

HENRY B. JOHN-ALDER, PH.D.

Professor and Chair

Rutgers University
Department of Ecology, Evolution, and Natural Resources
14 College Farm Road
New Brunswick, NJ 08901

PROFESSIONAL INTERESTS

Ecological and Evolutionary Physiology
Environmental and Behavioral Endocrinology

Telephone: 848.932.1064; Lab: 848-932-3762 / e-mail: henry@aesop.rutgers.edu

EDUCATION

1983 Ph.D., University of California, Irvine, CA
1979 M.S., Pennsylvania State University, University Park, PA
1974 B.A., Franklin and Marshall College, Lancaster, PA

PROFESSIONAL APPOINTMENTS

2007- Chair, Department of Ecology, Evolution, and Natural Resources,
Rutgers University
2007- Professor, Department of Ecology, Evolution, and
Natural Resources, Rutgers University
2002-2007 Professor, Department of Animal Sciences, Rutgers University
1999 Visiting Professor, Ecole Normale Supérieure, Paris, France
1997-2002 Associate Professor, Department of Animal Sciences, Rutgers University
1991-97 Associate Professor, Department of Biological Sciences, Rutgers University
1985-91 Assistant Professor, Department of Biological Sciences, Rutgers University, New
Brunswick, NJ
1984-85 Post-Doctoral Research Associate, SUNY Upstate Medical University, Syracuse,
NY. Supervisor: Ronald L. Terjung, Ph.D.
1983-84 Post-Doctoral Research Associate, Adelaide University, Adelaide, Australia.
Supervisor: Albert F. Bennett, Ph.D.
1974-76 Laboratory Research Assistant, School of Medicine, University of Pennsylvania.
Supervisor: Robert E. Forster, M.D.

OTHER RESEARCH AND PROFESSIONAL EXPERIENCE

2015-16 Member, Mentoring Executive Committee, Rutgers Connection Network Faculty
Mentoring, Office for the Promotion of Women in Science, Engineering, and
Mathematics, Rutgers University

- 2012-2015 Chair, GRE Biology Advisory Committee, Educational Testing Service, Princeton, NJ
- 2011- Editorial Board, *Integrative and Comparative Biology*
- 2008-10 Chair, Chairs Council, School of Environmental and Biological Sciences, Rutgers University
- 2014-15
- 2006- GRE Biology Advisory Committee, Educational Testing Service, Princeton, NJ
- 2005-2010 Member, Education Committee, American Institute of Biological Sciences
- 2004-2005 Chair, Digital Library Advisory Board, Society for Integrative and Comparative Biology
- 2004-2005 Member, Executive Committee, Society for Integrative and Comparative Biology
- 2004-2005 Chair, Education Council, Society for Integrative and Comparative Biology
- 2003-2004 Member, Nominating Committee, Division of Comparative Endocrinology, Society for Integrative and Comparative Biology
- 2002-04 Panelist, Ecological and Evolutionary Physiology, National Science Foundation
- 1998-2007 Director, Graduate Program in Animal Science, Rutgers University
- 1996-97 Secretary, Division of Comparative Endocrinology, Society for Integrative and Comparative Biology
- 1996- Board of Editors, *Physiological and Biochemical Zoology*
- 1995-98 Panelist, Ecological and Evolutionary Physiology, National Science Foundation
- 1992 Panelist, Dissertation Improvement Advisory Panel, National Science Foundation
- 1980-83 Teaching Assistant, University of California, Irvine Physiology; General Biology
- 1981-83 Summer Research Assistant, A.F. Bennett, University of California, Irvine
- 1981 Research Associate, Expedition to the Kalahari Desert of southern Africa, Drs. R.B. Huey, A.F. Bennett, K.A. Nagy
- 1980 Research Associate, "The Metabolism and Activity of Lizards" (film), George A. Bartholomew and Albert F. Bennett
- 1979 Research Assistant, Agricultural Pest Management, Dr. A. Hower, Department of Entomology, Penn State University
- 1976-79 Teaching Assistant, Pennsylvania State University, Physiology; General Biology

PROFESSIONAL AFFILIATIONS

American Association for the Advancement of Science
 American Institute of Biological Sciences
 Society for Behavioral Neuroendocrinology
 Society for Integrative and Comparative Biologists
 Society for the Study of Evolution

GRANTS

- 2017 National Science Foundation (NSF), preproposal (co-PI), "Collaborative Research: Evolutionary Reversals in Hormonal Modulation of Growth-Regulatory Gene Networks"
- 2015-20 Hatch Multistate Project, USDA, "Agrochemical Impacts On Human And Environmental Health: Mechanisms And Mitigation"; \$22,500, PD
- 2013-16 GAANN, Department of Education, "Ecology and Evolution in Urban Environments"; \$554,568 + 1:4 RU match, PD
- 2010-15 Hatch Multistate Project, USDA, "Agrochemical Impacts On Human And Environmental Health: Mechanisms And Mitigation"; \$12,500 in annual allotments of \$2,500, PD
- 2009 GAANN, Department of Education, "Ecology and Evolution in Urban Environments"; \$525,060 (declined)
- 2003 NIH-NIAID, Ecology of Infectious Disease, "Biodiversity, Habitat Fragmentation, and Lyme Disease Risk" (PI: R. Ostfeld; Collaborator: H. John-Alder)
- 2001-04 National Science Foundation, Ecological and Evolutionary Physiology, "Proximate Mechanisms of Sexual Size Dimorphism", PI
- 1998 National Science Foundation, REU Supplement, PI
- 1997 National Science Foundation, REU Supplement, PI
- 1996 Undergraduate Curriculum Seed Grant, Rutgers University, "Environmental Biology of the New Jersey Pine Barrens" (John Dighton, Co-PI)
- 1996 National Science Foundation, Doctoral Dissertation Improvement Grant, "The Role of Kin Recognition in Preventing Inbreeding in 4 Species of Voles", Melissa L. Foster, Student PI
- 1996 National Science Foundation, REU Supplement, PI
- 1995-98 National Science Foundation, Ecological and Evolutionary Physiology, "Ecological Significance of Individual Variation in Physiology", PI
- 1990 National Science Foundation, REU Supplement, PI
- 1987-90 National Science Foundation, Program in Regulatory Biology, "Reptilian Thyroid Physiology", PI
- 1986-87, 1987-88, 1992-93 Research Council Grant, Rutgers University
- 1986, 1987 Summer Research Fellowship, The Research Council, Rutgers University
- 1986-87, 1987-88, 1989-90, 1990-91, 1991-92, 1992-93, Busch Research Grant, Bureau of Biological Research, Rutgers University
- 1985-86, 1986-87, 1990-91, Biological Research Support Grant, Rutgers University
- 1982 National Science Foundation, Program in Population Biology and Physiology Ecology, Doctoral Dissertation Research Award, "Seasonal Variations in Circulating Thyroid Hormones and Activity Capacity in the Lizard Dipsosaurus dorsalis", A.F. Bennett

