Great Minds Symposium on Climate Change, Illinois Mathematics and Science Academy  
Veterinary Student Herpetology Club, Iowa State University  
University Corporation for Atmospheric Research, Iowa State University  
Department of Biology, Saint Louis University
- 2012 Beta Beta Beta Biological Honor Society, Iowa State University  
Mountain Lake Biological Station, University of Virginia (2012 Walton Lecture)  
Department of Forestry and Natural Resources, Purdue University  
Department of Biology, Swarthmore College
- 2011 Ecology, Evolution, and Conservation Biology Program, University of Nevada-Reno  
(cancelled due to extreme weather)  
Department of Forestry and Wildlife, University of Wisconsin  
Institute of Zoology, Chinese Academy of Science
- 2010 School of Biological Sciences, Washington State University  
Department of Genetics, Development, and Cell Biology, Iowa State University  
Department of Biology, University of Iowa
- 2009 Department of Biology, Duke University  
National Evolutionary Synthesis Center  
Annual Palmer Research Symposium (2009 Keynote Address), Morningside College  
Department of Biological Sciences, Eastern Illinois University  
Veterinary Student Herpetology Club, Iowa State University
- 2008 Wildness Symposium, Iowa State University  
Department of Biology, University of New Mexico
- 2007 Department of Biology, Grinnell College  
Department of Biology, St. Olaf College
- 2006 Beta Beta Beta Biological Honor Society, Iowa State University  
Iowa Herpetological Society
- 2005 Ecology and Evolutionary Biology Spring Symposium, Iowa State University  
Department of Biology, Southwest Missouri State University  
Annual Program, Big Bluestem Audubon Society  
Ecology, Evolution, and Behavior Seminar Series, Virginia Tech University
- 2004 Department of Biology, Reed College  
Center for Ecology & Evolutionary Biology, University of Oregon  
School of Biological Sciences, Washington State University  
Department of Biological Sciences, University of Oregon  
Environmental Biology Seminar Series, Haskell Indian Nations University  
Department of Zoology, Oregon State University  
Department of Biology, University of Washington  
3<sup>rd</sup> Annual Spring Research Symposium in Ecology, Evolution, and Behavior (2004 Keynote Address), University of Kentucky  
Department of Ecology, Evolution, and Organismal Biology, Iowa State University  
Interdepartmental Genetics Program, Iowa State University
- 2003 Iowa Criminalistics Laboratory
- 2002 Department of Zoology, Oklahoma State University
- 2001 Department of Biology, Indiana University  
School of Natural Resources and Environment, University of Michigan  
Department of Biology, Boston University  
Department of Biology, Washington University  
Department of Biology, University of Nebraska-Omaha
- 2000 Minnesota Herpetological Society
- 1999 Department of Biology, University of Nevada-Reno  
Department of Ecology and Evolutionary Biology, University of California-Irvine  
Department of Zoology and Genetics, Iowa State University
- 1998 Ecology, Evolution, and Behavioral Biology Section, University of Nebraska-Lincoln  
Department of Biology, Harvey Mudd College

- Department of Zoology, University of Toronto  
 Department of Zoology, University of Guelph  
 1997 Iowa Herpetological Society  
 Department of Genetics, University of Georgia  
 1996 Department of Biological Sciences, Northern Illinois University  
 Center for Ecology, Evolution and Behavior, University of Kentucky  
 1995 Department of Biology, Carleton College  
 Interdepartmental Genetics Program, Iowa State University  
 Department of Animal Ecology, Iowa State University  
 Ecology and Evolutionary Biology Spring Symposium, Iowa State University  
 1994 Department of Biology, University of Texas-Arlington

