Curriculum Vitae Karen H. Beard

CONTACT

Address: Department of Wildland Resources and Ecology Center, College of Natural Resources, Utah State University, Logan, UT 84322-5230, U.S.A.

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EDUCATION

Yale University

Ph.D., Forestry and Environmental Studies, 2001

M.S., Ecosystem Science and Management, 1996

University of California at Berkeley

B.A., Molecular and Cell Biology (emphasis: Genetics) and Environmental Sciences, 1994 Graduated Phi Beta Kappa, Magna Cum Laude

PROFESSIONAL EXPERIENCE

2014-present, **Professor**, Department of Wildland Resource (WILD), Ecology Center Faculty Associate, College of Natural Resources (CNR), Utah State University (USU)

2008-2014, Associate Professor, Department of WILD and Ecology Center, CNR, USU

2009-2010, **Visiting Scientist (Sabbatical)**, USGS Alaska Science Center, and Environment and Natural Resources Institute, University of Alaska, Anchorage

2006-2008, Associate Researcher, Luquillo LTER, Puerto Rico

2006-present, Adjunct Assistant Professor, Department of Biology, College of Sciences, USU

2002-2008, Assistant Professor, Department of WILD and Ecology Center, CNR, USU

2002, **Post-doctoral Researcher**, School of Natural Resources, University of Vermont (Advisor: Dr. Deane Wang)

2001-02, **Visiting Assistant Professor and Post-doctoral Researcher**, Environmental Studies Program, Dartmouth College (Advisor: Dr. Douglas Bolger)

AWARDS AND HONORS:

USU College of Natural Resources Undergraduate Mentor of the Year (2015)

Editor's Choice (2014) Biological Conservation

Editor's Choice (2014) Oikos

Principal Investigator Award, NSF Polar Programs (2013-17)

Outstanding Paper in Western North American Naturalist for 2010 (2012)

Outstanding Paper in Landscape Ecology award, International Association of Landscape Ecology (2011)

USGS Powell Center for Analysis and Synthesis, panel member (2010-11)

One of top 20 papers published 2005-2010 in *Journal of Ecology* on Invasion Ecology (2010)

Outstanding Research Publication National Wildlife Research Center Award (2009)

USDA NRI Biology of Weedy and Invasive Species in Agroecosystems, panel member (2008)

Junior Faculty Program for Research Bridges to South Africa Award, Mellon Foundation (2006-2009)

USU College of Natural Resources Researcher of the Year (2006)

USDA NRI Biology of Weedy and Invasive Plants program, panel member (2004)

New Principal Investigator Award, USDA NRI Biology of Weedy and Invasive Plants program (2003-06)

Post-doctoral Fellowship, American Association of University Women (2002-03)

Finalist David H. Smith Conservation Post-doctoral Research Fellow (2002)

AAAS Environmental Policy Fellow Declined (2002)

Christine Mirzayan Science and Technology Policy Fellowship Program, Board on Agriculture and Natural Resources, National Academies of Sciences, Washington, D.C. (2001)

EPA STAR Graduate Fellowship (1995)

Smithsonian Institution National Museum of Natural History Internship Program (1993)

RESEARCH PROJECTS AND FUNDING:

CURRENT PROJECTS:

1. Goose-vegetation interactions are changing with the advancement of northern growing seasons, Alaska

- 1. Research Catalyst Program, Utah State University, \$20,000, 2010, PI
- 2. USGS Powell Center for Analysis and Synthesis "Circumpolar assessment of ecological mismatch between avian herbivores and plant phenology", \$20,000, 2010, member of research team
- 3. NSF Polar Programs "Asynchrony in the timing of goose-vegetation interactions: implications for biogeochemical cycling in wet sedge tundra", \$454,093, 2014-17, PI, \$1.7 million for total grant

2. Eleutherodactylus coqui invasion from introduction through impact in Hawaii

- 1. Berryman Institute, \$194,804, 2004-11, PI
- 2. USU various awards, \$94,561, 2004-10
- 3. Hawaii Invasive Species Council Research, \$37,946, 2005-06, PI
- 4. USDA Wildlife Services, \$87,000, 2006-11, PI
- 5. U.S. Fish and Wildlife Service, \$74,000, 2004-11, PI
- 6. USDA Wildlife Services, \$56,575, 2013-15, PI
- 7. USDA Wildlife Services, \$58,110, 2015-17, PI

3. Determining how increasing precipitation intensity will impact rangelands in Utah

1. Utah Agricultural Experiment Station, \$75,000, 2015-20, PI

4. Effects of habitat loss and fragmentation on leaf litter frog communities in Brazil's Atlantic Rainforest

- 1. Various small grant to graduate student (R. Ferreira) 2011- present
- 2. Gardner Travel Grant, Utah State University, \$2,000, 2012, PI

PAST PROJECTS:

1. Indirect interactions among rodents and seeds in a disturbed shrubsteppe ecosystem, Utah

- 1. Utah Division of Wildlife Resources and federal partners, \$1,200,000, co-PI, 2005-10
- 2. Natural Resources Conservation Service, \$1,100,000, co-PI, 2005-10
- 3. USU various awards: \$64,000, 2005-10

2. Tree seedling and grass response to climate change in Kruger National Park, South Africa

- 1. Mellon Foundation, \$8,600, 2006, PI
- 2. Mellon Foundation, \$221,000, 2006-10, PI
- 3. Gardner Travel Grant, Utah State University, \$2,000, 2009, PI
- 4. Mellon Foundation, \$239,000, 2008-11, Collaborator
- 5. Mellon Foundation, \$169,000, 2011-13, Collaborator

3. Evaluating mechanisms of plant invasions and control effectiveness in the Intermountain West

- 1. American Association of University Women Post-doctoral Fellowship, \$30,000, 2002-03, PI
- 2. USU various awards: \$51,000, 2003-10
- 3. Berryman Institute, \$38,145, 2002-04, PI
- 4. USDA/CSREES-NRICGP Biology of Weedy and Invasive Plants, \$221,000, 2003-2006, PI
- 5. Utah Agricultural Experiment Station, \$151,000, 2004-13, PI
- 6. USDA/AFRI, Biology of Weedy and Invasive Species, \$150,000, 2010-12, Collaborator

7. Utah Agricultural Experiment Station, \$20,000, 2012-13, PI

4. Predicting invasive plant species occurrences in our national parks: A process for prioritizing prevention, Klamath National Park Network, California and Oregon

- 1. USGS, \$98,000, 2005-07, co-PI
- 2. USU award, \$6,500, 2005-06, PI

PUBLICATIONS:

Italics indicates graduate students, * plus italics indicate students for whom I am the primary advisor, †contact author/senior author

2016:

- 1. *Mageski, M.M.*, *R.B. Ferreira**, **K.H. Beard**, L.C. Costa, P.R. Jesus, C.C. Medeiros, and P.D. Ferreira. 2015. Bromeliad selection of *Phyllodytes luteolus* (Anura, Hylidae): the influence of plant structure and water quality factors. *Journal of Herpetology*. DOI: 10.1670/14-166
- 2. *Ferreira*, *R.B.**, R. Lourenço-de-Moraes, R. L. Teixeira, and **K.H. Beard**. (accepted) Frogs associations with bromeliads in an abandoned cacao plantation in northeastern Brazil. *Northwestern Journal of Zoology* (on-line first): e162501.

2015:

- 3. *Ferreria, R.B.**, **K.H. Beard,** *R.T. Choi**, and W.C. Pitt. 2015. Diet of the non-native greenhouse frog in Maui. *Journal of Herpetology.* 49(4):586-593.
- 4. Ferreira, R.B.*, J. Faivovich, K.H. Beard, and J.P. Pomal. 2015. The first bromeligenous species of *Dendropsophus* (Anura: Hylidae) from Brazil's Atlantic Forest. PLOSONE. 9 December 2015. DOI: 10.1371/journal.pone.0142893
 Covered in AAAS EurekAlert!: http://www.eurekalert.org/pub_releases/2015-12/p-tbt120415.php ScienceCodex: http://www.sciencecodex.com/teresensis_bromeliad_treefrog_found_in_brazil-171504 http://www.i4u.com/2015/12/100718/teresensis-bromeliad-tree-frog-located-brazil http://phys.org/news/2015-12-teresensis-bromeliad-treefrog-brazil.html http://news.discovery.com/animals/new-frog-found-in-tiny-water-pool-in-plant-151209.htm http://nvs24.com/news/Science/Teresensis-bromeliad-treefrog-found-in-Brazil-2265859.html
- 5. *Warren, C.P.**, A. Kulmatiski[†], and **K.H. Beard.** 2015. A combined tracer/evapotranspiration model approach estimates plant water uptake in native and non-native shrub-steppe communities. *Journal of Arid Environments*. 121(2015):67-78.
- Nolan, N.E.*, A. Kulmatiski, K.H. Beard, and J.M. Norton. 2015. Activated carbon decreases invasive plant growth by mediating plant-microbe. *AoB Plants*.7:plu072.
 Invited to be part of the Special Issue: The Role of Below-Ground Processes in Mediating Plant Invasions
- 7. *Mahoney*, P., **K.H. Beard**, A.M. *Durso*, A. G. *Taillian*, A. L. *Long*, R. J. *Kindermann*, N. E. *Nolan**, D. *Kinka*, and H. E. *Mohn*. 2015. Introduction effort, climate matching, and species traits as predictors of global establishment success in non-native reptiles. *Diversity and Distributions*. 21(1): 64-74. DOI: 10.1111/ddi.12240

