

Curriculum Vitae
Harald Beck, Ph.D.

Assistant Professor & Curator of the Mammal Museum

DEPARTMENTAL ADDRESS

Towson University
Department of Biological Sciences
8000 York Road
Baltimore, MD 21252-0001
Phone: (410) 704-3125
E-mail: hbeck@towson.edu

PERSONAL INFORMATION

Place of Birth: Nuremberg, Germany

EDUCATIONAL BACKGROUND

2002-2005 Research Associate, Duke University, Durham, North Carolina
2002 Ph.D. University of Miami, Coral Gables, Florida. Biology
1994 M.S. University of Erlangen-Nuremberg, Germany. Major in Zoology

PROFESSIONAL MEMBERSHIPS

Sigma XI The Scientific Research Society (since 2006)
IUCN The World Conservation Union, Tapir Specialist Group (since 2004)
Ecological Society of America (since 2002)
American Association for the Advancement of Science (since 2002)
Association for Tropical Biology and Conservation (since 1996)
American Society of Mammalogists (since 1996)

ASSOCIATED EDITOR

Journal of Mammalogy (since 2008)

REVIEWER

Journal of Tropical Ecology
Biotropica
Community Ecology
Journal of Mammalogy
Ecotropica
Australian Journal of Zoology
Plant Science

PUBLICATIONS

Beck, H. 2008. Tropical Ecology. Pages 3616-3624. *In*: S.E. Jorgensen and B. Fath (eds.). Encyclopedia of Ecology. Elsevier, Elsevier B.V., Oxford.
Paine, C.E. T. and Beck H. 2007. Seed predation by Neotropical rainforest mammals increases diversity in seedling recruitment. *Ecology* 88:3073-3087.
Beck, H. S. McKean and J. S. Carrillo. 2007. *Liophis reginae* (Reticulated Snake). Diet. *Herpetological Review* 38:90.

- Beck, H.** 2007. Synergistic impacts of ungulates and falling palm fronds on saplings in the Amazon. *Journal of Tropical Ecology* 23:599-602.
- Beck, H.** 2006. A review of peccary-palm interactions and their ecological ramifications across the Neotropics. *Journal of Mammalogy* 87:519-530.
- Beck, H.** 2005. Seed predation and dispersal by peccaries throughout the Neotropics and its consequences: a review and synthesis. Pages 77-115. *In* P-M. Forget, J. E. Lambert, P.E. Hulme and S. B. Vander Wall (eds.). *Seed fate: predation, dispersal and seedling establishment*. CABI Publishing, Wallingford, UK. Pp. 410.
- Beck, H., M. S. Gaines, J. E. Hines and J. D. Nichols.** 2004 Comparative dynamics of small mammal populations in treefall gaps and surrounding understorey within Amazonian rainforest. *Oikos* 106:27-38.
- Leite-Pitman, R., **H. Beck** and P. M. Velazco. 2003. Mamíferos terrestres y arbóreos de la selva baja de la Amazonía peruana: entre los ríos Manu y Alto Purús. Pages 109-122. *In* R. Leite-Pitman, N. Pitman and P. Alvarez (eds.). *Alto Purús: Biodiversidad, Conservación y Manejo*. Impreso Grafica S.A. Lima, Peru. Pp. 350.
- Nassar J. M., **H. Beck**, L. da S. L. Sternberg and T. H. Fleming. 2003 Dependence on cacti and agaves in nectar-feeding bats from Venezuelan arid zones. *Journal of Mammalogy* 84:106-116.
- Gaines, M. S., J. E. Diffendorfer, C. R. Sasso and **H. Beck.** 2002 Effects of tree island size and hydroperiod on the population dynamics of small mammals in the Everglades. Pages 429-444. *In* F. H. Sklar and A. van der Valk (eds.). *Tree Islands of the Everglades*. Kluwer Academic Publishers, Dordrecht, The Netherlands. Pp. 541.
- Beck, H.** and J. Terborgh. 2002 Groves vs. isolates: how spatial aggregation of *Astrocaryum murumuru* palms affects seed removal. *Journal of Tropical Ecology* 18:275-288.
- Beck-King, H., O. v. Helversen and R. Beck-King.** 1999. Home range, population density, and food resources of *Agouti paca* (Rodentia: Agoutidae) in Costa Rica: a study using alternative methods. *Biotropica* 31:675-685.

