

AMANDA M. HALE Curriculum Vita

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EDUCATIONAL BACKGROUND

Ph.D. in Biology, University of Miami	2004
M.S. in Ecology, Purdue University	1998
B.S. in Biology and B.A. in Spanish, Phi Beta Kappa, Purdue University	1995
La Complutense, The University of Madrid, Spain	1993-1994

YEAR OF APPOINTMENT TO THE UNIVERSITY AND RANK

2013	Associate Professor of Biology, Texas Christian University
2008	Assistant Professor of Biology, Texas Christian University
2007	Visiting Research Professor, Texas Christian University

PREVIOUS TEACHING AND RESEARCH APPOINTMENTS

2005-2007	Postdoctoral Associate, Department of Biology, University of Miami
2005	Lecturer, Department of Biology, University of Miami

CURRENT TEACHING RESPONSIBILITIES

BIOL 40803 Biological Research & Writing	2009-present
BIOL 40900 Independent Research in Biology	2009-present
BIOL 50123 Biostatistics	2009-present
BIOL 50903 Tropical Biology	2010-present

Guest Lecturer in:

BIOL 30403 Ecology and the Environment – Bats & Wind Energy	2014-present
BIOL 40163/60163 Avian Biology	2008-present

CURRENT GRANTS

Texturizing wind turbine towers to reduce bat mortality. Co-PI with V. Bennett. Wind Energy – Bat Impact Minimization Technologies and Field Testing Opportunities” – FOA # DE-FOA0001181.	2015-2017
Ultrasonic bat deterrent technology. PI – K. Kinzie, General Electric. Wind Energy – Bat Impact Minimization Technologies and Field Testing Opportunities” – FOA # DE-	2015-2017

FOA0001181, Sub-award to A. Hale & V. Bennett.

Development and testing of a practical deterrent to minimize bat fatalities at wind turbines. Co-PI with V. Bennett. NextEra Energy Resources. 2014-2016

GRADUATE THESES DIRECTED

13. Cole T. Lindsey, MS Biology, expected May 2017 – Evaluating the effectiveness of an acoustic deterrent on north Texas bat species. Co-advised with Victoria Bennett.
12. Ryan S. Conley, MS Environmental Science, expected Dec. 2017 – Bat behavior at smooth and texturized wind turbine towers. Co-advised with Victoria Bennett.
11. Cecily F. Foo, MS Biology, 2016 – Are tree bats foraging at wind turbines in the southern Great Plains? Co-advised with Victoria Bennett.
10. Christina R. Bienz, MS Environmental Science, 2016. – Surface texture discrimination by wild-caught bats: implications for reducing mortality at wind turbines. Co-advised with Victoria Bennett.
9. Luyi Z. Jarzombek, MS Environmental Science, 2016. – Aerial-hawking bats can glean prey items from surfaces similar to wind turbine towers: implications for reducing bat fatalities at wind facilities. Co-advised with Victoria Bennett.
8. Brad R. Yuen, MS Environmental Science, 2015 – Surface texture differentiation using synthetic bat echolocation calls: implications for reducing bat fatalities at wind turbines. Co-advised with Victoria Bennett.
7. Aaron M. McAlexander, MS Biology, 2013 – Evidence that bats perceive wind turbine surfaces to be water.
6. C. Danielle Cochran, MS Environmental Science, 2013 – Bats, bugs and wind farms – is there a connection?
5. Jennifer M. Korstian, MS Biology, 2012 – High genetic diversity and lack of structure in eastern red bats (*Lasiurus borealis*). Co-advised with Dean Williams.
4. Erin S. Hatchett, MS Environmental Science, 2011 – Wind turbines do not negatively impact density and nest success in grassland birds at a north Texas wind farm.
3. Thomas K. Stevens, MS Environmental Science, 2011 – The effects of wind energy on overwintering grassland birds.
2. Jeffrey A. Meyer, MS Environmental Science, 2010 – Effects of wind turbines on breeding grassland birds in north-central Texas.
1. Trevor G. Rubenstahl, MS Environmental Science, 2010 – Scissor-tailed Flycatcher (*Tyrannus forficatus*) nest placement and success in relation to wind turbines at a utility-scale wind farm in north-central Texas.

