

Robert M. Cox, Ph.D.

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Education

1999-2005	Ph.D. Ecology and Evolution	Rutgers, The State University of New Jersey New Brunswick, NJ
1995-1999	B.A. Biology	College of the Holy Cross Worcester, MA

Professional Appointments

2017-present	Associate Professor and Director of Graduate Studies Department of Biology, University of Virginia, Charlottesville, VA
2011-2017	Assistant Professor Department of Biology, University of Virginia, Charlottesville, VA
2007-2011	Postdoctoral Researcher Department of Biological Science, Dartmouth College, Hanover, NH
2005-2006	Postdoctoral Researcher Department of Ecology, Evolution & Organismal Biology, The Ohio State University, Columbus, OH
1999-2005	Graduate Student and Research Assistant Program in Ecology and Evolution, Rutgers University, New Brunswick, NJ

Undergraduate Teaching

2011-present	University of Virginia	BIOL 3020: Evolution & Ecology (~315 students) BIOL 4150: Evolution of Sex (~45 students) BIOL 4920: Independent Research (22 advisees) HBIO 4820: Human Biology (guest lecturer)
2006	Ohio State University	EEOB 400: Evolution (~130 students)
1999-2002	Rutgers University	BIO 101-2: Introductory Biology (Teaching Asst.)

Graduate Teaching

2011-present	University of Virginia	BIOL 8070 Colloquium in Population Biology BIOL 8081 Advanced Ecology & Evolution BIOL 8270 Communicating in Science BIOL 8250 7 Habits of Effective Grad Students
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Grants

2018	National Science Foundation (PI: lead institution) Integrative Organismal Systems – Physiological & Structural Systems IOS-1755026 “COLLABORATIVE RESEARCH – Evolutionary reversals in hormonal regulation of gene expression” (through 8/31/21)	\$653,343
2016	National Science Foundation DDIG Award (Co-PI: to student Aaron Reedy) Division of Environmental Biology – Evolutionary Ecology DEB-1601148 “DISSERTATION RESEARCH: Revealing the genomic targets of intralocus sexual conflict” (completed 5/31/18)	\$20,207
2015	National Science Foundation CAREER Award (PI) Division of Environmental Biology – Evolutionary Genetics DEB-1453089 “CAREER: Two phenotypes, one genome: Genomic conflict as a research framework for professional development of science educators” (through 2/27/20)	\$900,000
2015	National Science Foundation DDIG Award (Co-PI: to student Ariel Kahrl) Division of Environmental Biology – Evolutionary Ecology DEB-1501680 “DISSERTATION RESEARCH: Male fitness in a single cell: The evolutionary significance of male reproductive cell morphology” (completed 5/31/2017)	\$20,475
2015	National Science Foundation MEETING Award (PI: conference organizer) Integrative Organismal Systems – Behavioral Systems IOS-1539936 “MEETING: SICB Evolutionary Endocrinology: Hormones as mediators of evolutionary phenomena” (completed)	\$14,680
2003	Southwestern Research Station Student Support Grant American Museum of Natural History	\$760
2003	Grant in Aid of Research Society for Integrative and Comparative Biology	\$1,000
2003	Pre-dissertation Travel Award Grant Graduate School-New Brunswick, Rutgers University	\$2,500
2001	Theodore Roosevelt Memorial Grant American Museum of Natural History	\$800

Awards

2017	University of Virginia – All-University Teaching Award
2015	University of Virginia – Mead Honored Faculty Award
2011	University of Virginia – Excellence in Diversity Fellowship
2011	George A. Bartholomew Award – Awarded annually by the Society for Integrative and Comparative Biology to one outstanding early career scientist for distinguished contributions to comparative physiology and biochemistry

Peer-Reviewed Publications

¹ UVA undergraduate advisee, ² UVA graduate student advisee, ³ UVA postdoctoral advisee