AWARDS AND FELLOWSHIPS

- 2016 Fellow (elected), American Association for the Advancement of Science (AAAS)
 1981 Regent's Patent Fund Award, University of California, Irvine
 1981 Best Contributed Student Paper, American Society of Zoologists. Annual Meeting, Dallas
 1980 Edward A. Steinhaus Memorial Teaching Award - Honorable Mention
 1979-80 Regent's Fellowship, University of California, Irvine

SYMPOSIA AND WORKSHOPS

- 2013 Pinelands Short Course: Ecology and Physiology of Eastern Fence Lizards (*Sceloporus undulatus*), NJ Pinelands Commission and Pinelands Institute for Natural and Environmental Studies, Burlington County Community College
 2009 Invited Symposium Presentation. Hormones and Performance: Insights from Natural History and Endocrine Experiments. Society for Integrative and Comparative Biology, Boston, MA
 2007 Invited Symposium Presentation. Proximate Determinants of Sexual Size Dimorphism: Case Studies from Squamate Reptiles. Society for Integrative and Comparative Biology, Phoenix, AZ
 2005 Invited Speaker. Testosterone and Sexual Growth Divergence in Lizards: Implications for Sexual Size Dimorphism. The Evolution of Sexual Size Dimorphism. 21-26 August 2005, Centro Stefano Franscini, Switzerland
 2003 Williams Lecturer, University of Akron. "Comparative and Experimental Studies on Growth and Sexual Size Dimorphism in Lizards"
 2001 Plenary Address. Physiology and Evolutionary Biology of Lizards. 4th World Congress on Herpetology. Colombo, Sri Lanka. (Canceled after 9/11 attack on World Trade Center)
 1997 Environmental Endocrinology. XIIIth International Congress of Comparative Endocrinology. Yokohama, Japan
 1992 Integrative Thyroid Physiology in Conventional and Comparative Animal Models (Chairman). American Physiological Society (FASEB). Anaheim, California
 1989 Workshop on Ecological Endocrinology. XIth International Congress on Comparative Endocrinology. Malaga, Spain
 1989 Workshop on the Thyroid Axis. XIth International Congress on Comparative Endocrinology. Malaga, Spain

INVITED LECTURES

- March, 2017. Pinelands Short Course, Richard Stockton College. Growth and Reproduction in Eastern Fence Lizards: Mites Might Matter.
 October, 2016. Pinelands Research Series, Pinelands Commission, State of New Jersey. Testosterone, Growth, and Body Size in Eastern Fence Lizards: It's Not What You Think.

- February, 2015. Darwin Day, Graduate Programs in Molecular Biosciences, Rutgers University. Hormonal Pleiotropy and the Evolution of Sexual Dimorphism in Body Size.
- November, 2014. Clemson University. Hormonal Pleiotropy and the Evolution of Sexual Dimorphism in Body Size.
- July, 2012. Pinelands Research Series, Pinelands Commission, State of New Jersey. Ecological and Evolutionary Physiology of Sexual Dimorphism in Body Size in Eastern Fence Lizards.
- April, 2012. Graduate Program in Ecology and Evolution, Rutgers University. Hormonal Pleiotropy and the Evolution of Sexual Dimorphism in Body Size
- November, 2010. University of Sao Paulo. Hormones and Performance: Insights from Natural History and Endocrine Experiments.
- February, 2008. Dartmouth College. Physiology, Performance, Fitness: A Case Study of the Eastern Fence Lizard (*Sceloporus undulatus*)
- January, 2008. Roosevelt Public School (4th & 5th grades), Roosevelt, NJ. Diversity and Distribution of Lizards.
- April, 2007. Columbia University. Ecological Energetics of Reptiles
- March, 2007. Roosevelt Public School (4th & 5th grades), Roosevelt, NJ. Diversity and Distribution of Lizards.
- April, 2006. University of Akron. “Research Overview. Testosterone and Sexual Growth Divergence in Lizards: Implications for Sexual Size Dimorphism
- October, 2005. Rutgers University, Department of Animal Sciences. “Lessons from Lizards: 21st-Century Research and Training in Integrative Animal BioScience”
- October, 2005. Rutgers University, Department of Nutritional Sciences. “Testosterone and Sexual Growth Divergence: Implications for Sexual Size Dimorphism”
- September, 2005. University of Connecticut. “Integrative Animal BioScience”
- April, 2005. Animal Science Education Consortium, Rutgers University. “Undergraduate Physiology at Rutgers and Beyond: Looking Back to the Future?”
- November, 2004. Rutgers University. “Comparative and Experimental Studies on Growth and Sexual Size Dimorphism”
- April, 2004. California State University, Long Beach. “Comparative and Experimental Studies on Growth and Sexual Size Dimorphism in Lizards”
- April, 2004. University of California, Irvine. “Comparative and Experimental Studies on Growth and Sexual Size Dimorphism in Lizards”
- October, 2003. University of California, Riverside. “Seasonal Alterations in Adrenocortical Cell Function Associated with Sex and Stress in Eastern Fence Lizards”
- October, 2003. University of California, Riverside. “Comparative and Experimental Studies on Growth and Sexual Size Dimorphism in Lizards”
- October, 2003. Arizona State University. “Seasonal Alterations in Adrenocortical Cell Function Associated with Sex and Stress in Eastern Fence Lizards”
- April, 2003. University of Akron. William’s Lecture. “Comparative and Experimental Studies on Growth and Sexual Size Dimorphism in Lizards”
- April, 2002. Delaware Valley College. “Graduate Education in Animal Sciences: Areas of Specialty, General Application Procedures, and Acceptance Criteria”
- October, 2001. Rutgers University – Newark.). “Demographic and Experimental Studies on Growth and Sexual Size Dimorphism”