### SELECTED PAPER PRESENTATIONS (\*=Invited):

- 2018 \*Northwest Partners for Amphibian and Reptile Conservation, Oregon Wildlife Society, and Society for Northwest Vertebrate Biology, 13-16 February, Portland, OR  
 \*American Genetics Association, 23-25 March, Toronto, CANADA  
 \*Midwest Partners for Amphibian and Reptile Conservation and The Wildlife Society, 7-11 October, Cleveland, OH
- 2017 Society for Integrative and Comparative Biology, 4-8 January, New Orleans, LA
- 2016 Joint Meetings of the American Society of Naturalists, the Society of Systematic Biologists, and the Society for the Study of Evolution, 17-21 June, Austin, TX
- 2014 Society for Integrative and Comparative Biology, 4-8 January, Austin, TX  
 \*American Genetics Association, 27-29 June, Seattle, WA
- 2013 Society for Integrative and Comparative Biology, 3-7 January, San Francisco, CA
- 2012 \*Ecological Society of America, 6-10 August, Portland, OR (presented by A. Bronikowski)
- 2011 \*Joint Meetings of The Herpetologists' League, The Society for the Study of Amphibians and Reptiles, and the American Society of Ichthyologists and Herpetologists, 6-11 July, Minneapolis, MN  
 \*72<sup>nd</sup> Midwest Fish & Wildlife Conference, 4-7 December, Des Moines, IA
- 2009 \*"Evolution of Sex Determination and Sex Chromosomes", 17-20 June, University of Lausanne, SWITZERLAND  
 \*Joint Meetings of The Herpetologists' League, The Society for the Study of Amphibians and Reptiles, and the American Society of Ichthyologists and Herpetologists, 22-27 July, Portland, OR
- 2008 Ecological Society of America, 3-8 August, Milwaukee, WI
- 2007 European Society for Evolutionary Biology, 20-25 August, Uppsala, SWEDEN  
 Society for Integrative and Comparative Biology, 3-7 January, Phoenix, AZ
- 2006 \*Powdermill 2006, Sixth Occasional Freshwater Turtle Conference, 1-3 September, Southwest Research Station, Portal, AZ  
 Joint Meetings of The Herpetologists' League, The Society for the Study of Amphibians and Reptiles, and the American Society of Ichthyologists and Herpetologists, 13-17 July, New Orleans, LA
- 2004 \*Ecological Society of America, 1-6 August, Portland, OR
- 2003 Joint Meetings of The American Society of Naturalists, The Society of Systematic Biologists, The Society for Molecular Biology and Evolution, and The Society for the Study of Evolution, 20-24 June, California State University-Chico
- 2002 \*Iowa Space Grant Conference (NASA), 6 December, Iowa Valley Community College  
 Joint Meetings of The Society of Systematic Biologists and The Society for the Study of Evolution, 28 June-2 July, University of Illinois
- 2001 Society for Integrative and Comparative Biology, 3-7 January, Chicago, IL  
 American Society of Ichthyologists and Herpetologists, 5-10 July, Penn State University
- 2000 Joint Meetings of The American Society of Naturalists, The Society of Systematic Biologists, The Society for Molecular Biology and Evolution, and The Society for the Study of Evolution, 23-27 June, Indiana University

- \*"Evolutionary Ecology of Sex", 30 August-2 September, Biological Centre, University of Groningen, Haren, THE NETHERLANDS
- 1999 Society for Integrative and Comparative Biology, 6-10 January, Denver, CO  
 Joint Meetings of The American Society of Naturalists, The Society of Systematic Biologists, The Society for Molecular Biology and Evolution, and The Society for the Study of Evolution, 22-26 June, University of Wisconsin
- \*Powdermill 1999, Fourth Occasional Freshwater Turtle Conference, 13-16 August, Laughlin, NV
- 1998 Joint Meetings of The Herpetologists' League, The Society for the Study of Amphibians and Reptiles, and the American Society of Ichthyologists and Herpetologists, 16-22 July, University of Guelph, CANADA
- 1997 Joint Meetings of The American Society of Naturalists, The Society of Systematic Biologists, and The Society for the Study of Evolution, 14-18 June, University of Colorado
- \*Joint Meetings of The Herpetologists' League, The Society for the Study of Amphibians and Reptiles, and the American Society of Ichthyologists and Herpetologists, 25 June-2 July, University of Washington
- 1996 \*Fifth International Congress of Systematic and Evolutionary Biology, 17-24 August, Education Centre, Budapest, HUNGARY
- 1995 American Society of Zoologists, 4-8 January, St. Louis, MO
- 1994 \*Joint Meetings of The Herpetologists' League and The Society for the Study of Amphibians and Reptiles, 28 July-1 August, University of Georgia
- \*Joint Meetings of The American Society of Naturalists, The Society of Systematic Biologists, The Society for Molecular Biology and Evolution, and The Society for the Study of Evolution, 15-19 June, University of Georgia
- Second World Congress of Herpetology, 29 December 1993-5 January 1994, University of Adelaide, AUSTRALIA