54. Logan, M.L., J.D. Curlis¹, A.L. Gilbert, D.B. Miles, A.K. Chung¹, J.W. McGlothlin, and **R.M. Cox**. 2018. Thermal physiology and thermoregulatory behaviour exhibit low heritability despite genetic divergence between lizard populations. *Proceedings of the Royal Society B: Biological Sciences* 8285:20180697.
53. Neel, L.K., L.A. Durden, C.L. Cox, A.M. Reedy², and **R.M. Cox**. 2018. *Anolis sagrei* (Brown Anole) and *Leiocephalus carinatus* (Curlytail Lizard) ectoparasites. *Herpetological Review*: 842.
52. Reedy, A.M.², B. Pope, N. Kiriazis, C. Giordano¹, C. Sams¹, D.A. Warner, and **R.M. Cox**. 2017. Female anoles display less but attack more quickly than males in response to territorial intrusions. *Behavioral Ecology* 28: 1323-1328.
51. Kahrl, A.F.², and **R.M. Cox**. 2017. Consistent differences in sperm morphology between native and introduced populations of three *Anolis* lizard species. *Journal of Herpetology* 51: 532-537.
50. **Cox, R.M.**, R.A. Costello², B.A. Camber¹, and J.W. McGlothlin. 2017. Multivariate genetic architecture of the *Anolis* dewlap reveals both shared and sex-specific features of a sexually dimorphic ornament. *Journal of Evolutionary Biology* 30: 1262-1275.
49. **Cox, R.M.**, C.L. Cox³, J.W. McGlothlin, D. Card, A. Andrew, and T.A. Castoe. 2017. Hormonally mediated increases in sex-biased gene expression accompany the breakdown of between-sex genetic correlations in a sexually dimorphic lizard. *The American Naturalist* 189: 315-332.
48. Ren, T., A.F. Kahrl², M. Wu and **R.M. Cox**. 2016. Does adaptive radiation of a host lineage promote ecological diversity of its bacterial communities? A test using gut microbiota of *Anolis* lizards. *Molecular Ecology* 25: 4793-4804.
47. Kahrl, A.F.², C.L. Cox³ and **R.M. Cox**. 2016. Correlated evolution between targets of pre- and postcopulatory sexual selection across squamate reptiles. *Ecology and Evolution* 6: 6452-6459.
46. **Cox, R.M.**, J.W. McGlothlin and F. Bonier. 2016. Hormones as mediators of phenotypic and genetic integration: An evolutionary genetics approach. *Integrative and Comparative Biology* 56: 126-137.
45. **Cox, R.M.**, J.W. McGlothlin and F. Bonier. 2016. Evolutionary Endocrinology: Hormones as mediators of evolutionary phenomena. *Integrative and Comparative Biology* 56: 121-125.
44. Reedy, A.M.², C.L. Cox³, A.K. Chung¹, W.J. Evans¹, and **R.M. Cox**. 2015. Both sexes suffer increased parasitism and reduced energy storage as costs of reproduction in the brown anole (*Anolis sagrei*). *Biological Journal of the Linnean Society* 117: 516-520.
43. Cox, C.L.³, R. Peaden¹ and **R.M. Cox**. 2015. The metabolic cost of mounting an immune response in male brown anoles (*Anolis sagrei*). *Journal of Experimental Zoology A: Ecological Genetics and Physiology* 323A: 689-695.

42. Calsbeek, R., M.C. Duryea, P. Bergeron, D. Goedert, and **R.M. Cox**. 2015. Intralocus sexual conflict, adaptive sex allocation, and the heritability of fitness. *Journal of Evolutionary Biology* 28: 1975-1985.
41. Kahrl, A.F.², and **R.M. Cox**. 2015. Diet affects ejaculate traits in a lizard with condition-dependent fertilization success. *Behavioral Ecology* 26: 1501-1511.
40. Cox, C.L.³, and **R.M. Cox**. 2015. Evolutionary shifts in habitat aridity predict evaporative water loss across squamate reptiles. *Evolution* 69: 2507-2516.
39. Cox, C.L.³, A.F. Hanninen², A.M. Reedy², and **R.M. Cox**. 2015. Female anoles retain responsiveness to testosterone despite the evolution of androgen-mediated sexual dimorphism. *Functional Ecology* 29: 758-767.
38. Nash, J.¹, J. Price, and **R.M. Cox**. 2015. Photoperiodic rhythm of hatching suggests circadian entrainment of *Anolis sagrei* eggs. *Journal of Herpetology* 49: 611-615.
37. Logan, M., **R.M. Cox**, and R. Calsbeek. 2014. Natural selection on thermal performance in a novel thermal environment. *Proceedings of the National Academy of Sciences USA* 111: 14165-14169.
36. **Cox, R.M.** and R. Calsbeek. 2014. Survival of the fattest? Indices of body condition do not predict viability in the brown anole (*Anolis sagrei*). *Functional Ecology* 29: 404-413.
35. **Cox, R.M.**, M.B. Lovern and R. Calsbeek. 2014. Experimentally decoupling reproduction and energetics to test the functional basis of a life-history tradeoff. *Journal of Animal Ecology* 83: 888-898.
34. Calsbeek, R.M., M.C. Duryea, E. Parker, and **R.M. Cox**. 2014. Sex-biased juvenile dispersal is adaptive, but does not create genetic structure in island lizards. *Behavioral Ecology* 25: 1157-1163.
33. Duryea, M.C., A. Kern, **R.M. Cox** and R. Calsbeek. 2013. A novel application of Approximate Bayesian Computation for detecting male reproductive advantages due to mating order. *Behavioral Ecology and Sociobiology* 67: 1867-1875.
32. Reedy, A.M.², C.L. Cox³, R. Calsbeek and **R.M. Cox**. 2013. *Anolis sagrei* (Brown Anole). Sexual cannibalism. *Herpetological Review* 44: 661-662.
31. Calsbeek, R., and **R.M. Cox**. 2012. An experimental test of the role of predators in maintaining a genetically based polymorphism. *Journal of Evolutionary Biology* 25: 2091-2101.
30. Carsia, R.V., P.J. McIlroy, **R.M. Cox**, M. Barrett, and H.B. John-Alder. 2012. Effects of food restriction on steroidogenesis of dispersed adrenal cells from Yarrow's Spiny Lizard, *Sceloporus jarrovii*. *General and Comparative Endocrinology* 178: 306-313.
29. Urbach, D.U., **R.M. Cox**, and R. Calsbeek. 2012. Progeny sex ratios in a short-lived lizard: seasonal invariance despite apparent sex-specific effects of hatching date on fitness. *Evolutionary Ecology* 27: 205-220.
28. **Cox, R.M.**, and R. Calsbeek. 2011. An experimental test for alternative reproductive strategies underlying a female-limited polymorphism. *Journal of Evolutionary Biology* 24: 343-353.