- March, 2001. Department of Animal Sciences (Rutgers). “Demographic and Experimental Studies on Growth and Sexual Size Dimorphism”
- October, 2000. Environmental Change/Environmental Sociology (Rutgers). “On Lizards, Their Behavior and Ecology”
- November, 1999. City College of New York (CUNY). “Ecology and Physiology of Exercise Endurance in Lizards”
- October, 1999. First Year Seminar in Ecology and Evolution (Rutgers). “Environmental Physiology and Endocrinology of Lizards”
- November, 1998. Universite Pierre et Marie Curie, Paris. “Ecology and Physiology of Exercise Endurance in Lizards”
- October, 1998. Ecology and Evolution (Rutgers). “Ecology and Physiology of Exercise Endurance in Lizards”
- March, 1998. Ecology and Evolution (Rutgers). “Overview of Studies in Animal Physiological Ecology”
- February, 1998. Hofstra University. “Social and Hormonal Regulation of Exercise Endurance in Lizards: Experimental Studies and Natural Variation”
- October, 1997. First Year Seminar in Ecology and Evolution (Rutgers). “Environmental Physiology and Endocrinology of Lizards”
- July, 1997. Biomedical Careers Program, Office of Minority Undergraduate Student Programs. “Orientation to Systems Physiology: What You Can Expect From This Course”
- October, 1996. University of Colorado. “Experimental and Observational Studies on Social and Hormonal Control of Exercise Endurance in Lizards”
- March, 1996. Universite Pierre et Marie Curie, Paris. “Hormonal Regulation of the Expression of Functional Traits: Studies on Lizards” (3 lectures)
- March, 1996. Ecole Normale Supérieure, Paris. “Thyroid Regulation of Growth in Lizards”
- February, 1996. University of Pennsylvania. “Social and Hormonal Modulation of Exercise Endurance in Lizards”
- February, 1996. Department of Animal Sciences (Rutgers). “Social and Hormonal Regulation of Exercise Endurance in Lizards”
- April, 1995. Northeastern University. “Regulation of Exercise Endurance by Testosterone and Social Interactions in Lizards”
- April, 1994. Drexel University. “Social and Hormonal Regulation of Exercise Endurance in Lizards”
- March, 1994. University of Chicago. Social Modulation of Exercise Endurance in Lizards”
- April, 1993. University of Delaware. “Thyroid Hormonal Regulation of Growth, Energy Metabolism, and Exercise Performance in Lizards”

STATEMENT OF RESEARCH INTERESTS

Statement of Research Interests

I am interested in ecological and evolutionary physiology and endocrinology. My general approach is highly integrative, crossing traditional levels of biological organization from biochemical to behavioral and blending descriptive and experimental studies in the laboratory and the field. I stress the importance of field experiments solidly grounded in natural history. While the dissection of underlying mechanisms can require

controlled laboratory conditions, the integration of complex physiological and behavioral interactions can be fully understood only in the milieu of the natural environment. My primary research project involves comparative and experimental studies on growth and sexual size dimorphism (SSD) in lizards. At present, I am particularly interested in the apparent bipotentiality of testosterone as a stimulatory or an inhibitory growth regulator, where the effect of testosterone on growth aligns with a species' pattern of sexual dimorphism in body size. In short, the bipotentiality of testosterone may represent a proximate mechanism of macroevolutionary patterns in SSD. Other ongoing projects include 1) integrative studies on stress, adrenal hormones, and adrenocortical cell function (with R. V. Carsia) and 2) evolution of sexually dimorphic aggressive and sexual behavior in geckos (with A. Golinski and L. Kratochvíl).

PUBLICATIONS

DISSERTATION (Ph.D.)

John-Alder, H.B. 1983. The physiological basis of activity in lizards: Influences of body temperature and thyroid hormones.

THESIS (M.S.)

John-Alder, H.B. 1979. Aortic regional histamine-forming capacity in normal and diabetic male Wistar rats.

REFEREED ARTICLES AND BOOK CHAPTERS

67. Pollock, N.B., S. Feigin, M. Drazenovic, H.B. John-Alder. 2017. Sex hormones and the development of sexual size dimorphism: dihydrotestosterone inhibits growth in a female-larger lizard (*Sceloporus undulatus*). *J. Exp. Biol.* In press.
66. Golinski, A., L. Kubička, H. John-Alder, L. Kratochvíl. 2015. Role of testosterone in sex recognition and the control of male-typical behavior and morphology in Lichtenfelderi's gecko (*Goniurosaurus lichtenfelderi*). *Horm. Behav.* 72:49-59.
65. Duncan, C.A., A.E. Jetzt, W. Cohick, and H. John-Alder. 2015. Nutritional Modulation of IGF-1 in Relation to Growth and Body Condition in *Sceloporus* Lizards. *Gen. Comp. Endocrinol.* 216:116-124.
64. Golinski, A., L. Kubička, H. John-Alder, L. Kratochvíl. 2014. Elevated testosterone is required for male copulatory behavior and aggression in Madagascar ground geckos (*Paroedura picta*). 2014. *Gen. Comp. Endocrinol.* 205: 133-141.
63. Kubička, L., A. Golinski, H. John-Alder, L. Kratochvíl. 2013. Ontogeny of pronounced female-biased sexual size dimorphism in the Malaysian cat gecko (*Aeluroscalabotes*