2014:

- 8. Kulmatiski, A., A. Anderson-Smith, **K.H. Beard**, S. Doucette-Riis, M. Mazzacavallo, N. Nolan*, and R. Ramirez. 2014. Most soil trophic guilds increase plant growth: a meta-analytical review. *Oikos*. 123(12): 1409-1419. 10.1111/oik.01767
 - **Editor's Choice.** This honor highlights articles that will be advertised through social media and will be open access.
- 9. Cosentino, B.J., D.M. Marsh, K. Jones, J.J. Apodaca, C. Bates, J. Beach, K.H. Beard, K. Becklin, J.M. Bell, C. Crockett, G. Fawson*, J. Fjelsted, K.S. Genet, E.A. Forys, M. Grover, J. Holmes, K. Indeck, N.E. Karraker, E. Kilpatrick, T.A. Langen, S. Mugel, A. Molina, J.R. Vonesh, R. Weaver and A. Willey*. 2014. Citizen science reveals widespread negative effects of roads on amphibian distributions. Biological Conservation. 180:31-38.
 - **Editor's Choice for the volume.** This honor highlights a "must-read" article and makes the article free to download for one year.
- 10. Olson, C.A.*, A. Diesmos, and **K.H. Beard**. 2014. Geographical Distribution: *Eleutherodactylus planirostris* (greenhouse frog). *Herpetological Review*. 45 (4): 652-653.
 - **Referenced in**: Study: People growing tolerant of coqui frog, Hawaii Tribune Herald, West Hawaii Today, December 7, 2014

11. Kulmatiski, A. and **K.H. Beard**. 2013. Increasing precipitation intensity facilitates woody plant encroachment. *Nature Climate Change*. 3: 833-837.

Referenced in: Harder Downpours Likely to Spur Woody Plant Growth say USU Scientists Utah State today, Thursday, Jun. 20, 2013 http://www.usu.edu/ust/index.cfm?article=52485 **Featured in this focus:** Precipitation trends and extremes:
http://www.nature.com/nclimate/focus/precipitation-and-extremes/index.html

12. Hoopes, M., D. Marsh, **K.H. Beard**, N. Goldberg, A. Aparicio, A. Arbuthnot, B. Hixon, D. Laflower, L. Lee, A. Little, E. Mooney, A. Pallette, A. Ravenscraft, S. Scheele, K. Stowe, C. Skyes, R. Watson, B. Yang. 2013. Invasive plants in U.S. National Wildlife Refuges: A coordinated research project using undergraduate ecology students. Bioscience. 63(8): 644-656.

Referenced in: USU Conservation Biologists Contribute to NSF Invasive Species Study Utah State Today Thursday, Apr. 21, 2011 http://www.usu.edu/ust/index.cfm?article=49406

13. *Kalnicky, E.A.**, **K.H. Beard**, and M. Brunson. 2013. Community-level response to habitat structure manipulations: an experimental case study in a tropical ecosystem. *Forest Ecology and Management*. 307: 313-321.

Referenced in: The frog whisperer: Studying coqui, and the people who hate or love them by Peter Sur Published in West Hawaii Today, May 9, 2010.

- 14. **Beard, K.H.**, *C.A. Faulhaber**, F.P. Howe, and T.C. Edwards. 2013. Rodent-mediated interactions among seed species of differing quality in a shrubsteppe ecosystem. *Western North American Naturalist* 73(4): 436-441.
- 15. *Poessel, S.A.*, **K.H. Beard,** *C.M. Callahan, R.B. Ferreira**, and *E.T. Stevenson*. 2013. Biotic acceptance in introduced amphibians and reptiles in Europe and North America. *Global Ecology and Biogeography* 22:192–201.
- 16. Kulmatiski, A. and **K.H. Beard.** 2013. Root niche partitioning among grasses, saplings, and trees measured using a tracer technique. *Oecologia* 171(1): 25-37.

17. *O'Neill, E.M.**, **K.H. Beard**, and M.E. Pfrender. 2012. Cast adrift on an island: introduced populations experience an altered balance between selection and drift. *Biology Letters* 8(5):890-893.

Referenced in: Standard Examiner USU students studying small frog native to Puerto Rico By Nancy Van Valkenburg June 21, 2012

Referenced in: Utah State Today: Cast Adrift in Hawaii: USU Ecologists Study Invasive Frog Populations Jun. 21, 2012

Referenced in: Blue Print by Kelsen Kitchen http://aggieblueprint.com/2012/07/27/coqui-frogs-a-pest-in-the-hawaii-paradise-usu-alumnus-and-professor-says/ July 27, 2012

18. Kulmatiski, A., **K.H. Beard**, and J. Heavilin. 2012. Plant-soil feedbacks provide an alternative explanation for diversity-productivity relationships. *Proceedings of the Royal Society B* 279: 3020–3026.

Referenced in: USU Ecologists Cite New Explanation for Plant Productivity *Utah State Today* Thursday, Apr. 12, 2012

- 19. Ferreira, R.B.*, **K.H. Beard**[†], S.L. Peterson, S.A. Poessel, and C.M. Callahan. 2012. Establishment of introduced reptiles increases with the presence and richness of native congeners. *Amphibia-Reptilia* 33 (2012):387-392.
- 20. Ferreira, R.B.*, C.M. Callahan, S.A. Poessel, and **K.H. Beard**[†]. 2012. Global assessment of establishment success for amphibian and reptile invaders. Wildlife Research 39(7): 637-640.
- 21. Pitt, W.C., **K.H. Beard**, and *R.E. Doratt*. 2012. Management of invasive coqui frog populations in Hawaii. *Outlooks on Pest Management* 23(4): 166-169. (**Invited Submission**).
- 22. Olson, C.A.*, **K.H. Beard**[†], and W.C. Pitt. 2012. Pacific Island invasive species: 8. Eleutherodactylus planirostris, the Greenhouse frog (Anura: Leptodactylidae). Pacific Science 66(3):255-270. (**Invited Submission**).
- 23. *Bisrat*, *S.A.*, M.A. White, **K.H. Beard**[†], and D.R. Cutler. 2012. Predicting the distribution potential of an invasive Puerto Rican frog (*Eleutherodactylus coqui*) in Hawaii using remote sensing data. *Diversity and Distributions* 18(7):648-660.
- 24. *Choi*, *R.T.**, and **K.H. Beard**[†]. 2012. Coqui frog invasions change invertebrate communities in Hawaii. *Biological Invasions* 14(5):939-948.

Highlighted in: Star Advertiser "Let's do what we can to limit impact of pest" by Christy Martin, January 18, 2012

Highlighted in: Star Advertiser "Coquis taking a toll on Hawaii island bug life" by Jim Borg, July 14, 2012

25. *Olson, C.A.**, **K.H. Beard**[†], D.N. Koons, and W.C. Pitt. 2012. Detection probability of two introduced frogs in Hawaii: implications for assessing non-native species distributions. *Biological Invasions* 14(4): 889-900.

Paper summarized in FrogLog May 2012.

26. Olson, C.A.* and **K.H. Beard**[†]. 2012. Diet of the invasive greenhouse frog in Hawaii. Copeia 1:121-129

Paper summarized in FrogLog May 2012.

- 27. O'Neill, E.M.* and **Beard**, **K.H.**[†] 2011. Clinal variation in calls of native and introduced populations of *Eleutherodactylus coqui*. *Copeia* 2011(1):18–28.
- 28. Kulmatiski, A. and **K.H. Beard**. 2011. Long-term plant growth legacies overwhelm short-term plant growth effects on soil microbial community structure. *Soil Biology and Biochemistry* 43(3):823-830.
- 29. Kulmatiski, A., J. Heavilin, and **K.H. Beard.** 2011. Testing predictions of a three-species plant-soil feedback model. *Journal of Ecology* 99: 542–550.

Rated by F1000. Recommended reading: http://www.journalofecology.org/view/0/index.html

2010:

30. *Gilbert-Norton*, *L.*, *R. Wilson*, J.M. Stevens, and **K.H. Beard**[†]. 2010. Corridors increase movement: A meta-analytical review. *Conservation Biology* 24(3): 660-668.