BOOKS AND REPORTS

- Beck, H.** 2008. *Linking Amazon forest dynamics with mammalian diversity*. Vdm Verlag Dr. Muller Germany. Pp 128.
- 13th of 58 coauthors. 2008. *El destino de los arquitectos de los bosques Neotropicales: Evaluación de la distribución y el estado de conservación de los pecaríes labiados y los tapires de tierras bajas*. Pp. 182.

IN PREPARATION

- Beck, H.** and J. Terborgh. Long-term experiment on seed predation by terrestrial mammal species in an Amazonian rainforest (data are currently being analyzed).

STUDENT THESIS ADVISOR

- 2009 – 2010 Sylvia Pardonnet. Ms. student from Linköping University, Sweden. Butterfly community in treefall gaps and undisturbed understorey in an

- Amazonian rainforest.
- 2008 – 2009 Björn Johansson. Ms. student from Linköping University, Sweden. Invertebrate seed predation on the palm *Mauritius flexuosa* in the Peruvian Amazonas.
- 2008 – 2010 Jim Bressette. Ms. student. Quantifying trophic cascade effects in forests with high White-tailed deer (*Odocoileus virginianus*) densities.
- 2006 – 2009 Chara Batchelder. Ms student. Tracking infection rates of *Borrelia burgdorferi* in Maryland at a spatial-temporal scale using GIS.
- 2006 – 2008 Melissa Cameron. Ms student. Do peccaries functions as ecosystem engineers?
- 2006 – 2007 Kristin Farris. Honors Undergraduate Thesis: The impact of large mammals on the plant community in the Western Amazon.

GRANT ACTIVITIES

- 2005 The role of peccaries as ecosystem engineers and its effect on tropical species diversity. Towson University, \$6,750.
- 2004 The impact of the megafauna on forest structure and plant community; with an emphasis on peccary-plant interactions at Los Amigos and Cocha Cashu. Amazon Conservation Association, \$11,200.
- 2003 Travel grant for attending a special symposium of the British Ecological Society and the Annual Meeting of the Association for Tropical Biology and Conservation, University of Aberdeen, in the United Kingdom, \$1,000.
- 2001 Effects of heterogeneous landscapes on habitat selection, dispersal, and population dynamics of small tropical mammals. Travel grant for a presentation at the 8th International Theriological Congress, in South Africa. Department of Biology, University of Miami, \$1,500.
- 1999 Effects of heterogeneous landscapes on habitat selection, dispersal, and population dynamics of small tropical mammals. NSF Dissertation Improvement Grant, \$10,000.
- 1999 Effects of heterogeneous landscapes on habitat selection, dispersal, and population dynamics of small tropical mammals. Tropical Biology Fellowship Award, Department of Biology, University of Miami, \$11,350.
- 1998 Effects of heterogeneous landscapes on habitat selection, dispersal, and population dynamics of small tropical mammals. Departmental Graduate Research Support Award, \$300, Graduate Dean Fellowship, \$1,000 and Grant-in-Aid of Research from the National Academy of Science through Sigma Xi, The Scientific Research Society, \$700.
- 1997 Preliminary studies on tropical mammals in heterogeneous landscapes. University of Miami, J. Curtis Scholarship, \$500 and Graduate Committee, \$400.

INVITED SEMINARS

- 2009 Beck, H. Insights into tropic and Non-trophic species interactions, using Amazonian White-lipped peccaries as a model system Departmental Seminar at St. Lawrence University NY (March 26).
- 2009 Beck, H. Trophic & non-trophic interactions of neotropical megafauna. Departmental Seminar at Franklin & Marshall College PA (April 15).
- 2007 Beck, H. Bulldozing through the jungle: Peccaries as ecosystem engineers.