#### SELECTED EXTRAMURAL PROFESSIONAL ACTIVITY (last 15 years):

- 2017 Associate Editor, **Evolution** [abbreviated term to care for seriously ill spouse]
- 2016 Session Moderator, Quantitative Genetics, Society for the Study of Evolution (SSE)
- 2014 Member, NSF DEB Evolutionary Ecology Grant Review Panel
- 2013 Member, Applications Selection Committee (for underrepresented students), Ecological Society of America
- 2012-14 Member (2014 Chair), Nominations Committee, SSE
- 2008-now Member, Climate Change Working Group, Iowa Department of Natural Resources
- 2008-now Member, Wildlife Working Group, Iowa Department of Natural Resources
- 2006-13 Member, Editorial Board, **Chelonian Conservation and Biology**
- 2006-09 Member, Executive Council, Herpetologists' League
- 2006 Mentor, three minority undergraduates, SSE, Stony Brook, NY
- 2006 Judge, Best Student Paper Competition-Seibert Award, Morphology & Physiology, Society for the Study of Amphibians and Reptiles, New Orleans, LA
- 2005-12 Associate Editor, **Journal of Evolutionary Biology**
- 2005-08 Associate Editor, **American Naturalist**
- 2005-07 Member, Executive Committee, Society for Integrative and Comparative Biology (SICB)
- 2005-07 Chair, Division of Ecology and Evolution, SICB
- 2003-04 Judge, Best Student Paper Competition, Division of Ecology and Evolution, SICB
- 2003 Member, first NSF DEB Evolutionary and Population Ecology Grant Review Panel
- 2002-07 Member, Board of Governors, American Society of Ichthyologists and Herpetologists
- 2002-03 Chair, Program Advisory Committee, SICB
- 1999-now Member, IUCN/SSC Tortoise and Freshwater Turtle Specialist Group



**PROFESSIONAL AFFILIATIONS:**

American Association for the Advancement of Science  
 American Genetic Association  
 American Society of Ichthyologists and Herpetologists  
 American Society of Naturalists  
 Chelonian Research Foundation  
 Ecological Society of America  
 European Society for Evolutionary Biology  
 Evolutionary Demography Society  
 Herpetologists' League  
 IUCN/SSC Tortoise and Freshwater Turtle Specialist Group  
 Partners in Amphibian and Reptile Conservation  
 Sigma Xi  
 Society for Integrative and Comparative Biology  
 Society for the Study of Amphibians and Reptiles  
 Society for the Study of Evolution  
 The Wildlife Society