- felinus*): Squamata: Eublepharidae): a test of the role of testosterone in growth regulation. *Gen. Comp. Endocrinol.* 188: 183-188.
62. Carsia, R. V., P. McIlroy, R. M. Cox, M. Barrett, and H. B. John-Alder. 2012. Effects of food restriction on steroidogenesis in dispersed adrenocortical cells from Yarrow's Spiny Lizard (*Sceloporus jarrovii*). *Gen. Comp. Endocrinol.* 178:306-313.
 61. Golinski, A., H. John-Alder, and L. Kratochvíl. 2011. Male sexual behavior does not require testosterone in a lizard (*Coleonyx elegans*, Eublepharidae). *Horm. Behav.* 59: 144-150.
 60. John-Alder, H.B., R.M. Cox, G.J. Haenel, and L.C. Smith. 2009. Hormones, performance, and fitness: insights from natural history and endocrine experiments on a lizard (*Sceloporus undulatus*). *Int. Comp. Biol.* 49(4): 393-407.
 59. Carsia, R. V., P. McIlroy, R. M. Cox, M. Barrett, and H. B. John-Alder. 2008. Gonadal modulation of adrenal steroidogenesis in *Sceloporus* lizards. *Gen. Comp. Endocrinol.* 158:202-210. <http://dx.doi.org/10.1016/j.ygcen.2008.07.018>
 58. Cox, R. M., V. Zilberman, and H. B. John-Alder. 2008. Testosterone stimulates the expression of a social color signal in Yarrow's Spiny Lizard, *Sceloporus jarrovii*. *J. Exp. Zool.* 309A: 505-514.
 57. Carsia, R. V., R. M. Cox, M. Barrett, P. McIlroy, and H. B. John-Alder. 2008. Adrenal steroidogenesis in reptiles: insights from dispersed adrenocortical cells from *Sceloporus* lizards. Pages 57-88 IN: Recent Advances in Non-Mammalian Adrenal Gland Research. Ed. A. Capaldo. Research Signpost, Kerala, India.
 56. Cox, R.M., M.M. Barrett, and H.B. John-Alder. 2008. Effects of food restriction on growth, energy allocation, and sexual size dimorphism in Yarrow's Spiny Lizard, *Sceloporus jarrovii*. *Canadian Journal of Zoology.* 86:268-276.
 55. Cox, R.M. and H. B. John-Alder. 2007. Increased mite parasitism as a cost of testosterone in male striped plateau lizards *Sceloporus virgatus*. *Functional Ecology.* 21:327-334.
 54. John-Alder, H. B., R. M. Cox, and E. N. Taylor. 2007. Proximate developmental mediators of sexual dimorphism in size: case studies from squamate reptiles. *Integrative and Comparative Biology.* 47:258-271.
 53. Cox, R.M. and H.B. John-Alder. 2007. Growing apart together: the development of contrasting sexual size dimorphisms in sympatric *Sceloporus* lizards. *Herpetologica.* 63: 245-257.
 52. Cox, R. M., M. A. Butler, and H. B. John-Alder. 2007. The evolution of sexual size dimorphism in reptiles. Pages 38-49 IN: Sex, Size, and Gender Roles: Evolutionary Studies of Sexual Size Dimorphism. Eds. D. J. Fairbairn, W. U. Blanckenhorn, and T.

Szekely. Oxford Univ. Press, Oxford, UK.

51. John-Alder, H. B. and R. M. Cox. 2007. Pages 195-204 Development of sexual size dimorphism in lizards: testosterone as a bipotential growth regulator. IN: Sex, Size, and Gender Roles: Evolutionary Studies of Sexual Size Dimorphism. Eds. D. J. Fairbairn, W. U. Blanckenhorn, and T. Szekely. Oxford Univ. Press, Oxford, UK.
50. Oppliger, A., L. Degen, C. Bouteiller-Reuter, and H. B. John-Alder. 2007. Promiscuity and high level of multiple paternity in common wall lizards (*Podarcis muralis*): data from microsatellite markers. *Amphibia – Reptilia*. 28:301-303.
49. Cox, R. M., V. Zilberman, and H. B. John-Alder. 2006. Laboratory common garden removes effects of sex and castration on growth of Yarrow's spiny lizard, *Sceloporus jarrovi*. *Functional Ecology*. 20:880-888.
48. Carsia, R. V. and H. B. John-Alder. 2006. Atrial natriuretic peptide (ANP) is a negative modulator of adrenocortical cell function of the eastern fence lizard (*Sceloporus undulatus*). *Gen. Comp. Endocrinol.* 145: 157-161.
47. Cox, R.M., and H.B. John-Alder. 2005. Testosterone has opposite effects on male growth in lizards (*Sceloporus* spp.) characterized by opposite patterns of sexual size dimorphism. *J. Exp. Biol.* 208: 4679-4687.
46. Cox, R. M., S. L. Skelly, A. Leo, and H. B. John-Alder. 2005. Testosterone regulates sexually dimorphic coloration in the eastern fence lizard, *Sceloporus undulatus*. *Copeia*. 2005(3): 597-608.
45. Cox, R. M., S. L. Skelly, and H. B. John-Alder. 2005. Testosterone inhibits growth in juvenile male eastern fence lizards (*Sceloporus undulatus*): implications for energy allocation and sexual size dimorphism. *Physiol. Biochem. Zool.* 78(4): 531-545.
44. Oppliger, A., M. S. Giorgi, A. Conelli, M. Nembrini, and H. B. John-Alder. 2004. Effect of testosterone on immunocompetence, parasite load and metabolic rate in the wall lizard *Podarcis muralis*. *Canadian Journal of Zoology*. 82: 1713-1719.
43. Cox, R. M., S. L. Skelly, and H. B. John-Alder. 2003. A comparative test of adaptive hypotheses for sexual size dimorphism in lizards. *Evolution*. 57:1653-1669.
42. Carsia, R. V. and H. John-Alder. 2003. Seasonal Alterations in Adrenocortical Cell Function Associated with Stress-Responsiveness and Gender in the Eastern Fence Lizard (*Sceloporus undulatus*). *Horm. Behav.* 43:408-420.
41. Haenel, G. J., L. C. Smith, and H. B. John-Alder. 2003. Home range analysis in *Sceloporus undulatus*. II. A test of spatial relationships and reproductive success. *Copeia*. 2003(1): 13-123.

40. Haenel, G. J., L. C. Smith, and H. B. John-Alder. 2003. Home range analysis in *Sceloporus undulatus* (eastern fence lizard). I. Spacing patterns and the context of territorial behavior. *Copeia*. 2003(1): 99-112.
39. Kearns, C. F., K.H. McKeever, H. John-Alder, T. Abe, and W.F. Brechue. 2002. Relationship between body composition, blood volume and maximal oxygen uptake. *Equine vet. J. Suppl.* 34:485-490.
38. John-Alder, H. B., Carsia, R. V., Smith, L. C., and Haenel, G. J. 2002. Seasonal and sexual variation in plasma corticosterone and adrenocortical cell function in eastern fence lizards (*Sceloporus undulatus*). Proceedings of the 21st Conference of European Comparative Endocrinologists, Bonn, Germany. Pages 141-146.
37. Tokarz, R.R., S. McMann, L.C.Smith, and H. John-Alder. 2002. Effects of testosterone treatment and season on frequency of dewlap extensions during male-male interactions in the lizard, *Anolis sagrei*. *Horm. Behav.* 41:70-79.
36. Haenel, G. J. and H. B. John-Alder. 2002. Experimental and demographic analyses of growth rate and sexual size dimorphism in a lizard, *Sceloporus undulatus*. *Oikos*. 96:70-81.
35. Zhou, T., H. B. John-Alder, J. S. Weis, and P. Weis. 2000. Endocrine disruption: thyroid dysfunction in mummichogs (*Fundulus heteroclitus*) from a polluted habitat. *Mar. Environ. Res.* 50:393-397.
34. de Fraipont, M., J. Clobert, H. John-Alder, and S. Meylan. 2000. Increased pre-natal maternal corticosterone promotes philopatry of offspring in common lizards *Lacerta vivipara*. *J. Anim. Ecol.* 69:404-413.
33. Smith, L. C. and H. B. John-Alder. 1999. Seasonal specificity of hormonal, behavioral, and coloration responses to within- and between-sex encounters in male lizards (*Sceloporus undulatus*). *Horm. Behav.* 36:39-52.
32. Zhou, T., H. B. John-Alder, P. Weis, and J. S. Weis. 1999. Thyroidal status of mummichogs (*Fundulus heteroclitus*) from a polluted vs. a reference habitat. *Environ. Toxicol. Chem.* 18:2817-2823.
31. Lorenzon, P., J. Clobert, A. Oppliger, and H. John-Alder. 1999. Effect of water constraint on growth rate, activity and body temperature of yearling common lizard (*Lacerta vivipara*). *Oecologia*. 118:423-430.
30. Meylan, S., M. de Fraipont, J. Clobert, and H. John-Alder. 1998. Offspring philopatry is promoted by mother stress in the common lizard (*Lacerta vivipara*). – Pp. 325-330, in: Miaud, C. & G. Guyetant (eds): *Current Studies in Herpetology*, Le Bourget du Lac (SEH), 480 p.