27. **Cox, R.M.**, M.C. Duryea, M. Najarro and R. Calsbeek. 2011. Paternal condition drives sex-ratio bias in a lizard that lacks parental care. *Evolution* 65: 220-230.
26. **Cox, R.M.**, and R. Calsbeek. 2010. Cryptic sex-ratio bias provides indirect genetic benefits despite sexual conflict. *Science* 328: 92-94.
25. **Cox, R.M.**, and R. Calsbeek. 2010. Sex-specific selection and intraspecific variation in sexual size dimorphism. *Evolution* 64: 798-809.
24. **Cox, R.M.**, and R. Calsbeek. 2010. Severe costs of reproduction persist in *Anolis* lizards despite the evolution of a single-egg clutch. *Evolution* 64: 1321-1330.
23. **Cox, R.M.**, E.U. Parker, D.M. Cheney, A.L. Liebl, L.B. Martin, and R. Calsbeek. 2010. Experimental evidence for physiological costs underlying the trade-off between reproduction and survival. *Functional Ecology* 24: 1262-1269.
22. Calsbeek, R., and **R.M. Cox**. 2010. Experimentally assessing the relative importance of competition and predation as agents of selection. *Nature* 465: 613-616.
21. Calsbeek, R., L.A. Bonvini and **R.M. Cox**. 2010. Geographic variation, frequency-dependent selection, and the maintenance of a female-limited polymorphism. *Evolution* 64: 116-124.
20. Connallon, T., **R.M. Cox** and R. Calsbeek. 2010. Fitness consequences of sex-specific selection. *Evolution* 64: 1671-1682.
19. Gasc, A., M.C. Duryea, **R.M. Cox**, A. Kern and R. Calsbeek. 2010. Invasive predators deplete genetic diversity of island lizards. *PLoS ONE* 5: e12061.
18. **Cox, R.M.**, and R. Calsbeek. 2009. Sexually antagonistic selection, sexual dimorphism and the resolution of intralocus sexual conflict. *The American Naturalist* 173: 176-187.
17. **Cox, R.M.**, D.S. Stenquist, and R. Calsbeek. 2009. Testosterone, growth and the evolution of sexual size dimorphism. *Journal of Evolutionary Biology* 22: 1586-98.
16. **Cox, R.M.**, D.S. Stenquist, J.P. Henningsen, and R. Calsbeek. 2009. Manipulating testosterone to assess links between behavior, morphology and performance in the brown anole, *Anolis sagrei*. *Physiological and Biochemical Zoology* 82: 686-698.
15. John-Alder, H.B., **R.M. Cox**, G.J. Haenel, and L. Smith. 2009. Hormones, performance and fitness: natural history and endocrine experiments on a lizard (*Sceloporus undulatus*). *Integrative and Comparative Biology* 49: 393-407.
14. **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 jarrovi*. *Journal of Experimental Zoology* 309A: 505-514.
13. **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 jarrovi*. *Canadian Journal of Zoology* 86: 268-276.
12. **Cox, R.M.**, A. Muñoz-Garcia, M.S. Jurkowitz, and J.B. Williams. 2008. β -Glucocerebrosidase activity in stratum corneum of house sparrows following acclimation to high and low humidity. *Physiological and Biochemical Zoology* 81:97-105

11. Muñoz-Garcia, A., **R.M. Cox**, and J.B. Williams. 2008. Changes in cutaneous water loss and skin lipids of house sparrows (*Passer domesticus*) following acclimation to high or low humidity. *Physiological and Biochemical Zoology* 81: 87-96.
10. Carsia, R.V., P.J. McIlroy, **R.M. Cox**, M. Barrett, and H.B. John-Alder. 2008. Gonadal modulation of *in vitro* steroidogenic properties of dispersed adrenocortical cells from *Sceloporus* lizards. *General and Comparative Endocrinology* 158: 202-210.
9. **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.
8. **Cox, R.M.**, and H.B. John-Alder. 2007. Growing apart together: the development of contrasting sexual size dimorphisms in sympatric lizards. *Herpetologica* 63: 245-257.
7. 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.
6. **Cox, R.M.** 2006. A test of the reproductive cost hypothesis for sexual size dimorphism in Yarrow's spiny lizard, *Sceloporus jarrovii*. *Journal of Animal Ecology* 75: 1361-69.
5. **Cox, R.M.**, V. Zilberman, and H.B. John-Alder. 2006. Environmental sensitivity of sexual size dimorphism: Laboratory common garden removes effects of sex and castration on lizard growth. *Functional Ecology* 20: 880-888.
4. **Cox, R.M.**, and H.B. John-Alder. 2005. Testosterone has opposite effects on male growth in lizards (*Sceloporus* spp.) with opposite patterns of sexual size dimorphism. *Journal of Experimental Biology* 208: 4679-4687.
3. **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*: 597-608.
2. **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 dimorphism. *Physiological and Biochemical Zoology* 78: 531-545.
1. **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.