**SELECTED INTRAMURAL PROFESSIONAL ACTIVITY (last 15 years):**

2018-now Chair, Seminar Committee, EEOB Department  
 2017-now Member, Faculty Review Board, ISU  
 2016-now Member, Promotion and Tenure Committee, College of Agriculture & Life Sciences  
 2015-16 Chair, Search Committee for Limnologist, EEOB Department  
 2013-17 Co-chair, Undergraduate Genetics Major Committee, EEOB Department  
 2013-15 Faculty Leader, Strengthening the Professoriate Program (Broader Impacts), ISU  
 2013-14 Member, Search Committee for Macroevolutionary Biologist, EEOB Department  
 2013-14 Member, Admissions Committee, Interdepartmental Genetics Graduate Program  
 2012-now Member, Horticulture Farm Committee, ISU  
 2011-now Faculty Advisor, Amphibian and Reptile Club, ISU  
 2009-10 Member, Sigma Xi Chapter Executive Committee, ISU  
 2007-08 NSF ADVANCE Professor, ISU  
 2006-now Faculty Advisor, ESA Campus Chapter for Strategies for Ecology Education, Development and Sustainability (SEEDS), ISU  
 2005-now Member, Aquatic Research Facility Committee, ISU  
 2004-08 Curator, Amphibian and Reptile Research Collection, ISU  
 2001-now Co-representative to the Organization for Tropical Studies, ISU  
 2003-06 Member, Undergraduate Student Recruitment Committee, College of Agriculture  
 2006-08 Chair, Interdepartmental Genetics Graduate Program  
 2004-06 Associate Chair, Interdepartmental Genetics Graduate Program  
 2004-09 Member, Supervisory Committee, Interdepartmental Genetics Graduate Program  
 2003-05 Member, Curriculum Committee, Interdepartmental Genetics Graduate Program  
 2002-06 Member, Supervisory Committee, Center for Integrated Animal Genomics  
 2008-now Coordinator, Pandemic Committee, EEOB Department  
 2007-12, 2017-18 Chair, Executive Committee, EEOB Department  
 2002-07, 2013-16 Member, Executive Committee, EEOB Department  
 2006-08 Member, Honors and Awards Committee, EEOB Department  
 2005 Member, Search Committee for Microbial Ecologist, EEOB Department  
 2002-04 Chair, Strategic Planning Committee, EEOB Department

**RECENT TEACHING EXPERIENCE:**

Ecology and Evolutionary Biology Field Course: Pacific Northwest United States; Spring 2016  
 Herpetology; Fall 2008-2013, 2015-2018  
 Undergraduate Seminar in Enhanced Herpetology; Fall 2013  
 International Field Trips in Biology: Costa Rica; Spring 2008  
 Foundations of Evolution; Fall 2004, 2006, Spring 2013  
 Evolutionary Genetics; Spring 1995, Fall 1995, Spring 1997, 1998, 2000-2003, 2005, 2006, 2009-2012, 2014, 2016, 2018  
 Undergraduate Seminar in Environmental Biology; Spring & Fall 2001-2003  
 Genetics and Bioinformatics Workshop: New Directions in Evolutionary Genetics; Spring 2003  
 Epistasis and Evolution; Fall 2001  
 Ecology and Evolutionary Biology Field Course: Southwest United States; Spring 2001, 2014  
 Evolutionary Genetics: 15 Fundamental Figures; Fall 2000  
 Evolutionary Quantitative Genetics; Fall 1999  
 Biology of Organisms and Populations Seminar; Fall 1997, Spring 1998  
 Biogeography; Fall 1997  
 International Field Trips in Biology: Mainland Ecuador and Galápagos; Spring 1997  
 Life-History Evolution; Spring 1997  
 Advanced Topics in Evolutionary Biology; Spring 1996, Fall 1996  
 Molecular Ecology; Fall 1995  
 Evolutionary Physiology; Fall 1994

**RECENT SUPERVISION of STUDENTS in RESEARCH:**Postdoctoral

2016-now Anna Carter (Ph.D. from Victoria U.)  
 “Biogeography of Sex Determination in Turtles”  
 2014-16 Luke Hoekstra (Ph.D. from Indiana U.; currently a postdoctoral researcher with Anne Bronikowski at Iowa State U.)  
 “Evolutionary Quantitative Genetics of Thermal Adaptation in Reptiles”  
 2013-14 Timothy Mitchell (Ph.D. from Iowa State U.; NSF Postdoctoral Fellow in Biology with Dan Warner at Auburn U.; currently a postdoctoral researcher with Emilie Snell-Rood at U. Minnesota)  
 “Maternal Effects and Phenotypic Consequences in Turtles”  
 2007-12 Daniel Warner (Ph.D. from U. Sydney; currently an Assistant Professor at Auburn U.)  
 “Population Biology of Sex Allocation in Lizards and Turtles”  
 2006-08 Lisa Schwanz (Ph.D. from U. New Mexico; NSF Biological Informatics Postdoctoral Fellow; NSF International Research Fellow at James Cook U.; currently a Senior Lecturer at U. New South Wales)  
 “Sex-ratio Theory Applied to Environmental Sex Determination in Turtles”  
 2003-05 Ricky-John Spencer (Ph.D. from U. Sydney; Lead Researcher, CRC for Invasive Animals at U. Canberra; currently a Senior Lecturer at U. Western Sydney)  
 “Population Biology of Environmental Sex Determination in Turtles”  
 2001-03 Rachel Bowden (Ph.D. from Indiana U.; currently a Professor at Illinois State U.)  
 “Ecological Endocrinology of Environmental Sex Determination in Turtles”  
 1999-00 Nicole Valenzuela (Ph.D. from SUNY-Stony Brook; currently a Professor at Iowa State U.)  
 “Environmental, Gender, and Fitness Consequences of Microhabitat Selection by Nesting Turtles”