29. Oppliger, A., J. Clobert, J. Lecomte, P. Lorenzon, K. Boudjemadi, and H. B. John-Alder. 1998. Environmental stress increases the prevalence and intensity of blood parasite infection in the common lizard Lacerta vivipara. *Ecol. Letters*. 1:129-138.
28. Tokarz, R. R., S. McMann, L. Seitz, and H. John-Alder. 1998. Plasma corticosterone and testosterone levels during the annual reproductive cycle of male brown anoles (Anolis sagrei). *Physiol. Zool.* 71:139-146.
27. John-Alder, H., L. Seitz, and G. Haenel. 1997. Ecological endocrinology of reptiles: hormonal causes and correlates of variation in exercise endurance in lizards. Pages 1661-1667. In *Advances in Comparative Endocrinology*. Proceedings of the XIIIth International Congress of Comparative Endocrinology, Yokohama, Japan. Editors: S. Kawashima and S. Kikuyama. Monduzzi Editore, Bologna, Italy.
26. John-Alder, H.B., S. McMann, L.S. Katz, A. Gross, and D.S. Green. 1996. Social modulation of exercise endurance in a lizard (Sceloporus undulatus). *Physiol. Zool.* 69:547-567.
25. Marsh, R.L. and H.B. John-Alder. 1994. Jumping performance of hylid frogs measured with high-speed cine films. *J. Exp. Biol.* 188:131-141.
24. Steinberg, M.B., A.L. Finelli, R.W. Gerwien, and H.B. John-Alder. 1993. Behavioral effects of thyroxine in a lizard (Ameiva undulata: Teiidae). *Physiol. Zool.* 66:148-165.
23. Gerwien, R.W. and H.B. John-Alder. 1992. Growth and behavior of thyroid deficient lizards (Sceloporus undulatus). *Gen. Comp. Endocrinol.* 87:312-324.
22. Rome, L.C, E.D. Stevens, and H.B. John-Alder. 1992. Effects of temperature on physiological systems; thermal acclimation. Pages 183-205 in: *Environmental Physiology of the Amphibia*. Edited by Martin E. Feder and Warren Burggren. University of Chicago Press.
21. John-Alder, H.B. and B. Joos. 1991. Interactive effects of thyroxine and experimental location on running endurance, tissue masses, and enzyme activities in captive versus field-active lizards (Sceloporus undulatus). *Gen. Comp. Endocrinol.* 81:120-132.
20. Joos, B. and H.B. John-Alder. 1990. Effects of thyroxine on standard and total metabolic rates in the lizard Sceloporus undulatus. *Physiol. Zool.* 63:873-885.
19. John-Alder, H.B. and P.J. Morin. 1990. Effects of larval density on jumping ability and stamina in newly metamorphosed Bufo woodhousei fowleri. *Copeia*. 1990(3):856-860.
18. John-Alder, H.B. 1990. Effects of thyroxine on standard metabolic rate and selected intermediary metabolic enzymes in field-active lizards (Sceloporus undulatus). *Physiol. Zool.* 63:600-614.

17. John-Alder, H.B. 1990. Thyroid regulation of resting metabolic rate and intermediary metabolic enzymes in a lizard (*Sceloporus occidentalis*). *Gen. Comp. Endocrinol.* 77:52-62.
16. John-Alder, H.B., M.C. Barnhart, and A.F. Bennett. 1989. Thermal sensitivity of swimming performance and muscle contraction in northern and southern populations of tree frogs (*Hyla crucifer*). *J. Exp. Biol.* 142:357-372.
15. Tullson, P.C., H.B. John-Alder, D.A. Hood, and R.L. Terjung. 1988. *De novo* synthesis of adenine nucleotides in different skeletal muscle fiber types. *Am. J. Physiol.* 255:C271-C277.
14. John-Alder, H.B., P.J. Morin, and S.P. Lawler. 1988. Thermal physiology, phenology, and distribution of treefrogs. *Am. Nat.* 132:506-520.
13. John-Alder, H.B. and A.F. Bennett. 1987. Thermal adaptations in lizard muscle function. *J. Comp. Physiol. B.* 157:241-252.
12. John-Alder, H.B., R. McAllister, and R.L. Terjung. 1986. Reduced running endurance in gluconeogenesis-inhibited rats. *Am. J. Physiol.* 215:R137-R142.
11. John-Alder, H.B., T. Garland, and A.F. Bennett. 1986. Locomotory capacities, oxygen consumption, and the cost of locomotion of the shingle-back lizard (*Trachydosaurus rugosus*). *Physiol. Zool.* 59:523-531.
10. Bennett, A.F. and H.B. John-Alder. 1986. Thermal relations of some Australian skinks (Sauria: Scincidae). *Copeia.* 1986 (1):57-64.
9. John-Alder, H.B. 1984. Seasonal variations in activity, aerobic energetic capacities, and plasma thyroid hormones (T3 and T4) in an iguanid lizard. *J. Comp. Physiol. B.* 154:409-419.
8. John-Alder, H.B. 1984. Reduced aerobic capacity and locomotory endurance in thyroid-deficient lizards. *J. Exp. Biol.* 109:175-189.
7. Huey, R.B., A.F. Bennett, H. John-Alder, and K.A. Nagy. 1984. Locomotor capacity and foraging behavior of Kalahari lacertid lizards. *Anim. Behav.* 32:41-50.
6. Bennett, A.F. and H.B. John-Alder. 1984. The effect of body temperature on the locomotory energetics of lizards. *J. Comp. Physiol. B.* 155:21-27.
5. Bennett, A.F., R.B. Huey, H.B. John-Alder, and K.A. Nagy. 1984. The parasol tail and thermoregulatory behavior of the cape ground squirrel (*Xerus inauris*). *Physiol. Zool.* 57:57-62.
4. Bennett, A.F., R.B. Huey, and H. John-Alder. 1984. Physiological correlates of natural

activity and locomotor capacity in two species of lacertid lizards. *J. Comp. Physiol. B.* 154:113-118.