Invited Reviews and Chapters in Edited Books

9. **Cox, R.M.** 2017. Sexual size dimorphism. In: *The Encyclopedia of Evolutionary Psychological Science*. Eds. T. Shackelford and V. Weekes-Shackelford. Springer.
8. **Cox, R.M.** 2017. Sexually antagonistic selection. In: *The Encyclopedia of Personality and Individual Differences*. Eds. V. Zeigler-Hill and T. Shackelford. Springer.
7. **Cox, R.M.** 2014. Integrating costs of reproduction between the sexes. 2015. In: *Integrative Organismal Biology*. Eds. L.B. Martin, H.A. Woods, and C. Ghalambor. Wiley Scientific.
6. **Cox, R.M.** and **A.F. Kahr²**. 2014. Sexual selection and sexual dimorphism. In: *Reproductive Biology and Phylogeny of Lizards and Tuatara*. Eds. J. Rheubert, D. Seigel, S. Trauth and B. Jamieson. CRC Press.

5. **Cox, R.M.** 2013. Odd couples: Extraordinary differences between the sexes in the animal kingdom. Review of book by D.J. Fairbairn for *Reports of the National Center for Science Education* 34: 5.1-5.3.
4. **Cox, R.M.** 2010. Body size and sexual dimorphism. In: *The Encyclopedia of Animal Behavior*. Eds. M. Breed and J. Moore. Academic Press.
3. Carsia, R.V., P.J. McIlroy, **R.M. Cox**, M.M. Barrett, and H.B. John-Alder. 2008. Adrenal steroidogenesis in reptiles: insights from dispersed adrenocortical cells from *Sceloporus* lizards. In: *Recent Advances in Non-Mammalian Adrenal Gland Research*. Ed. A. Capaldo. Research Signpost.
2. **Cox, R.M.**, M.A. Butler, and H.B. John-Alder. 2007. The evolution of sexual size dimorphism in reptiles. In: *Sex, Size and Gender Roles: Evolutionary Studies of Sexual Size Dimorphism*. Eds. D.J. Fairbairn, T. Szekely, W.U. Blanckenhorn. Oxford University Press.
1. John-Alder, H.B., and **R.M. Cox**. 2007. 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, T. Szekely, W.U. Blanckenhorn. Oxford University Press.

Invited Seminars

- 2018 - James Madison University, Harrisonburg, VA (Sep 21, 2018)
- 2017 - Queen's University, Kingston, ON (Mar 9, 2017)
- 2016 - University of Florida, Whitney Lab, Marineland, FL (Jul 27, 2016)
- Joint Evolution Meetings, Austin, TX (June 19, 2016) – *Invited Symposium Speaker*
- University of Arizona, Tucson, AZ (Feb 29, 2016)
- University of Alberta, Edmonton, AB (Jan 11, 2016)
- SICB Meeting, Portland OR (Jan 5, 2016) – *Invited Symposium Speaker*
- 2015 - George Washington University, Washington, DC (Nov 20, 2015)
- University of Miami, Coral Gables, FL (Nov 2, 2015)
- Ohio Herpetology Symposium, Athens, OH (Oct 16, 2015) – *Invited Plenary Speaker*
- Mountain Lake Biological Station, Pembroke, VA (Jun 16, 2015)
- 2014 - Ohio State University, Columbus, OH (Feb 20, 2014)
- 2013 - University of New Mexico, Albuquerque, NM (May 16, 2013)
- Virginia Tech, Blacksburg, VA (Feb 28, 2013)
- Clemson University, Clemson, SC (Feb 15, 2013)
- 2012 - Indiana University, Bloomington, IN (Oct 26, 2012)
- The Island School, Cape Eleuthera, Bahamas (Jan 30, 2012)
- 2011 - University of Alabama, Tuscaloosa, AL (Oct 13, 2011)
- City University of New York, New York, NY (March 21, 2011)
- University of Pittsburgh, Pittsburgh, PA (Feb 2011)
- University of California, Irvine, CA (Feb 2011)
- University of Iowa, Iowa City, IA (Feb 2011)
- Syracuse University, Syracuse, NY (Jan 2011)
- University of Virginia, Charlottesville, VA (Jan 2011)

- Tufts University, Medford, MA (Jan 2011)
- SICB Meeting, Salt Lake City, UT (Jan 2011) – *Plenary Address, Bartholomew Award*
- 2010 - University of Illinois, Urbana-Champaign, IL (Nov 2010)
- Lehigh University, Bethlehem, PA (Nov 2010)
- University of Massachusetts, Dartmouth, MA (Nov 2010)
- Rutgers University, New Brunswick, NJ (Oct 2010)
- 2009 - American Museum of Natural History, New York, NY (Oct 2009)
- University of California, Riverside, CA (Apr 2009)
- State University of New York, Plattsburgh, NY (Apr 2009)
- 2008 - University of Michigan, Ann Arbor, MI (Mar 2008)
- University of Massachusetts, Amherst, MA (Feb 2008)
- 2007 - University of Vermont, Burlington VT (March 2007)

Conference Presentations (since 2011, as presenting author)