Also published in International Year of Biodiversity: Connectivity and Corridors, on-line April 2010.

Award: Outstanding Paper in Landscape Ecology award, US-International Association of Landscape Ecology

31. Kulmatiski, A., **K.H. Beard**, L.A. Myerson, *J.C. Gibson*, and K.E. Mock. 2010. Non-native *Phragmites australis* invasion into Utah wetlands. *Western North American Naturalist* 70(4): 541–552.

Award: Outstanding Paper in Western North American Naturalist for 2010

- 32. Kulmatiski, A., **K.H. Beard**, *R.J.T. Verweij*, and E.C. February. 2010. A depth-controlled tracer technique quantifies the location, extent, and timing of water uptake in a sub-tropical savanna. *New Phytologist*. 188(1):199-209.
- 33. *O'Neill, E.M.** and **K.H. Beard**. 2010. Genetic basis of a color pattern polymorphism in the frog *Eleutherodactylus coqui. Journal of Heredity* 101(6):703-9.

2009:

34. **Beard, K.H.**, *E.A. Price** (now *Kalnicky*), and W.C. Pitt. 2009. Biology and impacts of Pacific Island invasive species: *Eleutherodactylus coqui*, the Coqui frog (Anura: Leptodactylidae). *Pacific Science* 63(3): 297–316. (**Invited Submission**)

Referenced in: Coqui frogs continue to multiply in Kona by Diana Duff. Published in West Hawaii Today, June 11, 2011.

- 35. *Tuttle*, *N.C.**, **K.H. Beard**[†], and W.C. Pitt. 2009. Invasive litter, not an invasive insectivore, determines invertebrate communities in Hawaiian forests. *Biological Invasions* 11(4):845–855.
- 36. Peacock, M.M., **K.H. Beard**[†], *E.M. O'Neill**, V. Kirchoff, and M.B. Peters. 2009. Strong founder effects and low genetic diversity in introduced populations of Coqui frogs. *Molecular Ecology* 18: 3603-3615.

2008:

37. Bolger, D.T., **K.H. Beard**, A. Suarez, and T. Case. 2008. Increased abundance of native and non-native spiders with habitat fragmentation. *Diversity and Distributions* 14(4): 655-665.

- 38. **Beard, K.H.**, R. Al-Chokhachy, N.C. Tuttle*, and E.M. O'Neill*. 2008. Population density estimates and growth rates of Eleutherodactylus coqui in Hawaii. Journal of Herpetology. 42(4):626-636.
- 39. Sin, H.*, K.H. Beard[†], and W.C. Pitt. 2008. An invasive frog, Eleutherodactylus coqui, increases new leaf production and leaf litter decomposition rates through nutrient cycling in Hawaii. Biological *Invasions* 10(3):335-345.

Referenced in: 1) Pest or pal? A tiny tree frog with a big voice has got Hawaiians in an uproar by Robert Friedman. Published in The (NJ) Press of Atlantic City, Science section A4, March 13,

- 2) Controversy over coquis rages in Hawaii by Robert Friedman. Published in The San Juan Star, February 25, 2007.
- 3) Tree frogs that Puerto Ricans like are fiends in Hawaii by Robert Friedman. 2007. Published in the The Voice of the Taino People Online. http://uctp.blogspot.com/2007/03/tree-frogs-thatpuerto-ricans-like-are.html.

Award: Outstanding Research Publication National Wildlife Research Center Award (2009)

40. Tuttle, N.C.*, **K.H. Beard**[†], and R. Al-Chokhachy. 2008. Aerially applied citric acid reduces an invasive frog. Wildlife Research 35(7):676-683.

Referenced in: State Drops Acid on Coqui at Manuka, Develops New Pest Control Methods. Environment Hawaii. Volume 17, Number 9, March 2008.

41. Kulmatiski, A., K.H. Beard, J.M. Stevens, and S.M. Cobbold. 2008. Plant-soil feedbacks: A metaanalytical review. Ecology Letters 11(9): 980-992.

Noted: One of the top 1% most highly cited papers in the field - Council of Canadian Academies

- 42. Kyle, G.P.*, A. Kulmatiski, and K.H. Beard[†]. 2008. Influence of pocket gophers mounds on nonnative plant establishment in a shrubsteppe ecosystem. Western North American Naturalist 68(3):374-381.
- 43. Kulmatiski, A. and K.H. Beard. 2008. Decoupling plant-growth from land-use legacies in soil microbial communities. Soil Biology and Biochemistry 40(5):1059-1068.
- 44. Peters, M., K.H. Beard, C. Hagen, E.M. O'Neill*, K.E. Mock, W.C. Pitt, and T.C. Glenn. 2008. Isolation of microsatellite loci from the coqui frog, Eleutherodactylus coqui. Molecular Ecology Resources 8:139-141.

2007:

45. **Beard, K.H.** 2007. Diet of the invasive frog, *Eleutherodactylus coqui*, in Hawaii. *Copeia* 2007(2): 281-291.

Referenced in: What coqui eats: Does frog lunch bug you? by Jan W. TenBruggencate Raising Islands--Hawai'i science and environment August 24, 2007.

- 46. Cutler, D.R., T.C. Edwards, K.H. Beard, A. Cutler, K.T Hess, J.C. Gibson, and J.J. Lawler. 2007. Random forests for classification in ecology. *Ecology* 88(11):2783-2792.
- 47. Kyle, G.P.*, K.H. Beard[†], and A. Kulmatiski. 2007. Reduced soil compaction enhances establishment of non-native plant species. Plant Ecology 193:223-232.

- 48. Rexroad, E.A*, K.H. Beard[†], and A. Kulmatiski. 2007. Vegetation responses to 35 and 55 years of native ungulate grazing in shrub-steppe communities. Western North American Naturalist 67(1):16-25.
- 49. Velo-Antón, G., P.A. Burrowes, R. Joglar, I. Martínez-Solano, K.H. Beard, and G. Parra-Olea. 2007. Phylogenetic study of *Eleutherodactylus coqui* (Anura: Leptodactylidae) reveals deep genetic fragmentation in Puerto Rico and origins in Hawaii. Molecular Phylogenetics and Evolution 45(2007):716-728.

50. Kulmatiski, A. and K.H. Beard. 2006. Activated carbon as a restoration tool: Potential for control of invasive plants in abandoned agricultural fields. Restoration Ecology 14(2): 251-257.

Referenced in: Activated carbon helps native plants attain dominance against invasive species. Conservation Mayen: Online hub for the conservation community, February 2010.

- 51. **Beard, K.H.** and W.C. Pitt. 2006. Potential predators of an invasive frog (*Eleutherodactylus coqui*) in Hawaiian forests. Journal of Tropical Ecology 22(4): 345-347.
- 52. Kulmatiski, A., K.H. Beard, and J.M. Stark. 2006. Exotic communities shift water-use timing in a shrub-steppe ecosystem. Plant and Soil 288(1-2):271-284.
- 53. Kulmatiski, A., K.H. Beard, and J.M. Stark. 2006. Soil history as a primary control on plant invasion in abandoned agricultural fields. *Journal of Applied Ecology* 43(5):868-876.

Also published in International Year of Biodiversity: Invasive Species, published on-line (2010) Noted: One of top 20 papers published 2005-2010 in *Journal of Ecology* on Invasion Ecology (2010)

2005:

54. **Beard, K.H.** and E.M. O'Neill*. 2005. Infection of an invasive frog Eleutherodactylus coqui by the chytrid fungus Batrachochytrium dendrobatidis in Hawaii. Biological Conservation 126(4): 591-595.

Referenced in:

New and Noteworthy: Frog fungus infects coqui. Environment Hawaii. Volume 17, Number 4, October 2006.

Fungus doesn't kill coqui frogs. Hawaii Tribune Herald. May 22, 2011 by Erin Miller.

55. Beard, K.H. and W.C. Pitt. 2005. Potential consequences of the coqui frog invasion in Hawaii. Diversity and Distributions 11(5):427-433.

Referenced in:

Study says coqui isn't ecological scourge by Timothy Hurley. Published in the Honolulu Advertiser, August 28, 2005.

Author of Coqui Report Underscores Ecological Risks of Invading Frogs. Environment Hawaii Volume 16, Number 4, January 2005.

56. Beard, K.H., K.A. Vogt, D.J. Vogt, F.N. Scatena, A. Covich, T.C. Siccama, R. Sigurdardottir, and T.A. Crowl. 2005. Structural and functional responses of a subtropical forest to 10 years of hurricanes and droughts. Ecological Monographs 75(3):345-361.