3. John-Alder, H.B., C.H. Lowe, and A.F. Bennett. 1983. Thermal dependence of locomotory energetics and aerobic capacity of the Gila monster (*Heloderma suspectum*). *J. Comp. Physiol.B.* 151:119-126.
2. John-Alder, H.B. 1983. Effects of thyroxine supplementation on metabolic rate and aerobic capacity in a lizard. *Am. J. Physiol.* 244:R659-R666.
1. John-Alder, H.B. and A.F. Bennett. 1981. Thermal dependence of endurance and locomotory energetics in a lizard. *Am. J. Physiol.* 241:R342-R349.

MANUSCRIPTS IN PREPARATION (listed in likely order of submission)

67. Duncan, C.A, W. Cohick, and H. B. John-Alder. Testosterone Reduces Growth and Hepatic IGF-1 Message but not Plasma IGF-1 in a Female-Larger Lizard, *Sceloporus undulatus*.
68. Pollock, N.B., M. Drazenovic, S. Feigin, and H. John-Alder. Dihydrotestosterone inhibits growth and stimulates color development in a sexually-dimorphic lizard, *Sceloporus undulatus*.
69. Carsia, R.V., P.J. McIlroy, H.B. John-Alder. Modulation of adrenal steroidogenesis in lizards by testosterone.

ABSTRACTS

71. Cox, C.L., Pollock, N.B., John-Alder, H.B., Andrew, A.L., Card, D.C., Castoe, T.A., and Cox, R.M. 2016. Evolutionary lability in the modulation of sex-biased gene expression by testosterone. Evolution2016, Austin, TX.
70. Cox, C.L., Pollock, N.B., John-Alder, H.B., Andrew, A.L., Card, D.C., Castoe, T.A., and Cox, R.M. 2016. Evolutionary lability in the modulation of growth-regulatory gene networks by testosterone. SICB, Portland, OR.
69. Pollock, N.B., Drazenovic, M., Feigin, S.E., and John-Alder, H.B. 2015. Dihydrotestosterone inhibits growth in a female-larger lizard (*Sceloporus undulatus*): implications for the development of sexual size dimorphism. SICB, Portland, OR.
68. John-Alder, H.B. and Anholt, A. 2014. Size matters: a laboratory exercise on the allometric analysis of avian eggs. Evolution2014. Raleigh, NC.
67. Golinski, A. and John-Alder, H.B. 2012. Androgen receptor immunoreactivity in the brain of a gecko lizard. Society for Behavioral Neuroendocrinology. Madison, WI.

66. Duncan, C.A. and John-Alder, H.B. 2011. Testosterone inhibits hepatic IGF-1 message in *Sceloporus undulatus*, a female-larger species of lizard. SICB, Salt Lake City, Utah.
65. Golinski, A., Kratochvil, L, John-Alder, H. 2010. Androgens mediate male-specific chemical cues used for sex recognition in a lizard (*Coleonyx elegans*, Eublepharidae). Society for Behavioral Neuroendocrinology. Toronto, Canada.
64. Duncan, C.A., Cohick, W., and John-Alder H.B. 2010. Effects of food deprivation on the insulin-like growth factor 1 system in eastern fence lizards (*Sceloporus undulatus*). SICB, Seattle, WA.
63. Golinski, A., Kubicka, L., Kratochvil, L., John-Alder, H. 2009. Hormones and the evolution of mating strategies in eublepharid lizards. 7th Annual Conference on Behavior, Physiology and Genetics of Wildlife. Berlin.
62. Golinski, A., Kubička L., Kratochvíl L., John-Alder H. 2009. Sexual dimorphism in eublepharid lizards: evolutionary constraint or plasticity? Society for Behavioral Neuroendocrinology. East Lansing, MI.
61. Golinski, A., Kubička L., Kratochvíl L., John-Alder H. 2009. Expanding the comparative story of eyelid geckos (Eublepharidae): hormonal regulation of morphological and behavioral sexually dimorphic traits in *Goniurosaurus lichtenfelderi*. Annual conference of the Czech Zoological Society, Brno.
60. Duncan, C.A., and John-Alder, H.B. 2009. Food restriction inhibits growth rate but not expression of hepatic IGF-1 message in Yarrow's spiny lizard, *Sceloporus jarrovi*. SICB, Boston, MA.
59. Golinski, A., Kubicka, L., Kratochvil, L., and John-Alder, H. 2009. Hormonal regulation of sexual dimorphisms in Lichtenfelderi's gecko (*Goniurosaurus lichtenfelderi*). SICB, Boston, MA.
58. John-Alder, H.B., Cox, R.M., Haenel, G.J., and Smith, L.C. 2009. Hormones and Performance: Insights from natural history and endocrine experiments in lizards. SICB, Boston, MA.
57. Golinski, A., L. Kratochvil, and H. John-Alder. 2008. Effects of testosterone on sexually dimorphic traits in Mexican banded geckos (*Coleonyx elegans*). SICB, San Antonio, TX.