Guest faculty, teachers, and postdoctoral fellows from other institutions

2016-17 Ricky Spencer (University of Western Sydney)  
 2011-12 John Obrycki (University of Kentucky)  
 2009-11 Aaron Reedy (Kelly High School, Chicago, IL)

- 2009 Christian d'Orgeix (Virginia State University)  
 2009 Weiguo Du (University of Sydney/Chinese Academy of Sciences)
- Ph.D.
- 2018-now Caleb Krueger  
 2015-now David Delaney (ISU Competitive Fellow in Ecology and Evolutionary Biology)  
 2015-now Jessica Judson  
 2013-now Daniela Flores (ISU Graduate Minority Assistantship)  
 2012-17 Rebecca Polich (NSF GK-12 Fellow, Knaphus Teaching Fellow; Lecturer at Gonzaga U.; currently an Assistant Professor at Rocky Mountain College)  
 “Behavioral and Physiological Responses of a Freshwater Turtle to Anthropogenic Activity”
- 2009-15 Antonio Cordero (ISU Graduate Minority Assistantship, ISU College of Agriculture Diversity Scholarship; postdoctoral researcher with Tobias Uller at Lund U.; currently an Alexander von Humboldt Fellow with Ingmar Werneburg at U. Tuebingen)  
 “Phenotypic Innovation and Repeatability in Turtles”
- 2009-14 Rory Telemeco (ISU Competitive Fellow in Ecology and Evolutionary Biology, EPA STAR Predoctoral Fellow, NSF GK-12 Fellow; postdoctoral researcher with Lauren Buckley at U. Washington; postdoctoral researcher with Tonia Schwartz at Auburn U.; currently an Assistant Professor at California State U.-Fresno)  
 “Here Be Dragons: Functional Analyses of Thermal Adaptation and Biogeography of Reptiles in a Changing World”
- 2009-13 Arun Sethuraman (ISU Bioinformatics and Computational Biology Fellow, ISU Cornette Fellow; postdoctoral researcher with Jody Hey at Temple U.; currently an Assistant Professor at California State U.-San Marcos)  
 “On Inferring and Interpreting Genetic Population Structure—Applications to Conservation, and the Estimation of Pairwise Genetic Relatedness”
- 2008-13 Timothy Mitchell (ISU Biotechnology Fellow, NSF GK-12 Fellow; NSF Postdoctoral Fellow in Biology with Dan Warner at Auburn U.; currently a postdoctoral researcher with Emilie Snell-Rood at U. Minnesota)  
 “Phenotypic Consequences of Maternal Effects during Early Life Stages of the Painted Turtle, *Chrysemys picta*”
- 2007-12 Jeanine Refsnider (ISU Competitive Fellow in Ecology and Evolutionary Biology; NSF Postdoctoral Fellow in Biology with Erica Rosenblum at UC-Berkeley; currently an Assistant Professor at U. Toledo)  
 “Effects of Climate Change on Reptiles with Temperature-Dependent Sex Determination and Potential Adaptation via Maternal Nest-site Choice”
- 2004-10 Chris Chandler (ISU Biotechnology Fellow, ISU Graduate College Competitive Fellow; postdoctoral researcher with Ian Dworkin at Michigan State U.; currently an Associate Professor at SUNY-Oswego)  
 “Microevolution of Sex Determination Pathways: Case Studies in *Caenorhabditis elegans*”
- 2003-09 Suzanne McGaugh (ISU Graduate College Competitive Fellow, ISU Miller Fellow, NSF Predoctoral Fellow; postdoctoral researcher with Mohamed Noor at Duke U.; postdoctoral researcher with Wes Warren at the Washington U. Genome Institute; currently an Assistant Professor at U. Minnesota)  
 “Micro-evolutionary Potential of Temperature-Dependent Sex Determination in a Wild Population of Painted Turtles, *Chrysemys picta*”
- 2002-08 Erin Myers (USDA Fellow in Computational Biology in Animal Agriculture, ISU Graduate College Competitive Fellow; NSF Biological Informatics Postdoctoral Fellow with Tony Frankino at U. Houston; Research Assistant Professor at U. Houston; currently looking after family in Virginia)  
 “Exploring Speciation and its Underlying Processes using Map Turtles (*Graptemys*)”