PUBLICATIONS

28. **Hale AM.** 2016. Interpreting failure to reject the null hypothesis of displacement from wind turbines in three species of grassland birds: Response to Johnson (2016). *The Condor: Ornithological Applications* 118:676-679. DOI 10.1650/CONDOR-16-71.1
27. Katzner T, V Bennett, T Miller, A Duerr, M Braham, and **A Hale.** 2016. Wind energy development: methods for pre-construction risk assessment for birds and bats. *Human-Wildlife Interactions* 10:42-52.* (*Invited review)

26. Korstian JM, **AM Hale**, VJ Bennett, and DA Williams. 2016. Using DNA barcoding to improve bat carcass identification at wind farms in the United States. *Conservation Genetics Resources* 8:27-34. DOI 10.1007/s12686-015-0509-4
25. Korstian JM, **AM Hale**, and DA Williams. 2015. High genetic diversity, large historic population size, and lack of population structure in two North American tree bats. *Journal of Mammalogy* 96:972-980. DOI 10.1093/jmammal/gyv101
24. Korstian JM, AJ Schildt, VJ Bennett, DA Williams, and **AM Hale**. 2015. A method for PCR-based identification of bat species from fecal samples. *Conservation Genetics Resources* 7:803-806. DOI 10.1007/s12686-015-0488-5
23. Groff PA, **AM Hale**, and BA Whitlock. 2015. Chloroplast lineages in disjunct western North American populations of *Swertia perennis* (Gentianaceae). *Systematic Botany* 40:220-228.
22. Bennett VJ, and **AM Hale**. 2014. Red aviation lights on wind turbines do not increase bat-turbine collisions. *Animal Conservation* 17:354-358.
21. Bennett VJ, **AM Hale**, KB Karsten, CE Gordon, and BJ Suson. 2014. Effect of wind turbine proximity on nesting success in shrub-nesting birds. *American Midland Naturalist* 172:317-328.
20. **Hale AM**, ES Hatchett, JA Meyer, and VJ Bennett. 2014. No evidence of displacement due to wind turbines in breeding grassland songbirds. *The Condor: Ornithological Applications* 116:472-482.
19. Horner JD, EB Hodcroft, **AM Hale**, and DA Williams. 2014. Clonality, genetic variation, and the origin of isolated western populations of the carnivorous plant, *Sarracenia alata*. *Journal of the Torrey Botanical Society* 141:326-337.
18. Korstian JM, **AM Hale**, and DA Williams. 2014. Development and characterization of microsatellite loci for eastern red and hoary bats (*Lasiurus borealis* and *L. cinereus*). *Conservation Genetics Resources* 6:605-607. DOI 10.1007/s12686-014-0151-6
17. Hatchett ES, **AM Hale**, VJ Bennett, and KB Karsten. 2013. Wind turbines do not negatively affect nest success in the Dickcissel (*Spiza americana*). *The Auk* 130:520-528.
16. Korstian JM, **AM Hale**, VJ Bennett, and DA Williams. 2013. Advances in sex determination in bats and its utility in wind-wildlife studies. *Molecular Ecology Resources* 13:776-780.
15. Stevens TK, **AM Hale**, KB Karsten, and VJ Bennett. 2013. An analysis of displacement from wind turbines in a wintering grassland bird community. *Biodiversity and Conservation* 22:1755-1767.
14. Rubenstahl TG, **AM Hale**, and KB Karsten. 2012. Nesting success of Scissor-tailed Flycatchers (*Tyrannus forficatus*) at a wind farm in northern Texas. *Southwestern Naturalist* 57:189-194.
13. Williams DA, C Leach, **AM Hale**, KB Karsten, E Mujica, D Barber, LA Linam, and N Rains. 2012. Development of tetranucleotide microsatellite loci and a non-invasive DNA sampling method for Texas horned lizards (*Phrynosoma cornutum*). *Conservation Genetics Resources* 4:43-45. DOI 10.1007/s12686-011-9469-5
12. Whitlock BA, **AM Hale**, JL Indorf, and CF Wilkins. 2011. Polyphyly of *Rulingia* and *Commersonia* (Lasiopetaleae, Malvaceae s.l.). *Australian Systematic Botany* 24:215-225.
11. Whitlock BA, and **AM Hale**. 2011. The phylogeny of *Ayenia*, *Byttneria*, and *Rayleya* (Malvaceae s.l.) and its implications for the evolution of growth forms. *Systematic Botany* 36:129-136.
10. Whitlock BA, **AM Hale**, and PA Groff. 2010. Intraspecific inversions pose a challenge for the *trnH-psbA* plant DNA barcode. *PLoS ONE* 5(7): e11533. doi:10.1371/journal.pone.0011533
9. Williams DA, and **AM Hale**. 2008. Investment in nesting activities and patterns of within- and extra-group genetic paternity in a cooperatively breeding bird. *The Condor* 110:13-23.