- Towson University Sigma XI Seminar Series (25 April).
- 2006 Gaines, M., Beck, H. et al. Effects of patch size and population dynamics and genetic structure of small mammals in the Everglades. Greater Everglade Ecosystem Restoration Conference: Planning, Policy and Science. (June 5-9).
- 2006 Beck, H. The ecological role of peccaries: Examples from Manu National Park. Department of Conservation Biology, Smithsonian National Zoological Park, Washington DC (May 26).
- 2006 Beck, H. Tropical disturbance ecology. Departments of Vertebrate and Invertebrate Zoology Smithsonian National Museum of Natural History (April 5).
- 2006 Beck, H. Responses of mammals to disturbances and consequences of mammal mediated disturbances. Patuxent Wildlife Research Center, MD (November 15).
- 2005 Beck, H. The effects of disturbance on population dynamics and species diversity. Smithsonian Environmental Research Center, Edgewater, MD (October 4).
- 2005 Beck, H. Peccary-plant interactions. Invited symposium speaker at the IX International Mammalogical Congress, in Sapporo, Japan (August 2).
- 2005 Beck, H. The impact of disturbances on population dynamics and species diversity. Department of Biological Sciences, Duke University, North Carolina (February 18).
- 2005 Beck, H. The impact of disturbance on mammal populations and communities. Department of Biology, Towson University, Maryland (February 2).
- 2003 Beck, H. Population dynamics and biodiversity of small mammals in treefall gaps within an Amazonian rainforest. Department of Biology, Savannah State University, Georgia (March 18).
- 2002 Beck, H. Population dynamics and biodiversity of small mammals in treefall gaps within an Amazonian rainforest. Department of Biological Sciences, Florida International University (October 1).

ORAL PRESENTATIONS

- 2005 Beck, H. IX International Mammalogical Congress, in Sapporo, Japan. Peccaries in the Amazon, more than just disturbance.
- 2004 Beck, H. Congreso Internacional sobre Manejo de Fauna Silvestre en la Amazonía y Latinoamérica: Lecciones Aprendidas held in Iquitos, Peru. Regresar a la ecología significa avanzar en la conservación.
- 2003 Beck, H. Special Symposium of the British Ecological Society and the Annual Meeting of the Association for Tropical Biology and Conservation, University of Aberdeen, in the United Kingdom. Treefall gaps within an Amazonian rainforest lead to source-sink dynamics in small mammals.
- 2002 Beck, H. Second Bi-annual Symposium of the Coalition for Excellence in Tropical Biology, in Miami. Treefall gaps in the Amazon rainforest are mammal biodiversity hotspots.
- 2002 Beck, H. 87th Annual Meeting of the Ecological Society of America, in Tucson. Population dynamics of small mammals in treefall gaps within an Amazonian Rainforest.
- 2002 Beck, H. Annual Meeting of the Association for Tropical Biology, in Panama City, Panama. Are treefall gaps biodiversity hotspots within Amazon hotspots?
- 2001 Beck, H. 8th International Theriological Congress, in Sun City, South Africa. The effects of heterogeneous landscapes on habitat selection, dispersal, and

- population dynamics of small tropical mammals.
- 2001 Beck, H. 8th International Theriological Congress, in Sun City, South Africa. Habitat selection in *Peromyscus* and *Sigmodon*.