56. John-Alder, H., R. Carsia, R. Cox, M. Barrett, and P. McIlroy. 2008. Gonadal and nutritional regulation of adrenocortical cellular steroidogenesis in *Sceloporus* lizards. SICB, San Antonio, TX.
55. John-Alder, H. B., R. M. Cox, and E. N. Taylor. 2007. Proximate developmental mediators of sexual size dimorphism: case studies from squamate reptiles. SICB, Phoenix, AZ.
54. Cox, R. M. and H. B. John-Alder. 2007. Increase mite parasitism as a cost of testosterone in male striped plateau lizards, *Sceloporus virgatus*. SICB, Phoenix, AZ.
53. Cox, R. M., M. M. Barrett, V. Zilberman, and H. B. John-Alder. 2005. Effects of sex and castration on growth of Yarrow's Spiny Lizard (*Sceloporus jarrovi*) are reduced or absent in laboratory common garden. *Int. Comp. Biol.* 45:982.
52. Cox, R. M., S. L. Skelly, A. Leo, and H. B. John-Alder. 2004. Testosterone regulates sexually dimorphic coloration in the eastern fence lizard, *Sceloporus undulatus*. *Int. Comp. Biol.* 44: 685.
51. Cox, R. M. and H. B. John-Alder. 2004. Does female reproductive investment constrain growth and promote male-larger sexual size dimorphism in Yarrow's spiny lizard, *Sceloporus jarrovi*? *Int. Comp. Biol.* 44: 540.
50. Carsia, R. V., R. M. Cox, P. J. McIlroy, and H. B. John-Alder. 2004. Ovarian influence on adrenocortical cell function in *Sceloporus virgatus* (striped plateau lizard). *Int. Comp. Biol.* 44: 681.
49. John-Alder, H. B. and R. M. Cox. 2004. Growth effects of testosterone and castration in lizards (*Sceloporus* spp.) with female- vs. male-larger sexual size dimorphism. *Int. Comp. Biol.* 44: 578.
48. John-Alder, H. B. and R. V. Carsia. 2003. Influence of the Testis on Adrenocortical Cell Function in *Sceloporus undulatus* (Eastern Fence Lizard). *Int. Comp. Biol.* 43: 811.
47. Cox, R. M. and H. B. John-Alder. 2003. Energetic mechanisms for testosterone-mediated growth inhibition in male eastern fence lizards, *Sceloporus undulatus*. *Int. Comp. Biol.* 43: 811.

46. Carsia, R. V. and H. B. John-Alder. 2003. Atrial Natriuretic Peptide (ANP) is a Negative Modulator of Adrenocortical Cell Function in *Sceloporus undulatus* (Eastern Fence Lizard). *Int. Comp. Biol.* 43: 1053.
45. Skelly, S. L. and H. B. John-Alder. 2002. Effects of testosterone on growth and behavior of the eastern fence lizard (*Sceloporus undulatus*). *Int. Comp. Biol.* 42:1314.
44. Cox, R. M., S. L. Skelly, and H. B. John-Alder. 2002. Ontogenetic and mechanistic studies of sexual size dimorphism in lizards. *Int. Comp. Biol.* 42:1213-1214.
43. Smith, L. C., H. John-Alder, J. LeComte, M. de Fraipont, and J. Clobert. 2002. Ultraviolet reflectance is dependent on body size and aggression in a lizard, *Lacerta vivipara*. Program of the Animal Behavior Society Meeting. July, 2002. University of Indiana, Bloomington.
42. Kearns, C. F., K.H. McKeever, H. John-Alder, T. Abe, and W.F. Brechue. 2002. Relationship between body composition, blood volume and maximal oxygen uptake. *Proceedings of the 6th International Conference on Equine Exercise Physiology*, Lexington, KY.
41. John-Alder, H. B., Carsia, R. V., Smith, L. C. and Haenel, G. J. 2002. Seasonal and sexual variation in plasma corticosterone and adrenocortical cell function in eastern fence lizards (*Sceloporus undulatus*). European Conference of Comparative Endocrinologists.
40. Smith, L. C. and John-Alder, H. B. 2001. Hormones, behavior, and coloration in dominant and subordinate male lizards (*Sceloporus undulatus*) during continuous and intermittent staged encounters. *Horm. Behav. (Program/Abstracts)*. 39:350
39. Carsia, R. V. and John-Alder, H. B. 2001. Season-Specific Alterations in Adrenocortical Cell Function of the Eastern Fence Lizard (*Sceloporus undulatus*). *Am. Zool.* 41:1406.
38. Cox, R. M., Skelly, S. L., and John-Alder, H. B. 2001. A comparative test of adaptive hypotheses for sexual size dimorphism in lizards. *Am. Zool.* 41:1418.
37. John-Alder, H. B., Cox, R. M., Leo, A, and S. Skelly. 2001. Growth inhibition by testosterone in eastern fence lizards (*Sceloporus undulatus*). *Am. Zool.* 41:1486.
36. John-Alder, H. B. and R. V. Carsia. 2000. Partial Characterization of adrenocortical cells from the eastern fence lizard (*Sceloporus undulatus*). *Am. Zool.* 40:1078.
35. John-Alder, H. B. and G. J. Haenel. 2000. Demographic and experimental studies on growth and sexual size dimorphism. *Am. Zool.* 40:1078.
34. Haenel, G. J., H. John-Alder, and L. Seitz. 1999. Estimates of reproductive success of lizards, *Sceloporus undulatus*, in a natural population using DNA fingerprinting. Annual meeting of the Society for the Study of Evolution, University of Michigan, Ann Arbor.

33. Haenel, G. J., and H. B. John-Alder. 1998. Locomotor performance and reproductive success using DNA fingerprinting in male eastern fence lizards, *Sceloporus undulatus*. Annual meeting of the American Society of Ichthyologists and Herpetologists, University of Guelph, Ontario.
32. Seitz, L. C., H. B. John-Alder, and G. J. Haenel. 1997. Testosterone and corticosterone in free-living male lizards. Annual meeting of Animal Behavior Society.
31. Seitz, L. C., G. J. Haenel, and H. B. John-Alder. 1997. Social and hormonal correlates of home range area in breeding male lizards. *Am. Zool.* 37:119A.
30. Haenel, G. J., L. C. Seitz, and H. B. John-Alder. 1997. Heritability estimates of running endurance in the eastern fence lizard using DNA fingerprinting. *Am. Zool.* 37:106A.
29. Seitz, L.C. and H. B. John-Alder. 1996. Effects of conspecific social interactions on the behavior, color, and circulating hormone levels of male lizards. Annual meeting of Animal Behavior Society.
28. Seitz, L.C. and H.B. John-Alder. 1995. Hormonal and behavioral effects of conspecific social interactions in reproductive and non-reproductive male lizards. *Am. Zool.* 35:48A.
27. Seitz, L.C. and H.B. John-Alder. 1994. Social significance of dorsal color in a territorial lizard, *Sceloporus undulatus*. *Am. Zool.* 34:78A.
26. Gerwien, R.W. and H. B. John-Alder. 1994. Thyroid regulation of growth and food consumption in the lizard, *Sceloporus undulatus*. *Am. Zool.* 34:121A.
25. John-Alder, H. B. 1994. Testosterone improves exercise endurance in a lizard (*Anolis sagrei*). *Am. Zool.* 34:120A.
24. John-Alder, H.B., S. McMann, A. Gross, L.S. Katz, and D. Green. 1993. Social modulation of exercise endurance in a lizard (*Sceloporus undulatus*). American Society of Ichthyologists and Herpetologists. University of Texas. Austin, TX.
23. Gerwien, R.W., A. Finelli, and H.B. John-Alder. 1992. Morphological and enzymatic correlates of running endurance in lizards. American Society of Ichthyologists and Herpetologists. University of Illinois. Champaign-Urbana, IL.
22. John-Alder, H.B., S. McMann, A. Gross, and L.S. Katz. 1992. Androgenic enhancement of exercise endurance in lizards. Eastern Regional Conference on Comparative Endocrinology. American Society of Zoologists. Beaufort, NC.

