

CURRICULUM VITAE
CHRISTOPHER S. RICHARDSON

ADDRESS: Department of Biology, Northeastern University
360 Huntington Avenue, 134 Mugar Building, Boston, MA 02115
Email: c.richardson@northeastern.edu
Office: (617) 373-7048
Cell: (617) 953-2428

EDUCATION:

1990	B.S., Wildlife Ecology, University of Wisconsin-Madison, "Graduated with Distinction"
1993	M.S., Zoology, University of Wisconsin-Madison
2006	Ph.D., Biology, Boston University

AWARDS AND FELLOWSHIPS:

1986	William F. Vilas Merit Scholarship
1987	W. G. Bleyer Conservation Scholarship
1988	Agricultural and Life Sciences Honor Program
1987-1990	Dean's Honor List, University of Wisconsin-Madison
1996	Boston University Biology Department Travel Award
1996	Boston University Chapter of Sigma Xi Research Grant
1997	Sigma Xi Grants-in-Aid of Research Award
1997	American Society of Mammalogists Grants-in-Aid of Research Award
2013-2014	Nominated for Excellence in Teaching Award, Northeastern University
2015	Distinguished Educator Award Honorable Mention, Bouve College of Health Sciences, Northeastern University

PAST FUNDING:

2006-2008	Oak Ridge Institute for Science and Education, U.S. Army Engineer and Research and Development Center. "Assessing stress in the endangered <i>Myotis sodalis</i> using fecal cortisol assays." \$250,000 (6/01/06-12/31/08), E.P. Widmaier, PI and C.S. Richardson, Co-PI.
2009-2010	Oak Ridge Institute for Science and Education. "Assessing stress in the endangered <i>Myotis sodalis</i> using fecal cortisol assays." \$8,000 (8/5/09-5/31/10), C.S. Richardson, PI.

PROFESSIONAL EXPERIENCE:

1985	Field Research Assistant, Smithsonian Research Institute Project, Barro Colorado, Panama
1986-1990	Research Intern, Wildlife Ecology Laboratory in the U.S. Dairy Forage Research Center, U.W.-Madison

1991-1993	Teaching Assistant, Department of Zoology, U.W.-Madison
1994-1998	Teaching Fellow (courses include: Principles of Biology I and II, Genetics, Environmental Ecology, Marine Biology, Systems Physiology), Biology Department, Boston University
2002-2006	Professional Tutor (Biology, Chemistry, Physics and Statistics), Roxbury Community College, Boston, MA
2006-2010	Postdoctoral Research Fellow, Biology Department, Boston University
2007-2009	Senior Lecturer (Environmental Studies), Center for English Language and Orientation Programs, Boston University
2009	Adjunct Professor (Biology 2 with laboratory), Science, Technology, Engineering and Math Division, Roxbury Community College, Boston, MA
2011-present	Visiting Researcher, Department of Biology, Boston University
2009-present	Senior Lecturer (Anatomy and Physiology 1 with laboratory, Evolution and History of Life, Genetics, Biology 2 with laboratory, Infectious Diseases, Applied Ecology, Natural Science Undergraduate Field Research Course), Natural Sciences and Mathematics Division, Lesley University, Cambridge, MA
2009-present	Lecturer (Genetics, Anatomy and Physiology 1 and 2, Undergraduate Research Course), Department of Biology, Northeastern University, Boston, MA

RESEARCH INTERESTS:

Physiological Ecology, Evolutionary Physiology, Comparative Physiology, Evolution, Ecoimmunology, Mammalian Biology, Biostatistics

CURRENT AND PAST SOCIETY MEMBERSHIPS:

American Association for the Advancement of Science
 American Society of Mammalogists
 Society for the Study of Evolution
 Society for Integrative and Comparative Biology
 Sigma Xi
 Tri-Beta National Biological Honor Society, Chi Delta Epsilon Chapter

INVITED LECTURES:

1999 Ecology (temperature relations), Boston University
 2006 Biology of Mammals (metabolism and respirometry), Boston University

REVIEWER FOR:

1994 The American Naturalist
 2000 Physiological and Biochemical Zoology
 2007 Journal of Mammalogy
 2008 Physiological and Biochemical Zoology

PUBLICATIONS:

DISSERTATION:

Richardson, C. S. 2006. Intraspecific variation in metabolism and thermoregulation in *Eptesicus fuscus* (the big brown bat). Ph.D. dissertation, Boston University. 265 pp.

PUBLISHED ARTICLES:

Meyer, M. W., and C. S. **Richardson**. 1993. The effects of chronic tannic acid intake on prairie vole (*Microtus ochrogaster*) reproduction. *Journal of Chemical Ecology* 19:1577-1585.