13. **Cox, R.M.**, and J.W. McGlothlin. 2017. Using sexually antagonistic skewers to explore the genetic architecture of sexual dimorphism in *Anolis* lizards. Joint Evolution Meeting, Portland, OR (June 25, 2017)
12. **Cox, R.M.**, R.A. Costello, B. Camber, and J.W. McGlothlin. 2017. Genetic architecture of the *Anolis* dewlap reveals shared and sex-specific features of a sexually dimorphic ornament. Annual Meeting of the Society for Integrative & Comparative Biology, New Orleans, LA (January 8, 2017)
11. **Cox, R.M.** 2016. What field experiments can (and cannot) tell us about the proximate and ultimate basis of life-history tradeoffs: A case study in *Anolis* lizards. In the symposium: *How and Why? Towards an Evolutionary Physiological Synthesis*. Joint Evolution Meeting, Austin, TX (June 19, 2016)
10. **Cox, R.M.**, J.W. McGlothlin and F. Bonier. 2016. Hormones as mediators of phenotypic and genetic integration: An evolutionary genetics approach. In the symposium: *Evolutionary Endocrinology: Hormones as Mediators of Evolutionary Phenomena*. Annual Meeting of the Society for Integrative & Comparative Biology, Portland, OR (Jan 5, 2016)
9. **Cox, R.M.** 2015. When one genome serves two masters: Sexual conflict in the brown anole. Invited Plenary Address at the Ohio Herpetology Symposium, Athens, OH (Oct 16, 2015)
8. **Cox, R.M.** 2015. Integrating costs of reproduction between the sexes: a synthesis of sexual selection and life history perspectives. Annual Meeting of the Society for Integrative & Comparative Biology, West Palm Beach, FL (Jan 4, 2015)
7. **Cox, R.M.**, and R. Calsbeek. 2014. Survival of the fattest? Indices of body condition do not predict fitness in the brown anole (*Anolis sagrei*). Joint Evolution Meeting, Raleigh, NC (June 21, 2016)
6. **Cox, R.M.**, and J.W. McGlothlin. 2014. Developmental erosion of intersexual genetic correlations in a sexually dimorphic lizard. Annual Meeting of the Society for Integrative & Comparative Biology, Austin, TX (Jan 6, 2014)

5. **Cox, R.M.**, C. Daugherty, J. Price, and J.W. McGlothlin. 2013. Natural selection, developmental trajectories, and quantitative genetics of intraspecific variation in sexual dimorphism. Joint Evolution Meeting, Snowbird, UT (June 24, 2013)
4. **Cox, R.M.**, C. Daugherty, J. Price, J.W. McGlothlin, and R. Calsbeek. 2013. Proximate and ultimate mechanisms for intraspecific variation in sexual size dimorphism in the brown anole. Annual Meeting of the Society for Integrative & Comparative Biology, San Francisco, CA (Jan 7, 2013)
3. **Cox, R.M.**, and R. Calsbeek. 2012. Experimentally testing the physiological and ecological mechanisms underlying reproductive tradeoffs. Joint Evolution Meeting, Ottawa, Canada (July 7, 2012)
2. **Cox, R.M.**, and R. Calsbeek. 2012. Experimentally decoupling reproductive investment from energy storage: Testing the functional basis of a life-history tradeoff. Annual Meeting of the Society for Integrative and Comparative Biology, Charleston, SC (Jan 5, 2012)
1. **Cox, R.M.**, D. Urbach, M.C. Duryea, and R. Calsbeek. 2011. Testing the adaptive significance of progeny sex-ratio bias. Joint Evolution Meeting, Norman, OK (Jun 2011)

Coauthored Conference Talks & Posters (since 2011, as advisor)

¹ UVA undergraduate advisee, ² UVA graduate student advisee, ³ UVA postdoctoral advisee

24. Kustra, M.C.¹, A.F. Kahl², A.M. Reedy², and **R.M. Cox**. 2018. Local density of conspecifics affects sperm phenotypes in wild *Anolis sagrei* lizards. Oral presentation. Society for Integrative and Comparative Biology Annual Meeting, San Francisco, CA.
23. Wittman, T.N.², and **R.M. Cox**. 2018. Promiscuity and parasites: Mating system predicts the survival cost of parasitism across taxa. Oral presentation. Society for Integrative and Comparative Biology Annual Meeting, San Francisco, CA.
22. Bhave, R.S.², A.M. Reedy², H.A. Seears³, A.F. Kahl², and **R.M. Cox**. 2018. Do back pattern morphs in female brown anoles differ in morphology, behavior, and natural selection? Oral presentation. Society for Integrative and Comparative Biology Annual Meeting, San Francisco, CA.
21. Reedy, A.M.², H.A. Seears³, A.F. Kahl², C. Giordano¹, D.A. Warner, and **R.M. Cox**. 2017. Testing for sexually antagonistic selection across ontogeny in a sexually dimorphic lizard. Oral presentation. Joint Evolution Meeting, Portland, OR.
20. B. Pope, A.M. Reedy² and **R.M. Cox**. 2017. Predator cues decrease development time and reduce sexual dimorphism in the mosquito, *Aedes aegypti*. Poster presentation. Joint Evolution Meeting, Portland, OR.
19. Kahl, A.K.², M.A. Johnson and **R.M. Cox**. 2017. Both pre- and postcopulatory selection shape the evolution of sperm morphology across *Anolis* lizards. Oral presentation. Society for Integrative and Comparative Biology Annual Meeting, New Orleans, LA.
18. Reedy, A.M.², H.A. Seears³, A.F. Kahl², C. Giordano¹, D.A. Warner, and **R.M. Cox**. 2017. Sexually antagonistic selection emerges in the adult life stage in a sexually dimorphic lizard. Oral presentation. Society for Integrative and Comparative Biology Annual Meeting, New Orleans, LA.