57. **Beard, K.H.**, Wang, D., Waite, C.E. Decker, K.L.M., Hawley, G.J, DeHayes, D.D., Hughes, J. W., Cumming, J.R. 2005. Quantifying the importance of abiotic and biotic factors in controlling nutrient export from a developing ecosystem. *Ecosystems* 8:210-224.

2004:

- 58. *Kulmatiski*, A., **K.H. Beard**, and J.N. Stark. 2004. Soil-mediated control on weed establishment and growth. *Weed Technology* 18: 1353-1358 Suppl. S.
- 59. *Kulmatiski*, A. and **K.H. Beard**. 2004. Reducing sampler error in soil research. *Soil Biology and Biochemistry* 36(2): 383-385.

2003:

- 60. **Beard, K.H.**, *A.K. Eschtruth*, K.A. Vogt, D.J. Vogt, and F.N. Scatena. 2003. The effects of the frog *Eleutherodactylus coqui* on invertebrates and ecosystem processes at two scales in the Luquillo Experimental Forest, Puerto Rico. *Journal of Tropical Ecology* (37)19: 607-617.
- 61. **Beard, K.H.**, *S. McCullough*, and *A.K. Eschtruth*. 2003. Quantitative assessment of habitat preferences for the Puerto Rican terrestrial frog, *Eleutherodactylus coqui*. *Journal of Herpetology* 37(1):10-17.
- 62. Kulmatiski, A., D.J. Vogt, T.G. Siccama, and **K.H. Beard**. 2003. Detecting nutrient pool changes in rocky forest soils. *Soil Science Society of America Journal* 67:1282-1286.

BEFORE 2003:

- 63. **Beard, K.H.**, K.A. Vogt, and A. *Kulmatiski*. 2002. Top-down effects of a terrestrial frog on nutrient concentrations in a subtropical forest *Oecologia* 133: 583-593.
- 64. Vogt, K. A., **K.H. Beard**, *S. Hammann*, *J. L. O'Hara*, D. J. Vogt, F.N. Scatena, and *B. A. Parry*. 2002. Indigenous knowledge informing management of tropical forests: the link between rhythms in plant secondary chemistry and lunar cycles. *Ambio* 35: 485-490.
- 65. **Beard, K.H.** 2001. The effect of a juvenile terrestrial frog, *Eleutherodactylus coqui*, on the decomposer food web and leaf litter decomposition rate in the wet forest of Puerto Rico. *TRI News* 20:18-21.
- 66. Skelly, D.K., **K.H. Beard** and N. J. Hengarten. 2000. Animal-distribution modeling in gap analysis: an evolving science. *Conservation Biology* 14(5):1224-1225.
- 67. **Beard, K.H.**, N. Hengarten and D. K. Skelly. 1999. Effectiveness of predicting breeding bird distributions using probabilistic models. *Conservation Biology* 13(5):1108-1116.
- 68. Kiesecker, J. M., D. K Skelly, **K.H. Beard** and *E. Presser*. 1999. Behavioral reduction of infection risk. *Proceedings of the National Academy of Sciences* 96(16):9165-9168.
- 69. **Beard, K.H.** and P. T. DePriest. 1996. Genetic variation within and among mats of the reindeer-lichen, *Cladina subtenuis* (des abb.) Hale & W.Culb. *Lichenologist* 28(2):171-182.

PEER-REVIEWED IN REVIEW OR PROGRESS:

- 70. Wallis, A.C.*, R. L. Smith*, and K.H. Beard. (in revision) Temporal foraging patterns of non-native Coqui frogs (Eleutherodactylus coqui) in Hawaii. Journal of Herpetology. Re-submitted 23 December 2015.
- 71. Tingley, R., P.J. Mahoney, A.M. Durso, A.G. Taillan, A. Morán-Ordóñez, and K.H. Beard. (in revision) Threatened and invasive reptiles are not two sides of the same coin. Global Ecology and Biogeography.
- 72. Kulmatiski, A., K.H. Beard, J. Grezer, L. Forero, and J. Heavilin. (in revision) Plant-soil feedbacks marginally improve predictions of plant biomass in communities. *Ecology*.
- 73. Beard, K.H., S.A. Johnson and A. Shiels. (in review). Chapter 9: Frogs. Ecology and Management of Terrestrial Vertebrate Invasive Species in the United States (W. Pitt, J.C. Beasley, G.W. Witmer eds.) CRC Press/Taylor & Francis Group.
- 74. Tonini, J.F.R., K.H. Beard, R.B. Ferreira*, and R.A. Pyron. (in review) Fully-sampled phylogenies for squamates reveal evolutionary patterns in extinction risk, Biological Conservation. Invited Special Issue on Reptile Conservation.
- 75. Marsh, D., J.J., B. Cosentino, K. Jones, Apodaca, K.H. Beard, C. Bozarth, E. Forys, K. Genet, S. Hill, N. Karraker, E. Kilpatrick, T. Langen,, and J. Vonesh. (in review) Effects of road and land use on pond-breeding amphibians: patterns across spatial scales and regions in the eastern and central United States. Diversity and Distribution.
- 76. Ferreira, R.B.*, K.H. Beard, and M. Crump. (drafted) Breeding guilds determine frog response to edge effects in Brazil's Atlantic Forest. PLOSONE.
- 77. O'Neill, E.M.*, K.H. Beard, and C. W. Fox. (drafted) Life history traits in native and introduced populations of the coqui frog. *PLOSONE*.
- 78. Kalnicky, E.A.*, M. Brunson, K.H. Beard. (drafted) Exposure to a non-native species influences willingness to prevent their spread. Global Environmental Change.

BOOK CHAPTERS:

- 1. Crowl, T.A., N. Brokaw, R. Waide, G., Gonzalez, K.H. Beard, E. Greathouse, A.E. Lugo, A.P. Covich, J. Lodge, C. Pringle, J. Thompson, G.E. Belovsky, 2012. Chapter 6: When and where biota matter. In: A Caribbean Forest Tapestry: The Multidimensional Nature of Disturbance and Response (N. Brokaw, T. Crowl, A. Lugo, W.M. McDowell, F. Scatena, R.E. Waide, M.R. Willig, eds.) Oxford University Press, Oxford. pp. 272-304. Referenced in Utah State Today - University News: Pressing Disturbances: USU Ecologist's Book Explores Tropical Forests Thursday, June 07, 2012
- 2. Scatena, F.N., J.F. Blanco, K.H. Beard, R. Waide, A.E. Lugo, N. Brokaw, W. Silver, B. Haines, J. Zimmerman. 2012. Chapter 4: Disturbance regime. In: A Caribbean Forest Tapestry: The Multidimensional Nature of Disturbance and Response (N. Brokaw, T. Crowl, A. Lugo, W.M. McDowell, F. Scatena, R.E. Waide, M.R. Willig eds.) Oxford University Press, Oxford. pp. 164-200.

- 3. **Beard, K.H.** and W.C. Pitt. 2012. Chapter 26: Caribbean tree frog (Eleutherodactylus coqui). Pp. 311-319. In: Handbook of Global Freshwater Invasive Species. Earthscan, London. Ed. Robert A. Francis (Invited Submission)
- 4. **Beard, K.H.** 2006. Case Study Box: Puerto Rico and Hawaii: Wet tropical forests and the dilemma of coqui frog conservation and eradication. Pp: 135-137. In: Forests and Society: Sustainability and life cycles of forests in human landscapes Eds. K.A. Vogt, J. Honea, D.J. Vogt, M. Andreu, R. Edmonds, J. Berry, R. Sigurdardóttir, T. Patel-Weynand.
- 5. Vogt, K. A., O. Schmitz, O., K.H. Beard, J. L. O'Hara, and M. Booth. 2001. Conservation Biology, Contemporary, pp. 865-881. In: Encyclopedia of Biodiversity. Vol.1 (S. Levin, Ed.) Academic Press.

REPORTS:

- 1. Edwards, T.C., Cutler, R, and K.H. Beard. 2014. Chapter 7: Predicting risk of invasive species occurrence – plot –based. *In*: Early detection of invasive plants—Principles and practices: U.S. Geological Survey Scientific Investigations Report 2012–5162, 193 p. Eds. B.A. Welch, P.H. Geissler, and P. Lathame. http://dx.doi.org/10.3133/sir20125162.
- 2. Edwards, T.C., Cutler, R, and K.H. Beard. 2014. Chapter 9: Process of Model Assessment and Evaluation. In: Early detection of invasive plants—Principles and practices: U.S. Geological Survey Scientific Investigations Report 2012–5162, 193 p. Eds. B.A. Welch, P.H. Geissler, and P. Lathame. http://dx.doi.org/10.3133/sir20125162.