Richardson, C. S., M. R. Dohm, and T. Garland, Jr. 1994. Metabolism and thermoregulation in crosses between wild and random-bred laboratory house mice (*Mus domesticus*). *Physiological Zoology* 67:944-975.

Garland, T., Jr., M. R. Dohm., J. P. Hayes, and C. S. **Richardson**. 1994. Quantitative genetics of random bred house mice: a model system for studying correlated evolution (ABSTRACT). Published for 4th International Congress of Vertebrate Morphology, Chicago.

Dohm, M. R., C. S. **Richardson**, and T. Garland, Jr. 1994. Exercise physiology of wild and random-bred laboratory house mice and their reciprocal hybrids. *American Journal of Physiology (Regulatory Integrative Comparative Physiology)* 36: 267:R1098-R1108.

Garland, T., Jr., T. G. Gleeson, B. A. Aronovitz, C. S. **Richardson**, and M. R. Dohm. 1995. Maximal sprint speeds and muscle fiber composition of wild and laboratory house mice. *Physiology and Behavior* 58:869-876.

Baptista, T.L., C.S. **Richardson**, and T.H. Kunz. 2000. Growth rates and age estimation in free-ranging bats: a comparison of longitudinal and cross-sectional sampling methods. *Journal of Mammalogy* 81:709-718.

Kronfeld-Schor, N., C.S. **Richardson**, B.A. Silva, T.H. Kunz, and E.P. Widmaier. 2000. Dissociation of leptin secretion and adiposity during prehibernatory fattening in little brown bats. *American Journal of Physiology (Regulatory Integrative Comparative Physiology)* 279:R1277-R1281.

Richardson, C.S., M.G. Hohmann, T.H. Kunz, B.D. Shaller, and E.P. Widmaier. 2008. A simplified, non-invasive, and reproducible approach to monitoring stress in endangered bats using fecal cortisol assays (ABSTRACT). Published for Ecological Society of America meeting, Milwaukee, Wisconsin.

Richardson, C.S., T. Heeren, E.P. Widmaier, and T.H. Kunz. 2009. Macro- and microgeographic variation in metabolism and hormone correlates in big brown bats (*Eptesicus fuscus*). *Physiological and Biochemical Zoology* 82:798-811.

Allen, L.C., C.S. **Richardson**, G.F. McCracken, and T.H. Kunz. 2009. Birth size and postnatal growth in cave- and bridge-roosting Brazilian free-tailed bats. *Journal of Zoology* 280:8-16.

Reichard, J.D., N.W. Fuller, A.B. Bennett, S.R. Darling, M.S. Moore, K.E. Langwig, E.D. Preston, S. von Oettingen, C.S. **Richardson**, and D.S. Reynolds. 2014. Interannual

Survival of *Myotis lucifugus* (Chiroptera: Vespertilionidae) near the Epicenter of White-Nose Syndrome. Notes of the Northeastern Naturalist 21: N56-N59.

Richardson, C.S., X. Jean, K. Xiao, B. Dumont, and F. Davis. 2015. The effect of circadian organization on energy use and immune function in C57B mice (ABSTRACT). The Physiologist 58:31.

MANUSCRIPTS IN REVIEW:

Richardson, C.S., T. Heeren, and T.H. Kunz. Seasonal and sexual variation in metabolism, thermoregulation and hormones in *Eptesicus fuscus* (the big brown bat). Physiological and Biochemical Zoology.

MANUSCRIPTS SUBMITTED:

Braun de Torrez, E.C., C.S. **Richardson**, and T. Kunz. Habitat use by insectivorous bats across a pecan agroecosystem landscape: agricultural intensity, woodland structure, climate and prey availability. Ecological Monographs.

MANUSCRIPTS IN PREPARATION:

Richardson, C.S., M. Moore, T. Pong, and T.H. Kunz. Energetic cost of innate immune function in the little brown myotis (*Myotis lucifugus*) and the big brown bat (*Eptesicus fuscus*).

Richardson, C.S., X. Jean, B. Dumont, and F. Davis. The effect of circadian disruption on energy use and innate immune function in laboratory mice.

Richardson, C.S., M.G. Hohmann, and E.P. Widmaier. Assessing stress in the endangered *Myotis sodalis* using fecal cortisol assays.