8. Williams DA, and **AM Hale**. 2007. Female-biased helping in a cooperatively breeding bird: female benefits or male costs? *Ethology* 113:534-542.
7. **Hale AM**. 2006. The structure, context, and functions of group singing in black-breasted wood-quail (*Odontophorus leucolaemus*). *Behaviour* 143:511-533.
6. **Hale AM**. 2006. Group living in the black-breasted wood-quail and the use of playbacks as a survey technique. *The Condor* 108:107-119.
5. Williams DA, and **AM Hale**. 2006. Helper effects on offspring production in cooperatively breeding brown jays (*Cyanocorax morio*). *The Auk* 123:847-857.
4. **Hale AM**. 2004. Predation risk associated with group singing in a Neotropical wood-quail. *The Wilson Bulletin* 116:167-171.
3. Williams DA, E Berg, **AM Hale**, and CR Hughes. 2004. Characterization of microsatellites for parentage studies of white-throated magpie-jays (*Calocitta formosa*) and brown jays (*Cyanocorax morio*). *Molecular Ecology Notes* 4:509-511.
2. **Hale AM**, DA Williams, and KN Rabenold. 2003. Territoriality and neighbor assessment in brown jays (*Cyanocorax morio*) in Costa Rica. *The Auk* 120:446-456.
1. **Hale AM**, and CR Hughes. 2003. Characterization of polymorphic microsatellite loci in a Neotropical wood-quail, *Odontophorus leucolaemus*. *Molecular Ecology Notes* 3:508-510.

PRESENTATIONS (past 3 years)

- Hale AM***. 2016. Adverse effects of wind energy facilities on birds: state of science and management techniques for minimizing impacts. North American Ornithological Conference. Washington, DC.
*Invited Symposium
- Bienz CR, VJ Bennett, and **AM Hale**. 2016. Surface texture discrimination by bats: implications for reducing bat mortality at wind turbines. 96th Annual Meeting of the American Society of Mammalogists, Minneapolis, MN.
- Foo C, V Bennett, D Williams, and **A Hale**. 2016. Are tree bats actively foraging at wind turbines in the southern Great Plains? 96th Annual Meeting of the American Society of Mammalogists, Minneapolis, MN.
- Alison T, **A Hale**, N Matson, J Smith, and D Young. 2016. Research Agenda – Budgeting for change – I’ve got a bag of money to spend, now what? American Wind Energy Association (AWEA) Wind Project Siting and Environmental Compliance Conference. Charleston, SC.
- Korstian JM, MM Chumchal, and **AM Hale**. 2016. Mercury contamination in bats from the central United States. 7th Texas Tech Annual Biological Sciences Symposium. Texas Tech University, Lubbock, TX.
- Bienz C, V Bennett, and **A Hale**. 2015. Surface texture discrimination by bats: implications for reducing mortality at wind turbines. 45th Annual Meeting of the North American Society for Bat Research. Monterey, CA.
- Bennett VJ, and **AM Hale**. 2015. Exploring potential hypotheses behind bat-wind turbine collisions. American Wind Energy Association (AWEA) Wind Project Siting Seminar. Austin, TX.
- Bennett VJ, **AM Hale**, AJ Schildt, BG Cooper, AM McAlexander, and DA Williams. 2014. Exploring potential hypotheses behind bat-wind turbine collisions. National Wind Coordinating Collaborative Wind Wildlife Research Meeting X. Broomfield, CO.

- Hale AM**, and VJ Bennett. 2014. Investigating the benefits of fine-tuning curtailment strategies at operational wind facilities. National Wind Coordinating Collaborative Wind Wildlife Research Meeting X. Broomfield, CO.
- Bennett VJ, **AM Hale**, AJ Schildt, and DA Williams. 2014. Evidence that bats utilize wind turbines as a foraging resource. National Wind Coordinating Collaborative Wind Wildlife Research Meeting X. Broomfield, CO.
- Bennett V, **A Hale**, A Schildt, B Cooper, A McAlexander, and D Williams. 2014. Exploring potential hypotheses behind bat-wind turbine collisions. 44th Annual Meeting of the North American Society for Bat Research. Albany, NY.
- Hale A**, and V Bennett. 2014. Investigating the benefits of fine-tuning curtailment strategies at operational wind facilities. 44th Annual Meeting of the North American Society for Bat Research. Albany, NY.
- Korstian J, A Schildt, V Bennett, D Williams, and **A Hale**. 2014. A method for PCR-based identification of species from bat fecal samples. 44th Annual Meeting of the North American Society for Bat Research. Albany, NY.
- Hale AM***, ES Hatchett, TK Stevens, JA Meyer, TG Rubenstahl, KB Karsten, and VJ Bennett. 2014. Limited evidence of indirect effects of wind turbines on grassland songbirds. Joint Meeting of the American Ornithologists' Union, the Cooper Ornithological Society, and the Society of Canadian Ornithologists. Estes Park, CO. *Invited Symposium
- Bennett VJ, **AM Hale**, AJ Schildt, and DA Williams. 2014. Evidence that bats utilize wind turbines as a foraging resource. American Society of Mammalogists Annual Meeting. Oklahoma City, OK.
- Slattery M, **AM Hale**, and VJ Bennett. 2014. Environmental, social, and economic impacts of utility-scale wind energy projects. 7th World Future Energy Summit. Abu Dhabi, United Arab Emirates.