- 2002-05 Ken Bowen (ISU Competitive Fellow in Ecology and Evolutionary Biology; currently Director of Environmental Health for the Ionia County Health Department, Lansing, MI)  
“Predator-Prey Interactions and the Nesting Ecology of the Painted Turtle, *Chrysemys picta*”
- 1997-02 Curtis Eckerman (formerly a biology instructor and department chair at Des Moines Area Community College in Ankeny, IA; currently an Adjunct Instructor at Austin Community College, Austin, TX)  
“Distinguishing between Primary Intergradation and Secondary Contact in Hybrid Zones: Computational Modeling and Empirical Genetic Analysis”
- 1996-02 Carrie Morjan (NSF Predoctoral Fellow; NSF Biological Informatics Postdoctoral Fellow with Loren Rieseberg at Indiana U.; currently an Associate Professor at Aurora U.)  
“Temperature-Dependent Sex Determination and the Evolution of Sex Ratio in the Painted Turtle, *Chrysemys picta*”

M.S.

- 2014-17 Clare Adams (ISU Competitive Fellow in Ecology and Evolutionary Biology; currently a Ph.D. student with Michael Knapp at U. Otago)  
“The Detection and Quantification of Aquatic Reptilian Environmental DNA”
- 2014-17 Brooke Bodensteiner (ISU Gerontology Fellow; currently a Ph.D. student with Martha Muñoz at Virginia Tech U.)  
“Geographic Variation in Nesting Behavior and Thermally-Induced Offspring Phenotypes in a Widespread Reptile”
- 2012-15 Sarah Mitchell (ISU Biotechnology Fellow, ISU Miller Fellow, NSF GK-12 Fellow; currently pursuing science outreach opportunities in Colorado)  
“Differential Demographic Responses of Two Sympatric Turtle Species to Anthropogenic Disturbance”
- 2006-08 Jeramie Strickland (ISU Graduate Minority Assistantship, ISU College of Agriculture Diversity Scholarship; currently a wildlife biologist with the U.S. Fish & Wildlife Service)  
“Depredation of Painted Turtle (*Chrysemys picta*) Nests: Influence of Biotic, Abiotic, and Anthropogenic Factors at Local and Habitat Scales”
- 2006-07 Shannon Thol (ISU Biotechnology Fellow; worked in environmental GIS in PA; currently employed by The Nature Conservancy)  
“Habitat Use by Ornate Box Turtles, *Terrapene ornata*”
- 2004-07 Lindsay Kasuga (USDA Fellow in Computational Biology in Animal Agriculture, ISU Competitive Fellow in Ecology and Evolutionary Biology; currently a high school science teacher in Des Moines, IA)  
“Small and Large-Scale Landscape Approaches for Conservation of the Imperiled Blanding’s Turtle, *Emys blandingii*”
- 2003-06 Paul Colbert (currently a senior research associate at Sanford Healthcare in Sioux Falls, SD)  
“Hatching Synchrony and Survival in Early Life in the Painted Turtle, *Chrysemys picta*”
- 2001-04 Julie Gonzalez (currently a biology instructor at Des Moines Area Community College in Ankeny, IA)  
“Inheritance of Nest-Site Choice in the Field in a Turtle with Temperature-Dependent Sex Determination”
- 2001-03 Chih-Horng Kuo (Ph.D. with Jessica Kissinger and Daniel Promislow at U. Georgia; postdoctoral researcher with Howard Ochman and Nancy Moran at U. Arizona; currently an Associate Research Fellow at Academia Sinica, Taiwan)  
“Genetic Effects of Persistent Population Bottlenecks on Long-Lived Organisms with Overlapping Generations”
- 2000-02 Michael Mullins (ISU Competitive Fellow in Ecology and Evolutionary Biology; Ph.D. with Karen Register at Iowa State U.; currently a postdoctoral researcher