POSTER PRESENTATIONS

- 2009 Ellis, D., Bressette J. and Beck, H. Are arthropod communities affected by high deer density? 9th Annual Student Research and Scholarship Expo Towson University.
- 2009 Beck, H., Stinchcomb, K., Brown, S. and Ellis, D. Testing experimentally the effects of defaunation in undisturbed forests. 1st Symposium Living in a defaunated world. Stanford University, California.
- 2006 Cameron, M. and H. Beck. Evaluating wallows as dry season breeding habitat for frogs in the Peruvian Amazon. 8th Annual Student Research and Scholarship Expo Towson University.
- 2006 Farris, K. and H. Beck. The impact of large mammals on the plant community in the western Amazon. 8th Annual Student Research and Scholarship Expo Towson University.
- 2003 Beck, H. Special Symposium of the British Ecological Society and the Annual Meeting of the Association for Tropical Biology and Conservation, University of Aberdeen, in the United Kingdom. Seed dispersal and predation by peccaries and Suidae. A call for personal field observations.
- 1996 Beck, H. 76th Annual Meeting of the American Society of Mammalogists, North Dakota. Home range estimation: a comparison between two methods.

BOOK REVIEWER

Review of a new environmental science textbook, proposal "Global change: human and scientific dimensions" for W. H. Freeman & Co.

GRANT PROPOSALS REVIEWER

For the Earthwatch Institute, 3 Clock Tower Place, Suite 100, Maynard, MA 01754.

RESEARCH EXPERIENCES

- 2007 – present: An experimental approach to quantify the impact of varying deer densities on seedling survival and growth. Front Royal Virginia.
- 2006 – present: Collaboration with my graduate student Chara Bachelder: Spatial-temporal variation in Lyme disease infection in small, medium, and large mammals and ticks across Maryland.
- 2005 – present: Assistant Professor Towson University. Peccary-plant interactions within the Amazon. Peccaries as ecosystem engineers.
- 2003 – 2005: Post Doctoral Fellow with Dr. John Terborgh, Duke University, Center for Tropical Conservation. Peccary-plant interactions within the Amazon.
- 2002 – 2003: Post Doctoral Fellow with Dr. Michael Gaines, Department of Biology, University of Miami: Mammal biodiversity and communities in Key Biscayne National Park, Florida.
- 2001 – 2003: Collaboration with Dr. Michael Gaines, Department of Biology, University of Miami: The effects of tree island size and hydroperiod on the population dynamics of small mammals in the Everglades National Park, Florida.

- 2001 – 2002: Collaboration with Dr. Michael Gaines, Department of Biology, University of Miami: The effects of pre- and post-fire disturbance on habitat selection and population dynamics of small mammals in Pineland and Hardwood Hammock habitats within the Everglades National Park, Florida.
- 1999 – 2001: Collaboration with Dr. John Terborgh, Duke University: Experimental seed exclosures to test whether spatial aggregation of *Astrocaryum murumuru* palms affects peccary seed removal.
- 1998 – 2002: Ph.D. Research: The effects of heterogeneous landscapes on habitat selection, dispersal, and population dynamics of small mammals, in Cocha Cashu, Peru.
- 1996 – 1997: Stable isotope analysis of muscle tissues from two bat species to determine their tropic levels across seasons and habitats.
- 1996 – 2002: Research Assistant, with Dr. Michael Gaines, Department of Biology, University of Miami: The effects of tree island size and water level on demography and movement of small mammals in the Everglades National Park, Florida.
- 1995 – 1995: Research Assistant, with Dr. Carol Horvitz, Department of Biology, University of Miami: Plant community changes after Hurricane Andrew in Florida.
- 1994 – 1994: Master's Research: "Home range, population density, and food resources of *Agouti paca* (Rodentia) in Costa Rica.
- 1993 – 1993: Research Assistant, with Dr. Bernhard Ronacher, Department of Zoology II, University of Erlangen-Nuremberg, Germany: Acoustic orientation in grasshoppers.
- 1992 – 1993: Research Assistant, with Dr. Otto v. Helversen, Department of Zoology II, University of Erlangen-Nuremberg, Germany: Foraging behavior in honey bees.