BOOK REVIEWS:

- 1. **Beard, K.H.** 2014. Invasion Ecology Second Edition, J.L. Lockwood, M.F. Hoopes, and M.P. Marchetti, Wiley-Blackwell (2013). 466 pp. Paperback, Price US\$ 57.99, ISBN: 978-14443-3365-7 Biological Conservation 169: 157. (Invited Submission).
- 2. **Beard, K.H.** 2013. Novel Ecosystems: Intervening in the New Ecological World Order, R.J. Hobbs, E.S. Higgs, C. Hall. John Wiley & Sons (2013). 380 pp. Hardback, Price US\$ 79.95, ISBN: 978-1-118-35422-3, Biological Conservation 168: 168. (Invited Submission).
- 3. Beard, K.H. and A. Kulmatiski. 2012. Introduction, establishment, and spread: 50 years of invasion ecology since Elton. **Book review** of David M. Richardson, editor. 2011. Fifty years of invasion ecology: the legacy of Charles Elton. Wiley-Blackwell, Oxford. 432 p. Ecology 93(2): 437-438. (Invited Submission).

POPULAR ARTICLE:

Aggies on NSF-led 'Toads, Roads and Nodes' Undergrad Research Team http://www.usu.edu/ust/index.cfm?article=52368, Spring 2013

Beard, K.H. Coqui frogs as predators and prey in Hawai'i. Newsletters of the Maui Invasive Species Council. Invited for the "New Science" column, Spring 2007.

PRESENTATIONS (WHILE AT USU):

Italics indicates graduate students, * plus italics indicate students for whom I am the primary advisor

PRESENTATIONS AT NATIONAL AND INTERNATIONAL MEETINGS:

- 1. Leffler, J.A., K.H. Beard, K.C. Kelsey, R.T. Choi*, J. M. Welker. Earlier growing seasons and changes in migration timing influence carbon uptake and plant production in Arctic coastal wetlands. American Geophysical Union, San Francisco, California, December 2015.
- 2. Kelsey, K.C., Leffler, J.A., K.H. Beard, R.T. Choi*, J. M. Welker. Sub-arctic wetland greenhouse gases (CO2, CH4 & N2O) emissions are driven by interactions of environmental controls and herbivore grazers. American Geophysical Union, San Francisco, California, December 2015.
- 3. Ferreira, R.B.* and K.H. Beard Invasion of herpetofauna: predictors and study cases for management purposes Brazilian Herpetological Congress, September 2015.
- 4. Ferreira, R.B.*, R. Lourenço-de-Moraes, K.H. Beard, and E. Brodie, Jr. Antipredator behavior of post-metamorphic anurans in Brazil's Atlantic Forest. Brazilian Herpetological Congress, September 2015.
- 5. Taillian, A.G., R. Tingley, P.J. Mahoney, A.M. Durso, A. Morán-Ordóñez and K.H. Beard, Extinction and invasion risk are not two sides of the same coin, at least not for reptiles. International Congress for Conservation Biology ICCB-ECCB, Montpelier, France, August 2015.
- 6. Smith, R.L.*, K.H. Beard, and A.Shiels Invasive frogs do not affect native bird communities in Hawaii. Ecological Society of America, Baltimore, Maryland, August 2015.
- 7. Cosentino, B., D. Marsh, D., K. Jones, J.J. Apodaca, K.H. Beard, C. Bozarth, J. Charbonnier, E.A. Forys, K.S. Genet, N. Karraker, E. Kilpatrick, T. Langen, and J. R. Vonesh. Insights into effects of roads on amphibians from citizen science. Ecological Society of America, Baltimore, Maryland, August 2015.
- 8. Smith, R.L.*, K.H. Beard, and A.Shiels. Non-native coqui frogs do not affect native birds in Hawaii. Association of Tropical Biology and Conservation, Honolulu, Hawaii, July 2015.
- 9. Leffler, A.J., **K.H. Beard**, *R.T. Choi**, J.A. Schmutz, and J.M. Welker Early season goose grazing has a greater effect than advancement of the growing season on net ecosystem exchange in a coastal wetland of western Alaska. American Geophysical Union, San Francisco, California, December 2014.
- 10. Choi, R.T.,* K.H. Beard, A.J. Leffler, J.A. Schmutz, and J.M. Welker. Leaf tissue C:N and soil N are modified by growing season and goose grazing phenology in a sub-Arctic coastal wetland of western Alaska. American Geophysical Union, San Francisco, California, December 2014.
- 11. Ferreia, R.B.* and K.H. Beard. Frog assemblies' homogenization across Brazil's Atlantic Forest. Ecological Society of America, Sacramento, California, August 2014.
- 12. Vonesh, J., Marsh, D., J.J. Apodaca, K.H. Beard, C. Bozarth, B. Cosentino, E. Forys, K. Genet, S. Hill, K. Jones, N. Karraker, E. Kilpatrick, T. Langen, Regional and scale-specific effects of land use on amphibian diversity. Ecological Society of America, Sacramento, California, August 2014.
- 13. Mahoney, P., K.H. Beard, A.M. Durso, A. G. Taillian, A. L. Long, R. J. Kindermann, N. E. Nolan*, D. Kinka, and H. E. Mohn. Introduction effort, climate matching, and species traits as predictors of global establishment success in non-native reptiles. Joint Meeting of Ichthyologists & Herpetologists, Chattanooga, Tennessee, August 2014.
- 14. Beard, K.H., P.J. Mahoney, A.G. Taillan, A.L.Long, A.M. Durso, R.J. Kindermann, N.E. Nolan*, D. Kinka, and H.E. Mohn. Getting to the bottom of reptile establishment success. North American Congress for Conservation Biology, Missoula, Montana, July 2014.
- 15. Marsh, D., B. Cosentino, K.H. Beard, J. Vonesh, K. Genet, T. Langen, N. Karraker, K. Jones, J.J. Apodaca, E. Forys, E. Kilpatrick. Ubiquitous effects of road disturbance on the distribution of frogs and toads in eastern and central United States. North American Congress for Conservation Biology, Missoula, Montana, July 2014.
- 16. Ferreia, R.B.* and K.H. Beard. Local citizens decide the common name of a new frog species in Brazil. North American Congress for Conservation Biology, Missoula, Montana, July 2014.
- 17. Smith, R.L.*, K.H. Beard, and W.C. Pitt. Do coqui frogs change bird communities in Hawaii? Hawaii Ecosystems Meeting, University of Hawaii, Hilo, Hawaii, June 2014.
- 18. Genet, K.S., D.M. Marsh, J.J. Apodaca, C. Bates, J. Beach, K.H. Beard, K. Becklin, J.M. Bell, B.J. Cosentino, C. Crockett, K. Curtain, G. Fawson*, J. Fjelsted, E.A. Forys, M. Grover, J.

