

# James S. Adelman

Department of Natural Resource Ecology and Management, Iowa State University  
201 Science II, Ames, IA 50011  
(515) 294-9682, [adelmanj@iastate.edu](mailto:adelmanj@iastate.edu)

## APPOINTMENTS:

<b>Iowa State University, Ames, IA</b>	2015-present
<i>Assistant Professor, Department of Natural Resource Ecology and Management</i>	
<b>Virginia Tech, Blacksburg, VA</b>	2011-2014
<i>Postdoctoral Associate, Department of Biological Sciences</i>	
<b>Smithsonian Institution, Washington, DC</b>	2011-2011
<i>Postdoctoral Fellow, Migratory Bird Center</i>	

## EDUCATION:

<b>Princeton University, Princeton, NJ</b>	2004-2010
<i>Ph.D. in Ecology and Evolutionary Biology, Advisor: Dr. Michaela Hau</i>	
<b>Duke University, Durham, NC</b>	1995-1999
<i>B.S. with honors in Biology, summa cum laude, Phi Beta Kappa, minors in Music and Chemistry</i>	

## RESEARCH INTERESTS:

Revealing how host physiology and behavior influence the spread and evolution of infectious diseases in wild animal populations.

## PUBLICATIONS: (\*undergraduate student author, \*\*graduate student author)

### 2015

- Adelman, J.S.**, I.T. Moore, and D.M. Hawley. 2015. House finch responses to *Mycoplasma gallisepticum* do not vary with experimentally increased aggression. **Journal of Experimental Zoology, Part A** 323: 39-51.
- Adelman, J.S.** 2015. Immune systems: linking organisms, populations, and evolution through disease. In **Integrative Organismal Biology**, (L.B. Martin, C.K. Ghalambor and H.A. Woods, eds.).
- Núñez, C.M.V, **J.S. Adelman**, and D.I. Rubenstein. 2015. Sociality increases juvenile survival after a catastrophic event in the feral horse (*Equus caballus*). **Behavioral Ecology** 26: 138-147.
- Hau, M., M.F. Haussmann, T.J. Greives, C. Matlack, D. Costantini, M. Quetting, **J.S. Adelman**, A.C. Miranda, and J. Partecke. 2015. Repeated stressors in adulthood increase the rate of biological ageing. **Frontiers in Zoology** 12:4.

### 2014

- Adelman, J.S.**, S.C. Moyers\*\*, and D.M. Hawley. 2014. Using remote biomonitoring to understand heterogeneity in immune-responses and disease-dynamics in small, free-living animals. **Integrative and Comparative Biology** 54: 377-386.
- Downs, C.J., **J.S. Adelman**, and G.E. Demas. 2014. Methods and mechanisms in ecoimmunology. **Integrative and Comparative Biology** 54: 340-352.
- Núñez, C.M.V, **J.S. Adelman**, J. Smith\*, L.R. Gesquiere, and D.I. Rubenstein. 2014. Linking social environment and stress physiology in feral mares (*Equus caballus*): group transfers elevate fecal cortisol levels. **General and Comparative Endocrinology** 196: 26-33.

### 2013

- Adelman, J.S.**, L. Kirkpatrick, J.L. Grodio\*\*, and D.M. Hawley. 2013. House finch populations differ in early inflammatory signaling and pathogen tolerance at the peak of *Mycoplasma gallisepticum* infection. **The American Naturalist** 181: 674-689.
- Adelman, J.S.**, A.W. Carter\*\*, W.A. Hopkins, and D.M. Hawley. 2013. Deposition of pathogenic *Mycoplasma gallisepticum* onto bird feeders: host pathology is more important than temperature-driven increases in food intake. **Biology Letters** 9: 20130594.
- Adelman, J.S.**, D.R. Ardia, and K.A. Schat. 2013. Ecoimmunology. In **Avian Immunology**, (K.A. Schat, B. Kaspers, and P. Kaiser, eds), 2nd edition. Elsevier, Amsterdam.

# James S. Adelman

## 2013 (Cont'd)

- Nuñez, C.M.V, **J.S. Adelman**, and D.I. Rubenstein. 2013. A free-ranging, feral mare (*Equus caballus*) affords similar maternal care to her genetic and adopted offspring. **The American Naturalist** 182: 674-681.

## 2012

- Lopes\*\*, P.C., **J.S. Adelman**, J.C. Wingfield, and G.E. Bentley. 2012. Social context modulates sickness behavior. **Behavioral Ecology and Sociobiology** 66: 1421-1428.
- Hawley, D.M., S.E. DuRant\*\*, A. Wilson\*, **J.S. Adelman**, and W.A. Hopkins. 2012. Additive metabolic costs of thermoregulation and pathogen infection. **Functional Ecology** 26: 701-710.

## 2011

- Bisson, I.A., L. K. Butler, P. Kelley, **J.S. Adelman**, T.J. Hayden, L.M. Romero, and M. Wikelski. 2011. Energetic response to human disturbance in an endangered songbird. **Animal Conservation** 14: 484-491.