INVITED SEMINARS (past 3 years)

- Hale AM**. 2016. Impacts of wind energy on birds and bats: current efforts to reduce bat mortality. Texas Master Naturalist, Elm Fork Chapter, Denton, TX.
- Hale AM**. 2016. Impacts of wind energy on birds and bats: current efforts to reduce bat mortality. Texas Master Naturalist, Cross Timbers Chapter, Fort Worth, TX.
- Hale AM**. 2016. Impacts of wind energy on birds and bats. Fort Worth Audubon Society, Fort Worth, TX.
- Hale AM**, and VJ Bennett. 2016. Impacts of wind energy on birds and bats: research priorities and new initiatives. NextEra Energy Resources, Juno Beach, FL.
- Hale AM**, and VJ Bennett. 2015. Reducing bat mortality at wind turbines: curtailment and testing hypotheses of attraction. The Dallas Zoo, Dallas, TX.
- Hale AM**, and VJ Bennett. 2015. Impacts of wind energy on birds and bats: research priorities and new initiatives. NextEra Energy Resources, Juno Beach, FL.
- Hale AM**. 2015. Impacts of wind energy on birds and bats. Audubon Dallas, Dallas, TX.
- Hale AM**. 2015. Indirect effects of wind energy on grassland songbirds. The Dallas Zoo, Dallas, TX.
- Hale AM**. 2014. Bat mortality at wind turbines – why is it happening and can we lessen the impacts? Department of Biological Sciences, Sam Houston State University, Huntsville, TX.
- Hale AM**, and VJ Bennett. 2014. Impacts of wind energy on bats: research priorities and innovations to reduce bat mortality. General Electric, Greenville, SC.

- Hale AM.** 2014. Impacts of wind energy on birds and bats. Ministry of Natural Resources, Peterborough, Ontario, Canada.
- Hale AM.** 2014. Wind energy and bats – can we lessen the impacts? Department of Biology, Baylor University, Waco, TX.
- Hale AM, VJ Bennett, BL Johnson, and K Wyrick.** 2014. TCU’s women of wind: a panel discussion on wind energy, wind-wildlife issues, and social politics associated with wind energy. American Association of University Women (AAUW) Tarrant County (TX) Branch January Meeting. Sponsored by the TCU Women’s Studies Program.
- Hale AM, and VJ Bennett.** 2014. Impacts of wind energy on birds and bats: research priorities and new initiatives. NextEra Energy Resources, Juno Beach, FL.

MEMBERSHIPS AND SERVICE TO PROFESSIONAL ORGANIZATIONS

American Ornithological Society (formerly American Ornithologist’s Union and Cooper Ornithological Society); Science Advisor to the American Wind Wildlife Institute (AWWI) Research Committee; Associate Editor to *The Condor: Ornithological Applications*; Association of Field Ornithologists; National Wind Coordinating Collaborative (NWCC) Wind Wildlife Research Meetings (Meeting IX - Abstract Reviewer; Meeting X – Meeting advisor, pre-meeting workshop co-organizer and co-moderator, and abstract reviewer; Meeting XI – Meeting advisor, session moderator, and abstract reviewer); North American Society for Bat Research (Student Poster Judge 42nd Annual Symposium, 2012); Expert Review Panel, Chair, for the USGS Wind Energy Impact Assessment Methodology 2015; The Wildlife Society (Renewable Energy Working Group, 2013; Student Presentation & Poster Judge, 20th Annual Conference, 2013; Poster abstract reviewer 2014); Wilson Ornithological Society

Updated: 17 January 2017