17. Chung, A.K.¹, A.M. Reedy², C.L. Cox³ and **R.M. Cox**. 2017. Testosterone, energetics, and the regulation of a social and sexual signal in brown anoles. Society for Integrative and Comparative Biology Annual Meeting, New Orleans, LA.
16. Cox, C.L.³, N.B. Pollock, H.B. John-Alder, A.L. Andrew, D.C. Card, T.A. Castoe, and **R.M. Cox**. 2016. Evolutionary lability in the modulation of sex-biased gene expression by testosterone. Oral Presentation. Joint Evolution Meeting, Austin TX.
15. Cox, C.L.³, N.B. Pollock, H.B. John-Alder, A.L. Andrew, D.C. Card, T.A. Castoe, and **R.M. Cox**. 2016. Evolutionary lability in the modulation of growth-regulatory gene networks by testosterone. Oral Presentation. Society for Integrative and Comparative Biology Annual Meeting, Portland, OR.
14. Curlis, J.D.¹, C.L. Cox³, **R.M. Cox**. 2016. Sex-specific population differences in metabolism are associated with intraspecific variation in sexual dimorphism of brown anole lizards. Poster presentation. Society for Integrative and Comparative Biology Annual Meeting, Portland, OR.
13. Kahrl, A.F.², and **R.M. Cox**. 2016. Variation in sperm morphology between native and introduced populations of three *Anolis* lizard species. Oral presentation. Society for Integrative and Comparative Biology Annual Meeting, Portland, OR.
12. Logan, M.L., J.D. Curlis¹, I. Minnaar, J.W. McGlothlin, S. Clusella-Trullas, and **R.M. Cox**. 2016. Phenotypic correlations suggest that thermal adaptation is constrained in lizards and ladybugs. Society for Integrative and Comparative Biology Annual Meeting, Portland, OR.
11. Reedy, A.M.², W.J. Evans¹, and **R.M. Cox**. 2016. Does sexual conflict hinder life-history evolution? A comparative test with lizards. Oral Presentation. Society for Integrative and Comparative Biology Annual Meeting, Portland, OR.
10. Kahrl, A.F.², and **R.M. Cox**. 2015. Factors shaping inter- and intraspecific variation in sperm morphology in lizards. Oral Presentation. Biology of Spermatozoa, Bakewell, UK.
9. Cox, C.L.³, D. Card, A. Andrews, T.A. Castoe, and **R.M. Cox**. 2015. Sexual concordance in phenotypic and transcriptomic responses to testosterone in brown anoles. Oral presentation. Society for Integrative and Comparative Biology Annual Meeting, West Palm Beach, FL.
8. Kahrl, A.F.², C.L. Cox³, and **R.M. Cox**. 2015. Correlated evolution of proxies for pre- and postcopulatory sexual selection across squamate reptiles. Oral presentation. Society for Integrative and Comparative Biology Annual Meeting, West Palm Beach, FL.
7. Cox, C.L.³, D. Card, A. Andrews, T.A. Castoe, and **R.M. Cox**. 2014. Congruent phenotypic and transcriptomic responses to testosterone in both sexes: implications for the evolution of endocrine-mediated sexual dimorphism. Oral presentation. Joint Evolution Meeting, Raleigh, NC.
6. Kahrl, A.F.², and **R.M. Cox**. 2014. Diet affects ejaculate traits in a lizard with condition-dependent fertilization success. Oral presentation. Joint Evolution Meeting, Raleigh, NC.
5. Wice, E.¹, A. Arkhipova, C. Noble-Molnar, A. Schurtz, T. Wood, **R.M. Cox**, and J.W. McGlothlin. 2014. Sexual size dimorphism and reproductive isolation in two island populations of *Anolis sagrei*. Poster presentation. Joint Evolution Meeting, Raleigh, NC.

4. Cox, C.L.³, A.F. Hanninen², A.M. Reedy², and **R.M. Cox**. 2014. Testosterone pleiotropically regulates sexual dimorphism in multiple traits. Society for Integrative and Comparative Biology Annual Meeting, Austin, TX
3. Kahrl, A.F.², and **R.M. Cox**. 2014. Diet affects ejaculate traits in a lizard with condition-dependent fertilization success. Oral presentation. Society for Integrative and Comparative Biology Annual Meeting, Austin, TX.
2. Kahrl, A.F.², and **R.M. Cox**. 2013. Body condition affects ejaculate traits in a lizard with condition-dependent fertilization success. Oral presentation. Southeastern Population Ecology and Evolutionary Genetics (SEPEEG) Meeting, Pembroke, VA.
1. Cox, C.L.³, A.F. Hanninen², and **R.M. Cox**. 2014. Extreme sex differences in the development of body size and sexual signals are mediated by hormonal pleiotropy in a dimorphic lizard. Oral presentation. Joint Evolution Meeting, Snowbird, UT.