## 2010

- Adelman, J.S.**, S. Córdoba-Córdoba, K. Spoelstra, M. Wikelski, and M. Hau. 2010. Radiotelemetry reveals variation in fever and sickness behaviours with latitude in a free-living passerine. **Functional Ecology** 24: 813-823.
- Adelman, J.S.**, G.E. Bentley, J.C. Wingfield, L.B. Martin, and M. Hau. 2010. Population differences in fever and sickness behaviors in a wild passerine: a role for cytokines. **Journal of Experimental Biology** 213: 4099-4109.
- Adelman, J.S.** and L.B. Martin. 2010. Immune systems and sickness behavior. In **Encyclopedia of Animal Behavior** (M. Breed and J. Moore, eds), Vol. 2, pp. 133-137. Elsevier, Amsterdam.
- Nuñez, C.M.V, **J.S. Adelman**, and D.I. Rubenstein. 2010. Immunocontraception in wild horses (*Equus caballus*) extends reproductive cycling beyond the normal breeding season. **PLoS One** 5: e1365.

## 2009

- Adelman, J.S.** and L.B. Martin. 2009. Vertebrate sickness behaviors: adaptive and integrated neuroendocrine immune responses. **Integrative and Comparative Biology** 49: 202-214.
- Nuñez, C.M.V, **J.S. Adelman**, C. Mason, and D.I. Rubenstein. 2009. Immunocontraception decreases group fidelity in a feral horse population during the non-breeding season. **Applied Animal Behaviour Science** 117: 74-83.

## 2002-2008

- Safran, R.J., **J.S. Adelman**, K.J. McGraw, and M. Hau. 2008. Sexual signal exaggeration affects physiological state in male barn swallows. **Current Biology** 18: r461-462.
- Roemer, S.C., **J.S. Adelman**, M.E.A.Churchill, and D.P. Edwards. 2008. Mechanism of high-mobility group protein B enhancement of progesterone receptor sequence-specific DNA binding. **Nucleic Acids Research** 36: 3655-3666.
- Vitousek, M.N., **J.S. Adelman**, N.C. Gregory, and J.J.H. St Clair. 2007. Heterospecific alarm call recognition in a non-vocal reptile. **Biology Letters** 3: 632-634.
- Wikelski, M., D. Moskowitz, **J.S. Adelman**, J. Cochran, D.S. Wilcove, and M.L. May. 2006. Simple rules guide dragonfly migration. **Biology Letters** 2: 325-329.
- Melvin, V.S., C. Harrell, **J.S. Adelman**, W.L. Kraus, M. Churchill, and D.P. Edwards. 2004. The role of the C-terminal extension (CTE) of the estrogen receptor alpha and beta DNA binding domain in DNA binding and interaction with HMGB. **Journal of Biological Chemistry** 279: 14763-71.
- Wardell, S.E., V. Boonyaratankornkit, **J.S. Adelman**, A. Aronheim, and D.P. Edwards. 2002. Jun dimerization protein 2 functions as a progesterone receptor n-terminal domain coactivator. **Molecular and Cellular Biology** 22: 5451-5466.

# James S. Adelman

## PRESENTATIONS:

### Invited Talks

- Adelman, J.S.** 2014. How radio telemetry and radio frequency identification can help link individual immune responses and disease dynamics in wild animals. Methods and Mechanisms in Ecoimmunology Symposium, Annual Meeting of the Society for Integrative and Comparative Biology, Austin, TX.
- Adelman, J.S.** 2013. Heterogeneous responses to infection: potential mechanisms and transmission consequences in wild birds. College of William & Mary, Department of Biology.
- Adelman, J.S.** 2012. What birds have to say about the impending zombie apocalypse. NerdNite, Washington, DC. (Public Lecture)
- Adelman, J.S.,** A.F. Wilson, W.A Hopkins, and D.M. Hawley. 2012. Heterogenous responses to infection among house finches: toward transmission consequences. Disease Ecology Symposium, 5th North American Ornithological Conference, Vancouver, BC, Canada.
- Adelman, J.S.** 2010. What is 'pathogen pressure' and can it help us understand variation in host defenses? Virginia Tech, Department of Biological Sciences.
- Adelman, J.S.** 2009. Population differences in immune function: from patterns to mechanisms. University of South Florida, Department of Biology.
- Adelman, J.S.** 2009. Immunology in the wild: studies with song sparrows. The Stony Brook-Millstone Watershed Association, Pennington, NJ. (Public Lecture)
- Adelman, J.S.,** M.C. Wikelski, and M. Hau. 2009. Sickness behavior and fever vary among free-living sparrows along a life history gradient: only some like it hot. Psychoneuroimmunology meets Integrative Biology Symposium—Related Session, Annual Meeting of the Society for Integrative and Comparative Biology, Boston, MA.