- Holmes, K. Indeck, N.E. Karraker, E. Kilpatrick, T.A. Langen, S. Mugel, A. Molina, J.R. Vonesh, R. Weaver and A. Willey*. Toads, roads, and nodes: The influence of landscape composition and configuration on the distribution and abundance of frogs and toads in the Eastern and Central U.S.A. Ecological Society of America, Minneapolis, August 2013.
- 19. Ferreia, R.B.* and K.H. Beard[†]. Matrix-habitat and edge effects on amphibian communities in the Brazilian Atlantic rainforest. 26th International Congress for Conservation Biology, July 2013 (†presenter).
- 20. Ferreia, R.B.* and K.H. Beard. Influence of a non-native frog, Eleutherodactylus planirostris on invertebrates in Maui, Hawaii. VI Brazilian Congress of Herpetology, July 2013.
- 21. Ferreia, R.B.* and K.H. Beard. The response of frogs to matrix-habitat types and edge effects: preliminary results. VI Brazilian Congress of Herpetology, July 2013.
- 22. Kulmatiski, A., K.H. Beard, M. Mazzacavallo and S. Doucette-Riis. The two-layer hypothesis is dead, long live the two-layer hypothesis Kruger National Park Network Meeting, Kruger National Park, South Africa, March, 2013.
- 23. **Beard, K.H.**, A. Kulmatiski, *M. Mazzacavallo*. The two-layer hypothesis is dead: long live the two-layer hypothesis. Ecological Society of America, Portland, Oregon, August 2012.
- 24. Kulmatiski, A., K.H. Beard, J. Heavilin. Plant-soil feedbacks provide an additional explanation for diversity-productivity relationships. Ecological Society of America, Portland, Oregon, August 2012.
- 25. Kalnicky, E.A.*, K.H. Beard and M.W. Brunson. Resource availability and invasive coqui frog (Eleutherodactylus coqui) density in Hawaii. Ecological Society of America, Austin, Texas, August 2011.
- 26. Kulmatiski, A. and K.H. Beard. Testing predictions of a three-species plant-soil feedback model. Ecological Society of America, Austin, Texas, August 2011.
- 27. Kulmatiski, A., K.H. Beard and M. Mazzacavallo. Savanna structure with climate change: Results from a precipitation manipulation experiment. Kruger National Park Network Meeting, Kruger National Park, South Africa, March, 2011.
- 28. William, C.P.*, A. Kulmatiski, and K.H. Beard. Deuterium tracer injection: A precise technique for comparing water use patterns in an invaded plant community. Ecological Society of America, Pittsburgh, Pennsylvania, 2-6 August 2010.
- 29. Choi, R.*, C. Olson*, and K.H. Beard. Impacts of coqui and greenhouse frogs on Hawaiian invertebrate communities. Hawaii Conservation Conference. Honolulu, Hawaii, 4-6 August 2010.
- 30. Olson, C.* and K.H. Beard. Diet of the Cuban greenhouse frog, Eleutherodactylus planirostris, in Hawaii. Joint Meeting of Ichthyologists and Herpetologists. Providence, Rhode Island, 7-12 July 2010.
- 31. Choi, R.* and K.H. Beard. Changes at the invasion front: Impacts of coqui frog on invertebrates in Hawaii. Annual Human-Wildlife Conflict Berryman Institute Symposium, Utah State University, May 2010.
- 32. Olson, C.* and K.H. Beard. Cuban greenhouse frog in Hawaii. Annual Human-Wildlife Conflict Berryman Institute Symposium, Utah State University, May 2010.
- 33. ver Weij, R., Kulmatiski, A., K.H. Beard, S.I. Higgins, W.J. Bond, E.C. February. Spatial and temporal root activity patterns of trees and grasses: two approaches to test the two-layer hypothesis in a sub-tropical savanna. Netherlands Annual Ecology Meeting, February 2010.
- 34. Kulmatiski, A., R.J.T. Verweij, **K.H. Beard**, E.C. February, and *M. Mazzacavallo*. Where do trees and grasses get their water? Kruger National Park Network Meeting, Kruger National Park, South Africa, March, 2010.
- 35. Gilbert-Norton, L., R. Wilson, J.R. Stevens, and K.H. Beard[†]. Corridors enhance movement: A meta-analytical review. Ecological Society of America, Albuquerque, New Mexico, August 2009 (†presenter).

- 36. Kulmatiski, A., R.J.T. Verweij, K.H. Beard, and E. February. Defining niche space in savannas; a long-awaited resolution for the two-layer hypothesis. Ecological Society of America, Albuquerque, New Mexico, August 2009.
- 37. O'Neill, E.M.*, K.H. Beard, M. Pfrender, M.M. Peacock, M. B. Peters. Losing their balance: selection in native and introduced populations of the Coqui frog. Evolution, Moscow, Idaho, June 2009.
- 38. Bisrat, S.A., M.A. White, K.H. Beard, and D.R. Cutler. Predicting the invasion potential of a Puerto Rican frog in Hawaii using MODIS satellite imagery, American Geophysical Union, San Francisco, December 2008.
- 39. Kulmatiski, A., K.H. Beard, J.M. Stevens, and S.M. Cobbold. Plant-soil feedbacks: A metaanalytical review. Ecological Society of America, Milwaukee, Wisconsin, August 2008.
- 40. O'Neill, E. M.* and K.H. Beard Ecology and evolution of the introduced frog, the coqui. Annual Human-Wildlife Conflict Berryman Institute Symposium, Mississippi State University, May 2008.
- 41. Kulmatiski, A., K.H. Beard, R. ver Weij, E. February. Tree and grass water-use in a changing savannah system. Kruger National Park Networking Meeting, April 2008.
- 42. Tuttle, N.C.* and K.H. Beard. Bottom-up control determines invertebrate community composition and abundance in Hawaii, Ecological Society of America, San Jose, California, August 2007.
- 43. **Beard, K.H.** and A. Kulmatiski. Disturbance contingent plant-soil feedback: the passenger takes the wheel, Ecological Society of America, San Jose, California, August 2007.
- 44. Kulmatiski, A. and K.H. Beard. Changing soil microbial communities to manage plant communities. Ecological Society of America, San Jose, California, August 2007.
- 45. Sin, H.*, K.H. Beard, and W.C. Pitt. Top-down effects of coquis in lowland forests in Hawaii. Hawaii Ecosystems Meeting, University of Hawaii, Hilo, Hawaii, June 2007.
- 46. Edwards, T.C., Jr., D.R. Cutler, K.H. Beard, J.C. Gibson, and D. Sarr. A framework for predicting invasive plants in National Parks: A proof of concept using Verbasum thapsus in Lava Beds National Monument, Invited Symposium: Invasive Species: Early Detection and Monitoring in Natural Areas, Natural Areas, Flagstaff, Arizona, September 2006.
- 47. **Beard, K.H.**, *H. Sin**, and W. C. Pitt. An invasive frog influences ecosystem processes similarly in its native and introduced ranges. Ecological Society of America, Memphis, Tennessee, August 2006.
- 48. Kulmatiski, A., K.H. Beard, and J.N. Stark. Exotic plants shift water-use timing, Ecological Society of America, Memphis, Tennessee, August 2006.
- 49. Sin, H.*, K.H. Beard, and W. C. Pitt, Coqui frogs (Eleutherodactylus coqui) influence lowland forest invertebrates and ecological processes, Hawaii Conservation Conference, Honolulu, Hawaii, July 2006.
- 50. **Beard, K.H.**, *H. Sin**, and W. C. Pitt. Effects of coqui frogs on ecosystem processes in Hawaii. Hawaii Ecosystems Meeting, Volcanoes National Park, Hawaii, July 2006.
- 51. Sin, H.*, K.H. Beard, and W. C. Pitt, Effects of an invasive frog on invertebrate community and ecosystem processes in Hawaii, Vertebrate Pest Conference, Berkeley, California, March 2006.
- 52. Tuttle, N.C.* and K.H. Beard. Direct effects of coqui frogs on arthropods in Hawaii. Annual Berryman Symposium, Logan, Utah State University, August 2005.
- 53. Beard, K.H., and W.C. Pitt. Effects of coqui frogs on nutrient cycling in Hawaii. Annual Human-Wildlife Conflict Berryman Institute Symposium, Logan, Utah State University, August 2005.
- 54. **Beard, K.H.** and *Tuttle, N.C.** Direct effects of coqui frogs (*Eleutherodactylus coqui*) on invertebrate communities in Hawaii, Hawaii Conservation Conference, Honolulu, Hawaii, July 2005.
- 55. Rexroad, E.*, K.H. Beard, and A. Kulmatiski. Ecosystem- and community-level impacts of 50 years of large ungulate grazing, Ecological Society of America, Portland, Oregon, August 2004.

- 56. Rexroad, E.*, K.H. Beard, and A. Kulmatiski. Effects of deer and elk on vegetation structure, soil composition and invertebrate communities throughout central Washington, Utah Wildlife Society Meeting, February 2004.
- 57. Kulmatiski, A., K.H. Beard, and J.N. Stark. Plants, soils, and alternative steady states in plant communities, Weed Science Society of America and Ecological Society of America, Fort Lauderdale, Florida, November 2003.
- 58. **Beard, K.H.** Consequences of the coqui frog invasion in Hawaii: Is Puerto Rico a starting place? Intermountain Herpetology Rendezvous II Conference, Logan, Utah, November 2003.
- 59. Beard, K.H., Vogt, K.A., Vogt, D.J., Scatena, F.N., Covich, A.P., Sigurdardottir, R., Sicaama, T.C., and Crowl, T.A. Structural, functional characteristics and resilience of forest ecosystems impacted by multiple, severe disturbances in legacy environments, Ecological Society of America, Savannah, Georgia, August 2003.
- 60. Kulmatiski, A. K.H. Beard, and J.N. Stark. Plants, soils, and alternative steady states in plant communities, Savannah, Georgia, Ecological Society of America, August 2003.