- with Lauren Bakaletz at Nationwide Children's Hospital, Columbus, OH)  
 "Temperature and Clutch Effects on Embryos and Hatchlings of the Smooth Softshell Turtle (*Apalone mutica*)"
- 1999-01 Olusegun Coker (M.D. from Meharry Medical College; currently a neurosurgeon at St. Louis U. School of Medicine)  
 "SEM and LM Analyses of Gonadal Development in a Turtle with Temperature-Dependent Sex Determination"
- 1998-01 James Krenz (ISU Competitive Fellow in Ecology and Evolutionary Biology; currently working in health technology in St. Paul, MN)  
 "Turtles Through Time: Exploring Historical Relationships Among Turtle Families using DNA Sequence Data from a Nuclear Gene"
- 1997-00 Jason Kolbe (ISU Competitive Fellow in Ecology and Evolutionary Biology; Ph.D. with Jonathan Losos at Washington U.; NSF Biological Informatics Postdoctoral Fellow with Rick Shine at U. Sydney and Craig Moritz at UC-Berkeley; currently an Associate Professor at U. Rhode Island)  
 "The Ecological and Evolutionary Consequences of Maternal Nest-Site Selection for the Embryos and Hatchlings of the Common Snapping Turtle, *Chelydra serpentina*"
- 1995-97 Nirvana Filoramo (Ph.D. with Kurt Schwenk at U. Connecticut; currently an Assistant Professor at Worcester State U.)  
 "Effects of Hydric Conditions Experienced by Incubating Red-Eared Slider Turtle Eggs, *Trachemys scripta elegans*, on Overwintering Hatchlings and Their Survivorship upon Emerging from the Nest"
- 1995-97 David Weisrock (Ph.D. with Alan Larson at Washington U.; postdoctoral researcher with Randall Voss at U. Kentucky and then with Anne Yoder at Duke U.; currently an Associate Professor at U. Kentucky)  
 "Molecular Phylogenetics and Phylogeography of North American Softshell Turtles (*Apalone*)"

Guest graduate students from other institutions

- 2012-13 Jessica McGlashan (University of Western Sydney)  
 2011 Nick Kiriazis (Utah State University)  
 2010-11 Andrew Durso (Eastern Illinois University)  
 2009-11 Lori Neuman-Lee (Eastern Illinois University and Utah State University)  
 2005-07 Laura Dixon (South Dakota State University)  
 2004 Jennifer Howeth (University of Texas-Austin)  
 2002-03 Sarah Holt (University of Guelph)  
 2002 Jennifer Powers (University of Nebraska-Omaha)  
 1999-00 Devon Pearse (University of Georgia)  
 1999 Ricky-John Spencer (University of Sydney)  
 1996-98 Paul Magwene (University of Chicago)  
 1995 Dan O'Connell (University of Texas-Arlington)

Undergraduate (1995-now):

101 from Iowa State University, 6 from Carleton College, 1 from Kalamazoo College, 1 from North Central College, 1 from Washington University, 1 from University of Northern Iowa, 2 from UC-Berkeley, 1 from Prairie View A&M, 1 from Oregon State University, 1 from Penn State University, 1 from Eastern Illinois University, 1 from University of Illinois-Chicago, 1 from Daley College, 1 from Swarthmore College, 1 from Langston University, 1 from North Carolina A&T, 1 from Alcorn State University, 1 from Alabama A&M (105 of whom were women, URM, or persons with disabilities)

High School (1998-now):

70 from high schools across the country (including Puerto Rico) (62 of whom were women, URM, or persons with disabilities)