SOCIETY OR OTHER MEETINGS ATTENDED:

- 1993 American Society of Naturalists, Society of Systematic Biologists, and Society for the Study of Evolution. Annual Meeting. Snowbird, Utah. Oral Paper presented: Metabolism and thermoregulation in crosses between wild and laboratory house mice.
- 1994 American Society of Mammalogists. Annual Meeting. Washington, D.C.
- 1995 10th International Bat Research Conference and 25th North American Symposium on Bat Research. Boston, Massachusetts.
- 1996 North American Symposium on Bat Research. Annual Meeting. Bloomington, Illinois. Poster presented: Seasonal variation in brown adipose tissue mass and plasma cortisol levels in the little brown bat, *Myotis lucifugus*.
- 2006 North American Symposium on Bat Research. Annual Meeting. Wilmington, North Carolina. Poster presented: Assessing stress in bats using fecal cortisol Assays.
- 2007 Society for Integrative and Comparative Biology. Annual Meeting. Phoenix, Arizona. Oral Paper presented: Macro vs. micro-geographic variation in metabolism and hormone correlates in the big brown bat (*Eptesicus fuscus*).
- 2008 Society for Integrative and Comparative Biology. Annual Meeting. San Antonio, Texas. Poster presented: Using fecal cortisol assays to assess stress in an endangered bat.

- 2008 American Society of Mammalogists. Annual Meeting. Brookings, South Dakota. Oral Paper presented: Assessing stress in the endangered *Myotis sodalis* using fecal cortisol assays.
- 2008 Ecological Society of America. Annual Meeting. Milwaukee, Wisconsin. Poster presented: A simplified, non-invasive, and reproducible approach to monitoring stress in endangered bats using fecal cortisol assays.
- 2009 Society for Integrative and Comparative Biology. Annual Meeting. Boston, Massachusetts.
- 2012 Society for Integrative and Comparative Biology. Annual Meeting. Charleston, South Carolina. Oral Paper presented: The effect of circadian disruption on metabolic rate and immune function in vasoactive intestinal peptide (VIP) deficient mice.
- 2014 American Physiological Society. Intersociety Meeting. San Diego, CA. Poster presented: The effect of circadian organization on energy use and immune function in C57B mice.
- 2016 Society for Integrative and Comparative Biology. Annual Meeting. Portland, Oregon. Oral Paper presented: The Impact on Metabolism and Immune function of the Immune Response of Bats to White Nose Syndrome.

STUDENTS MENTORED:

- Tosa, M. 2006-2007. The Analysis of Stress in Free-Ranging Bats. Senior Thesis. Boston University Academy.
- Nabhan, M. 2008. The study of stress in bats using fecal cortisol assays. Biology, Boston University.
- Hajjar, M. 2008-2009. The study of metabolism and immune function in bats. Boston University Academy.
- Fellows, S. 2009-2010. Variation in Plasma Triglycerides, Plasma Cortisol, and Basal Metabolic Rate of Big Brown Bats (*Eptesicus fuscus*) in Eastern Massachusetts. Senior Thesis. Biology, Boston University.
- Hartranft, O. 2010. The comparison of energetic cost of innate immune function between two bat species. Lesley University and Boston University.
- Curley, Bridget 2011-2012. The effects of circadian disruption on metabolism, food intake, hormone and immune function in lab mice (Capstone Research in 2012). Partially funded by **Provost Undergraduate Research Award (\$1,000)** in 2012. Northeastern University.
- Presto, J. 2011-2012. The effects of circadian disruption on metabolism and immune function in lab mice. Northeastern University.
- Pong, T. 2011-2013. The comparison of energetic cost of innate immune function between two bat species. Northeastern University.
- Patel, K. 2010-2012 (Directed Study in 2012). Energetic cost of innate immune function in bats and mice. Northeastern University.
- Jean, X. 2011-2012 (Directed Study in 2012). The effects of circadian disruption on activity and feeding behavior. Northeastern University.

- Patel, K.; Jean, X. 2012-2013. The effect of immune challenge and circadian disruption on energy use and innate immune function in lab mice. Partially funded by **Provost Undergraduate Research Award (\$2,000)** in 2012-2013. Northeastern University.
- Dumont, B.; Xiao, K. 2013-2015. The effect of circadian disorganization on food intake, energy use and immune function. Northeastern University.
- Drucker, M.; Helzer, C. 2013-2015. Difference in susceptibility to White Nose Syndrome in bats due to energetic cost of immune function and wing damage. Northeastern University.
- Fontes, G.; Suci, N. 2015. The impact on metabolism and immune function of the immune response of bats to White Nose Syndrome. Northeastern University.

TECHNICIANS TRAINED:

- Porter, A. 2006-2007. Developing and using fecal cortisol assays. Biology, Boston University.
- Shaller, B. 2007-2008. The study of metabolism and immune function and stress in bats. Biology, Boston University.
- Sarkar, A. 2007-2008. The study of stress in bats using fecal cortisol assays. Biology, Boston University.
- Pong, T. 2014-2015. The impact on metabolism and immune function of the immune response of bats to white nose syndrome. Biology, Boston University and Biology, Northeastern University.
- Suci, N. 2016. The impact on metabolism and immune function of the immune response of bats to white nose syndrome. Biology, Boston University and Biology, Northeastern University.