21. Gerwien, R.W. and H.B. John-Alder. 1991. Growth and behavior in thyroid-deficient lizards. Eastern Regional Conference on Comparative Endocrinology. American Society of Zoologists. Lewes, Delaware.
20. Pierce, V., T.R. Meagher, and H. John-Alder. 1990. Genetic markers for pedigree inference in a lizard, *Sceloporus undulatus*. *Am. Zool.* 30:54A.
19. Joos, B. and H.B. John-Alder. 1989. Thyroxine 5'deiodinase activity in a lizard, *Sceloporus occidentalis*. *Am. Zool.* 29:44A.
18. Gerwien, R., A. Finelli, and H.B. John-Alder. Physiological correlates of inter-and intra-specific differences in stamina of lizards. *Am. Zool.* 29:159A.
17. John-Alder, H.B. and B. Joos. 1989. Effects of thyroxine on standard and field metabolic rates in field-active and captive lizards. *Am. Zool.* 29:55A.
16. John-Alder, H.B. and B. Joos. 1989. Thyroxine has greater physiological activity in field-active than in captive lizards: a case for field endocrinology. Program of XIth International Symposium on Comparative Endocrinology, Malaga, Spain. p. 21.
15. John-Alder, H.B. 1988. Effects of thyroxine on energy metabolism and intermediary metabolic enzymes in captive and field-active lizards. *Am. Zool.* 28:43A.
14. John-Alder, H.B., P.J. Morin, and S.P. Lawler. 1987. Thermal physiology, phenology, and distribution of treefrogs. *Physiologist.* 30:236.
13. Tullson, P.C., H. John-Alder, D.A. Hood, and R.L. Terjung. 1986. *De novo* synthesis of purine nucleotides in different fiber types of rat skeletal muscle. *Fed. Proc.* 45:544.
12. Bennett, A.F., R.B. Huey, and H.B. John-Alder. 1986. Body temperature, sprint speed, and muscle contraction kinetics in lizards. *Physiologist.* 29:179.
11. John-Alder, H.B. 1986. Effects of physiological thyroxine delivery in lizards. *Am. Zool.* 26:23A.
10. John-Alder, H.B., R. McAllister, and R.L. Terjung. 1985. Reduced running endurance in gluconeogenesis-inhibited rats. *Physiologist.* 28(4):276.
9. John-Alder, H.B. and A.F. Bennett. 1984. Thermal effects on the performance of lizard skeletal muscle: acute responses and adaptive adjustments. *Am. Zool.* 24:6A.

8. John-Alder, H.B. 1983. Reduced locomotory endurance and aerobic capacity in thyroid-deficient lizards. *Proceedings of the International Union of Physiological Sciences*. XV:54.
7. John-Alder, H.B. 1983. Reduced locomotory endurance and aerobic capacity in thyroid-deficient lizards. Western Reg. Conf. Comp. Endocrin. University of California, Berkeley.
6. Bennett, A.F., R.B. Huey, H. John-Alder, and K.A. Nagy. 1982. Activity physiology and behavioral capacity of two congeneric lizards. *Physiologist*. 25(4):338.
5. John-Alder, H.B. 1982. Seasonal cycles in behavioral and physiological capacities in the lizard *Dipsosaurus dorsalis*. *Physiologist*. 25(4):190.
4. Huey, R.B., A.F. Bennett, H.B. John-Alder, and K.A. Nagy. 1982. Behavioral and physiological correlates of foraging mode in two lacertid lizards. Am. Soc. Ichthyologists and Herpetologists.
3. John-Alder, H.B. 1981. Effects of thyroxine (T4) supplementation on aerobic capacity in the lizard, *Dipsosaurus dorsalis*. *Am. Zool.* 21(4):964.
2. John-Alder, H.B. and A.F. Bennett. 1980. Thermal dependence of endurance, oxygen consumption, and cost of locomotion in a lizard. *Physiologist* 23(4):41.
1. John-Alder, H.B. and T.M. Hollis. 1978. Segmental analysis of aortic histamine synthesis in diabetic rats: its significance with respect to atherogenesis. Pennsylvania Academy of Science.

COURSES TAUGHT

UNDERGRADUATE

- 1) Organismic Physiology Lecture and Laboratory (01:119:358/360 and 01:119:361)
- 2) Systems Physiology (01:119/146:356)
- 3) Systems Physiology Laboratory (01:119:357)
- 4) Biology of the New Jersey Pinelands (11:015:249)

Current:

- 5) Animal Physiological Ecology (11:216:360)
- 6) Field Techniques (11:216:274)
- 7) Principles of Ecology (11:216:351)
- 8) Principles of Ecology Laboratory (11:216:352)

GRADUATE

- 5) Environmental Physiology (16:761:520)
- 6) Physiological Ecology (16:215:600)
- 7) Ecology and Physiology of Growth and Body Size (16:215:603)
- 8) Ecological Endocrinology (16:215:607)
- 9) Topics in Behavioral Endocrinology (16:215:604)

- 10) Herpetology (16:215:600)
- 11) Seminar in Animal Sciences (16:067:693,694)
- 12) Physiology of Reproduction (16:067:502)
- 13) Mammalian Physiology (16:761:502)
- 14) Principles of Integrative Physiology (16:067:506)

Current:

- 15) Ecological and Evolutionary Physiology (16:215:599)
- 16) Ecological Developmental Biology (16:215:599; with Diane Adams, sp, 2015)

GRADUATE STUDENTS (list only includes students for whom I was or am principal advisor)

Ph. D.

Robert M. Cox
Christine Duncan
Melissa Foster
Alison Golinski
Nicholas Pollock
Linda Smith
Robert Gerwien

M. S.

Stephanie L. Skelly
Laura Branagan
Jeanine Bayus
Janet Wang-Lee
Stephen McMann