INVITED PRESENTATIONS AT SYMPOSIUMS/ORGANIZED SESSIONS:

- 61. Beard, K.H. and E.M. O'Neill*. Symposium: Founder effects haven't quieted them down: the coqui frog invasion in Hawaii. Insights from invasions: using exotic amphibians and reptiles to study ecological and evolutionary processes. 7th World Congress of Herpetology, which is meeting jointly with ASIH, HL, and SSAR in Vancouver, Canada, August 2012.
- 62. **Beard, K.H.**, R.T. Choi*, H. Sin*, and W.C. Pitt. **Symposium:** Invasive species management: The coqui frog invasion in Hawaii: impacts and management. The Wildlife Society Annual Conference Waikoloa, Hawaii, November 2011.
- 63. **Beard, K.H.** and A. Kulmatiski. Fewer larger precipitation events increase infiltration and root growth but not aboveground production of trees or grasses in a subtropical savanna. Organized **Oral Session**. Ecological Society of America, Austin, Texas, August 2011.
- 64. **Beard, K.H.** An invasive frog affects ecosystem process through nutrient recycling as opposed to trophic cascades **Symposium**: Roles of amphibians in ecosystem processes, Joint Meeting of Ichthyologists and Herpetologists, Montreal, Canada, July 2008.
- 65. **Beard, K.H.** Opening remarks Introduction to research on the role of amphibians in ecosystem processes. Symposium: Roles of amphibians in ecosystem processes, Joint Meeting of Ichthyologists and Herpetologists, Montreal, Canada, July 2008.
- 66. Beard, K.H. and W. C. Pitt, Potential consequences of the coqui frog invasion in Hawaii, Symposium: Introduced Amphibians and Reptiles, Joint Meeting of Ichthyologists and Herpetologists, Tampa, Florida, July 2005.

INVITED PRESENTATIONS AT UNIVERSITIES:

- 67. **Beard, K.H.** The coqui frog invasion in Hawaii: Ecological and evolutionary consequences. Department of Biology, Iowa State University, October 12, 2012.
- 68. **Beard, K.H.** Global change at local scales: Examples from invasions and climate change. Department of Biology, Cal State Poly Pomona. April 19, 2011.
- 69. Beard, K.H. Global change at local scales: Examples from species introductions and climate change. Department of Biology, Central Florida University, Orlando. December 11, 2010.
- 70. **Beard, K.H.** Global change at local scales: Examples from species introductions and climate change. Department of Ecology, Tulane University, Louisiana. March 3, 2008.
- 71. Beard, K.H. Global change at local scales: Examples from species introductions. Department of Ecology, Auburn University, Alabama. February 11, 2008.
- 72. **Beard, K.H.** Global change at the local scale: Examples from plant and animal invasions and climate change Department of Biology, University of Nevada, Reno. January 31, 2008.

- 73. **Beard, K.H.** Can an invasive frog influence ecosystem processes? Department of Ecology, Montana State University, Bozeman, Montana. December 6, 2007.
- 74. **Beard, K.H.** Mechanisms and consequences of coqui frog invasions in Hawaii. Department of Wildland Resources, Utah State University, Logan, Utah. March 1, 2007.
- 75. Beard, K.H. Mechanism of coqui frog invasions in Hawaii. Department of Biology. Utah State University, Logan, Utah. April 25, 2006.
- 76. Beard, K.H. Ecological consequences of the coqui invasion. Department of Biology, University of Hawaii, Hilo. November, 2004.
- 77. Beard, K.H. Research Interests. CNR Council. Utah State University, Logan, Utah. February 26, 2004.
- 78. **Beard, K.H.** The role of disturbance in conservation biology, Department of Environment and Society, Utah State University, Logan, Utah. April 11, 2004.

STATE, COMMUNITY AND AGENCY PRESENTATIONS:

- 79. Wallis, A.C., R.L. Smith*, and K.H. Beard. 2016. Does the diet of the coqui frog change over the course of the day? Utah Conference on Undergraduate Research. University of Utah, 19 February 2016.
- 80. Farnsworth, S.Y., C.B. Allred, M.B. Flack, S.A. Hill*, N.A. Schvaneveldt, A.C.E. Wallis*, and **K.H. Beard**. Frogger, Game Over: Roads reduce Frogs across the eastern US. Utah Chapter of the Wildlife Society meeting. St. George, Utah, March 2014.
- 81. Nolan, N.*, K.H. Beard, and A. Kulmatiski. Activated carbon as a restoration technique in Utah. Board members of the Grantsville Conservation District. October 2013.
- 82. **Beard, K.H.**, A. Kulmatiski, and *N. Nolan**. Activated carbon as a restoration technique in Washington and maybe Utah? Utah Society for Range Management, Orem, UT, November 2012.
- 83. Kulmatiski, A. and K.H. Beard. Activated carbon as a restoration technique. Utah Weed Control Association, Logan, UT, February 2012.
- 84. Beard, K.H. Potential consequences of trophic mismatch for geese in Alaska, and Non-native Phragmites australis invasion in Utah. Great Salt Lake Duck Club meeting, March 2011.
- 85. Kulmatiski, A. and K.H. Beard. Managing soil to manage plant communities: activated carbon as a restoration technique. Kenai Peninsula Cooperative Weed Management Area Weed Workshop, Homer, AK, April 2010.
- 86. Beard, K.H. Summary of recent research results on coquis in Hawaii. U.S. Fish and Wildlife Service, Honolulu, Hawaii. January, 2010.
- 87. Kulmatiski, A. and **Beard, K.H.** What allows weeds to invade abandoned agricultural fields? 10 years of data from the Methow Valley. First Tuesday: General public. Twisp, Washington, May, 2009.
- 88. **Beard, K.H.** Population density, growth rates, and diets of *Eleutherodactylus coqui* at eight sites in Hawaii. First International Conference on the Coqui Frog, Hilo, Hawaii, February 2008.
- 89. Price, E.A., M.W. Brunson, and K.H. Beard. What about the people? The importance of understanding human attitudes, knowledge, and behavior in control of Eleutherodactylus coqui First International Conference on the Coqui Frog, Hilo, Hawaii, 6-9 February 2008.
- 90. O'Neill, E. M.*, K.H. Beard, M.E. Pfrender, and K.E. Mock. Color pattern polymorphism in Eleutherodactylus coqui: evidence of selection in Puerto Rico and founder effects in Hawaii. First International Coqui Conference, Hilo, Hawaii, February 2008.
- 91. Edwards, T. C., Jr., D. R. Cutler, and K.H. Beard. National Park Service Annual Inventory and Monitoring Meeting, San Diego, California, February 2006.
- 92. Beard, K.H. Effects of coqui frogs in Hawaii. Kaloka Coqui Community Coalition. Kaloko Mauka, Kona, Hawaii. October, 2005
- 93. Beard, K.H. Mechanisms of invasion: Coquis in Hawaii. Department of Agriculture, Plant Quarantine Branch, Honolulu, Hawaii. October 14, 2005

- 94. Edwards, T. C., Jr., D. R. Cutler, and K.H. Beard. National Park Service Annual Inventory and Monitoring Meeting, Seattle, Washington, August 2005.
- 95. **Beard, K.H.** Ecological consequences of the coqui invasion. U.S. Forest Service, Hilo, Hawaii. November, 2004
- 96. **Beard, K.H.** Coqui effects on their prey and ecosystem processes in their native community. Coqui Working Group, Hilo, Hawaii. June, 2003
- 97. **Beard, K.H**. Coqui effects on their prey and ecosystem processes in their native community. Nurserymen Association, Hilo, Hawaii. June, 2003
- 98. **Beard, K.H.** Coqui effects on their prey and ecosystem processes in their native community. U.S. Fish and Wildlife Service, Honolulu, Hawaii. June, 2003.

TEACHING:

Assigned teaching at USU:

WILD 4600: Conservation Biology, 10-15 students (spring: 2004, 2005, 2006, 2007, 2008, 2011, 2012, 2013, 2014, 2015)

WILD 6720/7720: Advanced Conservation Biology, 15 students (spring: 2003, 2005, 2007, 2011, 2013) WILD 6900: Invasion Ecology, 10 students (spring: 2006, 2008)

Invited lectures:

BIOL 1050 (fall 2007, fall 2011)

Other courses I've taught (or co-taught):

WILD 6960: Graduate Ecology, 30 students. Guest lectured five contact hours. One week on Conservation Ecology (fall 2002, 2003, 2004, 2006, USU)

ENVS 30: Biodiversity, 20 students (winter 2002, Dartmouth College). This course met an English requirement for starting freshmen.