Supervision of Thesis Research

- Graduate Thesis Supervisor: - Christopher Robinson (rotation research in 2018)
 - Rachana Bhawe (advanced to PhD candidacy 2018)
 - Tyler Wittman (advanced to PhD candidacy 2018)
 - Aaron Reedy (completed PhD in 2018)
 - Ariel Kahrl (completed PhD in 2017)
 - Amanda Hanninen (completed MS in 2015)
- First Reader for Thesis: - Hilary Edgington (completed PhD in 2015)
 - Michael Hague (advanced to PhD candidacy in 2015)
 - Robin Costello (advanced to PhD candidacy in 2016)
 - Yingnan Gao (advanced to PhD candidacy in 2017)
 - Gabriela Toledo (completed PhD in 2018)
- Thesis Committee Member: - Phoebe Cook (qualifying exam in 2019)
 - Catherine Debban (advanced to PhD candidacy in 2015)
 - Liza Mitchem (qualifying exam in 2019)
 - Yiyi Pu (completed MS in 2017)
 - Tiantian Ren (completed PhD in 2016)
 - Brittany Sutherland (completed PhD in 2013)
 - Helen Vasaly (completed MS in 2012)
 - Zhang Wang (completed PhD in 2014)
 - Cory Weller (advanced to PhD candidacy in 2015)
 - Corlett Wood (completed PhD in 2015)
 - Hanquin Wu (completed MS in 2018)
 - Yang Yu (qualifying exam in 2018)
- Dean's Representative: - Ariela Haber (Environmental Sciences)
 - Ariel Firebaugh (Environmental Sciences)
- External Examiner: - Angela Hung (University of New Mexico, PhD in 2014)
 - Nicholas Pollock (Rutgers University, PhD in 2016)
 - Kaitlin Schaal (Sweet Briar College, VA, undergrad major thesis)

Undergraduate Advising

- Biology Majors Advising - Advisor for 8-25 majors per year from 2012-present
- Echols Scholars Program - Advisor for 2 students
- College Science Scholars - Advisor for 3 students

Supervision of Undergraduate Research

- Kaitlin Alford (2012-13)
Microsatellite development and maternity and paternity analysis in wild anoles
- Torun Carlson (2018)
Fitness consequences of experimental removal of parasites in wild anole populations
- Albert Chung (2013-15, see **publication #44**)
Identification of gut and fecal parasites from anoles with altered reproductive effort
- Benjamin Camber (2016-present, coauthor on **manuscript #1 in preparation**)
Genetic basis of dewlap color and morphology and circulating testosterone levels
- John David Curlis (2012-14, see coauthored **conference presentation #15**)
Development of population differences in growth and metabolism over ontogeny
- Christopher Daugherty (2012-13, coauthor on **conference presentations #5-6**)
Common-garden comparison of sex and population differences in adult growth
- William Evans (2013-14, see **publication #44**)
Identification of parasites from anoles, mark-recapture in wild Florida populations
- Lauren Finks (2015-present)
Variation in sperm morphology and performance wild Florida anole populations
- Nicole Furst (2013)
Population differences in skeletal morphology and body shape in brown anoles
- Kamala Ganesh (2013)
Linking morphology of anole sperm to its swimming performance
- Cara Giordano (2015-present)
Testing for phenotypic indicators of “good genes” in a wild anole population
- Simon Hwang (2013-14)
Growth and metabolism in male and female anoles from two populations in the Bahamas
- Matthew Kustra (2016-present)
Spatial variation in population density and its effects on natural and sexual selection
- Elizabeth Luebbert (2014-15)
Relationship between sperm quantity, quality and morphology in a wild lizard population
- Michael Luu (2012-14)
Effects of testosterone on growth and metabolism of brown anoles
- Vida Motamedi (2015-16)
Variation in sperm morphology across Anolis lizards of the Dominican Republic
- Daenuka Muraleetharan (2013-14)
Sex differences in bone growth and development of shape dimorphism in anoles
- Joshua Nash (2013-14, see **publication #38**)
Circadian entrainment and synchronization of egg hatching time in brown anoles
- Robbie Peaden (2013-14, see **publication #43**)
Metabolic cost of mounting an immune response in brown anoles

- Mark Rimkus (2017)
Effects of testosterone on the genetic integration of dewlap traits in brown anoles
- Allison Russell (2013-14)
Common-garden test for population differences in growth of juvenile anoles
- Cheyenne Sams (2015-16)
Territorial behavior of male and female anoles, in collaboration with K-12 teachers
- Frank Song, Jr. (2015-16)
Evolution of sperm morphology in fence and spiny lizards
- Davis Tran (2013)
Enzyme immunoassay for testosterone in anoles, identification of parasites in newts
- Connor Valenzuela (2013-14)
Sex differences in resting metabolic rate across ontogeny in brown anoles
- Adeline Walsh (2018)
Effects of 5 α -dihydrotestosterone on growth and morphology of male and female anoles
- Eric Wice (2012-13, see **coauthored conference presentation #5**)
Optimization of radiography techniques for phenotyping anole skeletal morphology
- Arielle Wimmer (2018)
Effects of testosterone and 5 α -dihydrotestosterone on display behavior of anoles
- Laura Zemanian (2013-14)
Comparison of sperm morphology in four sympatric species of Bahamian anoles