### Contributed Talks and Posters

- Adelman, J.S.,** A.F. Wilson, W.A Hopkins, and D.M. Hawley. 2013. Pathology is more important than temperature-induced increases in food intake for *Mycoplasma gallisepticum* deposition on bird feeders. Annual Ecology and Evolution of Infectious Diseases Conference, State College, PA. (Poster)
- Adelman, J.S.,** A.F. Wilson, W.A Hopkins, and D.M. Hawley. 2013. Temperature-induced feeding increases do not augment pathogen deposition on bird feeders: potential consequences for climate-disease relationships. Annual Meeting of the Society for Integrative and Comparative Biology, San Francisco, CA.
- Adelman, J.S.,** L. Kirkpatrick, J.L. Grodio, and D.M. Hawley. 2012. Can early immune responses predict tolerance to an emerging infectious disease? Annual Ecology and Evolution of Infectious Diseases Conference, and Annual Workshop for Refining and Diversifying Ecoimmunology. Ann Arbor, MI. (Poster)
- Adelman, J.S.,** L. Kirkpatrick, and D.M. Hawley. 2012. Variation in immune responsiveness and tolerance of *Mycoplasma* infection between house finch populations. Annual Meeting of the Society for Integrative and Comparative Biology, Charleston, SC.
- Adelman, J.S.** and S.A. Muñoz. 2011. Could helminths drive geographic patterns in vertebrate eco-immunology? Annual Meeting of the Society for Integrative and Comparative Biology, Salt Lake City, UT.
- Adelman, J.S.,** S.A. Muñoz, M. Wikelski, and M. Hau. 2010. Can latitudinal differences in immune responses predict parasite burdens? Annual Ecology and Evolution of Infectious Disease Conference, Ithaca, NY. (Poster)
- Adelman, J.S.** and M. Wikelski, M. Hau. 2010. Latitudinal differences in sickness behaviors and fever: from patterns to mechanisms. Annual Meeting of the Society for Integrative and Comparative Biology, Seattle, WA.
- Adelman, J.S.,** M. Wikelski, and M. Hau. 2008. Acute phase immune responses along a life history gradient. Annual Meeting of the Society for Integrative and Comparative Biology, San Antonio, TX.

# James S. Adelman

## FELLOWSHIPS AND GRANTS:

Organismal Biology and Ecology Grants, Virginia Tech	2012
“The effects of social stress on immune-endocrine interactions, host behavior, and pathogen transmission in an emerging wildlife disease” (\$2,600)	
Dean's Fund for Scholarly Travel, Princeton University (\$600)	2009
EBIRD USA Exchange Visit Award, NSF	2007
“Assessing cytokine levels in passerine macrophages <i>in vitro</i> ” (\$1,000)	
NSF Graduate Research Fellowship	2006
“Migratory decision rules and their impacts on avian responses to global climate change” (\$121,500)	
Francis Boyer Fellowship in the Life Sciences, Princeton University (\$24,000)	2004

## TEACHING EXPERIENCE:

<b>Iowa State University, Ames, IA</b>	2015-present
Instructor, Ecological Methods	
<b>Virginia Tech, Blacksburg, VA</b>	2013-2014
Guest Lecturer in: Disease Ecology, Ornithology, and Introduction to Animal Physiology	
<b>Princeton University, Princeton, NJ</b>	2010-2011
Lecturer, Ecology and Evolution of Immune Systems	
<b>Princeton University, Princeton, NJ</b>	2004-2010
Guest Lecturer in: Ecology and Evolution of Immune Systems, Animal Behavior, Comparative Physiology, and the Junior Thesis Tutorial	
Teaching Assistant in: Introductory Biology, Animal Behavior	
<b>Duke University, Durham, NC</b>	1998-1999
Course Co-Director: Project WILD, a student-run, one-semester wilderness training course	

## UNDERGRADUATE STUDENTS MENTORED:

Courtney Youngbar, Independent Research, Virginia Tech	2014-2015
Casey Setash, Honors Research, Virginia Tech	2013-2014
Sydney Robinette, Independent Research, Virginia Tech	2013-2014
Corinne Mayer, Honors Research, Virginia Tech	2012-2014
Ethan Robertson, Independent Research, Virginia Tech	2012
Stephanie Feldstein, Senior Thesis, Princeton University	2008
Nick Cuneo, Senior Thesis, Duke University	2008

## PROFESSIONAL MEMBERSHIPS:

Society for Integrative and Comparative Biology	2006-present
Symposium Co-Chair, “Methods and Mechanisms in Ecoimmunology”	2014
Session Chair, Annual Meetings	2010-2013
Student Worker, Annual Meetings	2008-2009
American Ornithologists Union	2008-present
NSF-RCN Refining and Diversifying Ecoimmunology, Core Participant	2009-2014

## PROFESSIONAL SERVICE AND OUTREACH:

Reviewer for: Biology Letters, Proceedings of the Royal Society B, American Naturalist, Functional Ecology, Journal of Experimental Biology, EcoHealth, Behavioral Ecology and Sociobiology, The Auk, Journal of Experimental Zoology, Journal of Animal Ecology, Biotropica	2008-present
SEEDS Nature Center, Blacksburg, VA, public bird banding demonstrations	2012-2014
Greening Princeton, lobbying for environmentally sustainable university policies	2006-2009