MENTORING:

PRIMARY ADVISOR:

PhD Students

- 1. Leandro do Nascimento, PhD Ecology, fall 2015-present (Thesis title: Amazon Symphony: Effects of land use change and habitat heterogeneity on biodiversity and its role on infectious diseases transmission, Expected Graduation Date: 2019)
- 2. Ryan Choi, PhD Ecology, fall 2014-present (Thesis title: Timing is everything: How migration and growing season timing affect ecosystem processes in the Yukon-Kuskokwim Delta, Expected Graduation Date: 2018)
- 3. Rodrigo Ferreira, PhD Ecology, fall 2010-spring 2015 (Thesis title: Ecology, behavior, and taxonomy of anurans from Brazil's Atlantic Rainforest)
- 4. Emily (nee Price) Kalnicky, PhD Ecology, fall 2007-spring 2012 (Thesis title: A coupled human and natural systems approach to understanding an invasive frog, Eleutherodactylus coqui, in Hawaii)
- 5. Eric M. O'Neill, PhD Biology, spring 2006-spring 2009 (Thesis title: Evolutionary consequences of the introduction of *Eleutherodactylus coqui* in Hawaii)

MS Students

- 6. Shane Hill, MS Ecology, fall 2016 present (Thesis title: Predators of coqui frogs in Hawaii, Expected Graduation Date: 2018)
- 7. Lindsay Carlson, MS Ecology, spring 2015 present (Thesis title: The effects of herbivory and climate change on plant competition in the Yukon-Kuskokwim Delta, Expected Graduation Date: 2017)
- 8. Robyn Smith, MS Ecology, fall 2014- present (Thesis title: Interactions between an invasive frog and Hawaiian bird communities)

- 9. Nicole Nolan, MS Ecology, fall 2012-summer 2014(Thesis title: Activated carbon decreases invasive plant growth by mediating plant-microbe interactions)
- 10. C. Pascale (nee Williams) Warren, MS Ecology, fall 2008-fall 2011 (Thesis title: Isotopic tracer reveals depth-specific water use patterns between two adjacent native and non-native plant communities)
- 11. Ryan Choi, MS Ecology, fall 2008-summer 2011 (Thesis title: Invertebrate community changes ialong coqui invasion fronts in Hawaii)
- 12. Christina Olson, MS Ecology, fall 2008-spring 2011 (Thesis title: Diet, density, and distribution of the introduced greenhouse frog, *Eleutherodactylus planirostris*, on the island of Hawaii)
- 13. Nathania C. Tuttle, MS Ecology, spring 2005-fall 2007 (Thesis title: Assessing mechanisms of invasion and control of *Eleutherodactylus coqui* in Hawaii)
- 14. Hans Sin, MS Wildlife Biology, fall 2004-fall 2006 (Thesis title: Eleutherodactylus coqui influences lowland forest invertebrate communities and ecological processes in Hawaii)
- 15. G. Page Kyle, MS Ecology, fall 2003-fall 2005 (Thesis title: Mechanisms influencing invasive plant establishment following rodent disturbance in a shrub-steppe ecosystem)
- 16. Echo A. Rexroad, MS Wildlife Biology, spring 2003-spring 2005 (Thesis title: Effects of long-term ungulate grazing in a shrub-steppe environment)

OTHER MENTORING:

Post-baccalaureate field/laboratory assistants, Employed for > 3 months, average 6 months each Graduated/completed=49. Continuing=0

Undergraduate field/laboratory assistants, Employed for > 3 months, average 8 months each Graduated/completed=35, Continuing=1

Served on over 28 MS and PhD committees across USU's campus

SERVICE:

SERVICE ON-CAMPUS:

University

Faculty Senate, College of Natural Resources alternate, 2015-16

Utah Agricultural Experiment Station Seed Grant Proposal Review Panel, 2015

Faculty Senate, College of Natural Resources representative, 2011-14

USU Ombudsperson, College of Natural Resources representative, 2013-present

Member, T&P Committee, Susannah French, Department of Biology, 2012-present

International Professor of the Year, Selection Committee, 2010-11

Judge for USU Graduate Student Symposium, 2011, 2008

Member, T&P Committee, Department of Health, Physical Education, and Recreation (denied promotion), 2008-2010

College

Grad School Info Session for Undergraduates, Assisting in planning and serving on panel, fall 2013

CNR Graduate Affairs Committee (Representative for WILD), 2002–2010, 2013-present

Ranking committee for the USGS Coop Unit position, Assistant Unit and Professor, College of Natural Resources, 2012

CNR Researcher of the Year, Selection Committee, 2008-09

Grad School Info Session for Undergraduates, Served on Panel, 15 October 2008

Educational Policy Committee (Graduate Education Representative for WILD), 2002–2010, often involved meeting monthly

Member, Quinney Ph.D. Fellowship Selection Committee, 2002-2008

Department

Member, T&P Committee, Edd Hammill, Department of Watershed Sciences, 2015-present

Member, T&P Committee, Julie Young, Department of Wildland Resources, 2015

Member, T&P Committee, Peter Adler, Department of Wildland Resources, 2015

Chair, T&P Committee, Kris Hulvey, Department of Wildland Resources, 2014-present

Co-director of Graduate Symposium, 2012-present

Chair, T&P Committee, Daniel MacNulty, Department of Wildland Resources, 2011-present

Developed fellowship list for WILD graduate students, 2011-present

Conducted "Evening Sessions" for graduate student on how to get through the graduate process for graduate students, 2008-present

Director of Graduate Studies, responsible for graduate handbook and developing departmental policies, 2007-present

Mock Quiz Bowl participant for USU's Wildlife Society Conclave preparation, 2013

Co-authored Graduate Degree Program 5-year plan, 2012

Conducted Graduate Degree Program Self-Assessments, 2012

Member, T&P Committee, David Koons, Department of Wildland Resources, 2011-2013

Chair Search Committee, Wildlife Ecology Search Committee, Assistant Professor, Department of Wildland Resources, 2010-11

Member of the Aldo Leopold Scholarship committee, 2010-present

Developed evening session on how to get through the graduate process for graduate students, spring 2008 Search Committee Member, Plant Community Ecology, Assistant Professor, Department of Wildland Resources, fall 2004–spring 2005

Member of the committee that developed and wrote the proposal for the new B.S. degree in Conservation and Restoration Ecology, fall 2003

SERVICE OFF-CAMPUS:

Editor of *Biological Conservation* (2013-16)

Elected Board of Governors, Member-at-Large, Society for Conservation Biology (2013-16)

Board Member, Stokes Nature Center (2014)

Reviewed three book chapters in Global Change Biology by Rosenblum (2015)

North America Section the Society for Conservation Biology, Co-Chair of the Science Committee for North American Congress (2013-14)

Society for Conservation Biology, Chair of the Publications Committee (2013-16)

Judged Student Oral Presentations, Society for Conservation Biology meeting, Baltimore, MD (2013)

Associate Editor of *Diversity and Distributions* (2013)

Member of the Editorial Board of *Biological Conservation* (2013)

Handling editor for Conservation Biology (2012, 2013)

Book review for Biological Conservation (2013)

Elected Board Member North America Section the Society for Conservation Biology (NASCB) (2012-15)

Reviewed abstracts for 26th International Congress for Conservation Biology (2013)

Judged Student Oral Presentations, Society for Conservation Biology meeting, Oakland, CA (2012)

Reviewed four book chapters in Conservation Science by Kareiva and Marvier (2012)

Book review for *Ecology* (2011-12)

Associate Editor Western North American Naturalist (2007-2011)

Member of the proposal review panel: USDA NRI Biology of Weedy and Invasive Species in Agroecosystems (2008), USDA NRI Biology of Weedy and Invasive Plants program (2004)

Reviewed manuscripts for Acta Oecologica (2012), Biodiversity and Conservation (2004, 2003),

Biological Conservation (2013 3x, 2010, 2009, 2006 2x), Biological Control (2009), Biological Invasions (2011 2x, 2007 2x), Caribbean Journal of Science (2009, 2008), Conservation Biology (2011, 2003), Copeia (2007, 2004), Diversity and Distributions (2011 2x, 2010, 2007, 2006), Ecology (2006, 2004), Ecological Applications (2010), Environmental Entomology (2005), Functional Ecology (2010), Herpetotropicos (2008), Hydrobiologia (2011), Human-Wildlife

Interactions (2012), Journal of Applied Ecology (2012), Journal of Herpetology (2015, 2011, 2008), Journal of Ecology (2012), Journal of Tropical Ecology (2013, 2006, 2005), Oecologia (2013), Oikos (2005), Pacific Conservation Biology (2010, 2005), Plant Ecology (2008, 2007), Restoration Ecology (2009, 2006), Tropical Ecology (2013), Weed Technology (2004), Wildlife Research (2008), Zoologia (2011).

Reviewed proposals for NSF Long-term Ecological Research Program (2013, 2009), USGS Alaska Science Center (2010), NSF Ecosystem Studies Program (January 2007, July 2006, January 2006, July 2003), NSF Ecology Program (July 2006), USDA Small Business Initiatives Program (2004), Sigma Delta Epsilon/Graduate Women in Science Graduate Student Grants (2007), Utah Agricultural Experiment Station (2007, 2013)

Interviewed for NPR on "Landmark Study Reveals Low National Rate of Frog Abnormalities on Wildlife Refuges" December 2013

American Society of Ichthyology and Herpetology, Symposium Chair, 2008 Technical advisory committee: Rana luteiventris, Columbia spotted frog, State of Utah (2003-2007)

PROFESSIONAL SOCIETIES/MEMBERSHIPS:

Society for Conservation Biology (SCB) Ecological Society of America (ESA) Sigma Xi Full Member

American Society of Ichthyology and Herpetology (ASIH)