Professional Service and Synergistic Activities

- 2017-present Chair (elected by members) of the Society for Integrative and Comparative Biology's Division of Ecology and Evolution (SICB DEE)
- 2017-present Editorial board member: *Integrative and Comparative Biology*
- 2015-16 Co-founder of NSF-funded [Evolution Education](#) program for science teachers
 - Organizer of workshops for 8-12 science teachers per year at UVA's Mountain Lake Biological Station, with K-12 teacher participants from 10 states to date
 - Development of field research projects and classroom science projects for 2 Teacher Fellows per year from classrooms in UT, TX, MI, NC, NY and VA
 - Development of "Data Nuggets" online science modules for high school students in collaboration with Teacher Fellows and UVA undergraduates
- 2015-17 Organized visit by ~80 7th and 8th graders (Harrisonburg, VA) in STEM program to tour our lab and other Biology labs at UVA. Planned to repeat in Dec 2016.
- 2015 Research on costs of reproduction featured with a figure, photo, and text box in *Evolution: Making Sense of Life* textbook by Zimmer & Emlen, Roberts & Co.
- 2014-present Editorial board member: *Physiological and Biochemical Zoology*
- 2016 Judge for the Society for the Study of Evolution's Hamilton Award
- 2013 Co-organizer of Southeastern Population Ecology & Evolutionary Genetics (SEPEEG) regional conference at Mountain Lake Biological Station
- 2011-16 Peer reviewer for scientific journals (over 100 peer reviews since 2003)
 - 60 reviews, 32 invitations declined over past 5 years of faculty appointment

- 2011-12 Reviewer of two chapters for *Evolution* textbook by Bergstrom & Dugatkin, W.W. Norton & Co., Inc.
- 2014 Reviewer of four chapters for *Evolution: Making Sense of Life* textbook by Zimmer & Emlen, Roberts & Co.
- 2013-17 Panelist for US National Science Foundation Pre-Proposal Grant Reviews
 - DEB Evolutionary Processes (served on 2 panels total, 3 days each)
 - IOS Behavioral Systems (served on 1 panel, 3 days)
- 2009-15 *Ad hoc* grant reviewer for various funding agencies (number of proposals):
 - US National Science Foundation IOS Behavioral Systems (2)
 - US National Science Foundation DEB Evolutionary Processes (6)
 - US National Science Foundation DEB Population & Community Ecology (1)
 - National Geographic Society: Research, Conservation & Exploration (3)
 - Louisiana Board of Regents: Small Grants Program (1), California State Faculty Support Grants (2), Academy of Sciences of the Czech Republic (1)
- 2006-17 Society for Integrative and Comparative Biology
 - Declined nomination for Secretary, Division of Comparative Endocrinology
 - Organizer of “Evolutionary Endocrinology” symposium (Portland, 2016)
 - Contributor for special issue of *Integrative and Comparative Biology* featuring papers from “Evolutionary Endocrinology” symposium (*ICB* vol. 56 no. 2)
 - Judge for DEE, DCE, DCPB best student poster/talk competitions (2006-17)
 - Committee member to select Bartholomew Award recipient (2014-17)
- 2011-13 Interviewed by *Science News*, *Science Times*, and *The Scientist* for perspective on new studies published in *Science* and *Science News*
- 2014 Interview by *ClimateWire* regarding our *PNAS* article about natural selection on thermal performance featured in *Scientific American* and *The Washington Post*

Supervision of Postdoctoral Scholars and Lab Personnel

- Postdoctoral Scholars - Christian Cox (2012-15)
 - Heidi Seears (2015-present)
- Lab Managers/Technicians - Jennifer Price (2012-13)
 - Hannah Donald-Cannon (2013-14)
 - Dominique Rose (2015-16)
 - Albert Chung (2016)

University of Virginia - Departmental Committees and Service

- 2017-present Director of Graduate Studies in Biology
- 2016-17 Chair, Faculty Search Committee in Evolutionary Ecology
- 2012-16 Biology Graduate Committee
- 2013-15, 16-present Biology Steering Committee
- 2013, 14, 16 Coordinator of Grad Student Rotation Research Posters and Presentations
- 2011, 12, 14 Co-organizer of Departmental Retreat, Mountain Lake Biological Station

University of Virginia - Participation and Service

- 2015-18 Reviewer for Harrison Undergraduate Research Awards
- 2015-16 Mead Endowment “Dream Idea”
Hosted an informal dinner series and other events for UVA undergraduates interested in exploring the intersection of science and education
- 2012, 13, 16 Jefferson Society, participant in recruitment dinners and Fellows events
- 2013, 14 Judge for student presentations at Annual Huskey Research Exhibition
- 2013 Inaugural speaker at “Science Straight-Up” Science Café organized by the UVA Director of Science Education and Public Outreach
- 2012 Participant in undergraduate Second Year Dinner Series
- 2011-12 Excellence in Diversity Fellowship
- 2011-12 Graduate School of Arts & Sciences – Legacy of Distinction Fund
Worked with Director of Strategic Stewardship to create personally illustrated cards and place settings as donor luncheon gifts, spoke to donors at luncheon

Professional Affiliations

- American Society of Naturalists (member)
- Society for the Study of Evolution (member)
- Society for Integrative and Comparative Biology
- Division of Ecology & Evolution (Chair 2017-2019)
 - Division of Comparative Endocrinology (member)
 - Division of Comparative Physiology & Biochemistry (member)

Dissertation and Postdoctoral Advisors

- Ph.D. Advisor: Dr. Henry John-Alder (1999-2005)
Chair, Department of Ecology, Evolution and Natural Resources
Rutgers University, New Brunswick, NJ
- Postdoctoral Advisor: Dr. Joseph Williams (2005-2006)
Professor, Department of Evolution, Ecology and Organismal Biology
Ohio State University, Columbus, OH
- Postdoctoral Advisor: Dr. Ryan Calsbeek (2007-2011)
Associate Professor, Department of Biological Sciences
Dartmouth College, Hanover, NH