TEACHING EXPERIENCES

- 2009 – Summer Study Abroad Course: Biol 447 / 547, Tropical Field Ecology, for major Towson University
- 2009 – Spring Lecturing and Laboratory: Biol 458 /558, Mammalogy, for majors Towson University
- 2009 – Mini Online course: Bio 204, Career and Educational Planning, for majors Towson University
- 2009 – Fall Lecturing and Laboratory: Biol 213, Human Anatomy and Physiology I, for majors Towson University
- 2008 – Fall Lecturing and Laboratory: Biol 213, Human Anatomy and Physiology I, for majors Towson University
- 2008 – Summer Study Abroad Course: Biol 447 / 547, Tropical Field Ecology, for major Towson University
- 2008 – Spring Online course: Bio 204, Career and Educational Planning, for majors Towson University.
- 2008 – Spring Lecturing: Biol 446 /546, Tropical Ecology and Conservation, for majors Towson University.
- 2007 – Spring Lecturing and Laboratory: Biol 458 /558, Mammalogy, for majors Towson University.

- 2007 – Fall Lecturing and Laboratory: Biol 213, Human Anatomy and Physiology I, for majors Towson University.
- 2006 – Spring Lecturing and Laboratory: Biol 213, Human Anatomy and Physiology I, for majors Towson University.
- 2005 – Fall Lecturing and Laboratory: Biol 213, Human Anatomy and Physiology I, for majors Towson University.
- 2003 – Spring Team teaching with Dr. Gaines: Esc 103, Seminar in Environmental Science, University of Miami.
- 2003 – Spring Team teaching with Dr. Gaines: Bio 299, Seminar in Research Problems, University of Miami.
- 2002 – Fall Lecturing: Esc 101, Environmental Science, for majors and non-majors, University of Miami.
- 2001 – 2002 Teaching Assistant: Biol 161, Ecological Biodiversity Laboratory, University of Miami.
- 2000 – Spring Graduate Research Mentor: Research in Ecology. Howard Hughes Medical Institute and National Science Foundation. Young Scholars, 6th grade students, University of Miami.
- 1999 – Fall Lecturing: General Biology for non-majors, Miami Dade Community College.
- 1996 – 1998 Teaching Assistant: Biol 266, Physiology Laboratory, University of Miami.
- 1996 – Spring Teaching Assistant: Biol 161, Ecological Biodiversity Laboratory, University of Miami.
- 1996 – Fall Teaching Assistant: NSF-Young Scholars, 6th grade students, University of Miami.
- 1995 – Spring Lecturing: Human Anatomy and Physiology, for majors, Miami Dade Community College.
- 1995 – Spring Lecturing: Laboratories for Human Anatomy and Physiology, for majors, Miami Dade Community College.
- 1995 – Fall Lecturing: General Biology and Environmental Science, for non-majors, Miami Dade Community College.
- 1991 – 1993 Teaching Assistant: Ecology for majors. Department of Zoology I, University of Erlangen-Nuremberg, Germany.

PROFESSIONAL ACTIVITIES

- 2009 – Symposium co-organizer “Biology, Conservation, Health and Management of Peccaries and Pigs” for the X International Mammalogical Congress Mendoza, Argentina.
- 2007 – present IUCN (The World Conservation Union) Peccary Specialist Group member
- 2005 Invited by the Wildlife Conservation Society to participate in a workshop entitled “Identificar prioridades de conservación a escala de distribución para *Tayassu pecari*”.
- 2005 Symposium organizer “Mammals as Ecosystem Engineers” for the IX International Mammalogical Congress, in Sapporo, Japan.
- 2003 Judge, Student Poster Awards. 10th Annual Meeting of the Florida-Georgia Louis Strokes Alliance for Minority Participation in Science, Engineering &

Mathematics, in Tampa.

- 2002 Invited by the Royal Society of London to participate in a workshop on measuring biodiversity. Royal Society of London, Carlton House Terrace, London, UK.
- 2002 Judge, Student Paper Awards. 87th Annual Meeting of the Ecological Society of America, in Tucson.
- 1997 – 1998 President, Biology Graduate Student Association, Department of Biology, University of Miami.
- 1997 – 1998 Graduate student representative at faculty meetings. Department of Biology, University of Miami.