



## Barrett Anthony Klein

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### Education

University of Texas at Austin (UT)	PhD, Ecology, Evolution & Behavior	2003-2010
University of Arizona	MS, Entomology	2000-2003
Missouri State University (MSU)	Graduate studies, Biology	1995-1996
Cornell University	BS, Entomology	1989-1993

### Employment/Positions

Assistant Professor, Animal Behavior, University of Wisconsin – La Crosse (UW-L)	2012-present
Research Associate, Field Museum, Chicago, IL	2013-present
Assistant Professor L/I, Dept. of Entomology, University of Wisconsin – Madison	2013-present
Innovative Lecturer, University of Konstanz, Germany	2011-2012
Visiting scientist	
Dept. of Neurobiology & Behavior, Cornell University	2011
BEEgroup, University of Würzburg, Germany	2010
Educator (see below)	
Freelance scientific illustrator, model maker, & filmmaker	
Sleep lab research assistant: Insomnia treatment studies, Univ. of Arizona	2003
Senior Preparator: Exhibition Dept., American Museum of Natural History (AMNH)	1996-1999
Production & maintenance of natural history exhibits;	
Scientific & model-making coordination: models for the <i>Hall of Biodiversity</i>	
& model microorganisms for <i>Epidemic! World of Infectious Disease</i> exhibit	
Model maker, illustrator, & curator of entomology: Chase Studio, Inc., MO	1995-1996

### Publications

- Klein BA, Seeley TD.** 2015. The declining use of animal and behaviour images in animal behaviour journals. *Animal Behaviour*. 103:171-177. doi:10.1016/j.anbehav.2015.02.004
- Klein BA.** 2015. Encaustics: repurposing the architecture of insects. Introduction to *The Buzz Stops Here: an exhibition of encaustic artwork about the science and conservation of bees*. Art.Science.Gallery., Austin, TX, USA. [http://issuu.com/artsciencegallery/docs/buzzcatalogue\\_20150411\\_1608](http://issuu.com/artsciencegallery/docs/buzzcatalogue_20150411_1608)
- Klein BA, Stiegler M, Klein A, Tautz J.** 2014. Mapping sleeping bees within their nest: spatial and temporal analysis of worker honey bee sleep. *PLOS ONE*. 9(7): e102316. doi:10.1371/journal.pone.0102316 <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0102316>
- Klein BA.** 2013. Standing on the shoulders of wee giants. Introduction to *ECLOSION: a juried group exhibition of insect-inspired art*. Art.Science.Gallery., Austin, TX, USA. <http://issuu.com/artsciencegallery/docs/eclosioncatalogue>
- Klein BA, Stein J, Taylor RC.** 2012. Robots in the service of animal behavior. *Communicative & Integrative Biology*. 5:467-473. doi:10.4161/cib.21304; [http://www.landesbioscience.com/journals/cib/article/21304/?show\\_full\\_text=true](http://www.landesbioscience.com/journals/cib/article/21304/?show_full_text=true)
- Klein BA.** 2012. The curious connection between insects and dreams. *Insects*. 3:1-17. doi:10.3390/insects3010001; <http://www.mdpi.com/2075-4450/3/1/1/>
- Wray MK, Klein BA, Seeley TD.** 2011. Honey bees use the social information in waggle dances more fully when foraging errors are more costly. *Behavioral Ecology*. 23:125-131. doi:10.1093/beheco/arr165

- Klein BA**, Seeley TD. 2011. Work or sleep? Honeybee foragers opportunistically nap during the day when forage is not available. *Animal Behaviour*. 82:77-83. doi:10.1016/j.anbehav.2011.03.026  
*Science News: www.sciencenews.org/view/generic/id/74425/title/News\_in\_Brief\_Life\_\_*
- Taylor RC, **Klein BA**, Stein J, Ryan MJ. 2011. Multimodal signal variation in space and time: how important is matching a signal with its signaler? *Journal of Experimental Biology*. 214:815-820. doi:10.1242/jeb.043638  
*Featured on cover*
- Taylor RC, **Klein BA**, Ryan MJ. 2011. Inter-signal interaction and uncertain information in anuran multimodal signals. *Current Zoology*. 57:153-161.  
*Featured on cover*
- Monto G, **Klein BA**. 2011. In conversation: Barrett Anthony Klein. *Current Science*. 100:16-18.
- Abbott JC. 2011. Illustrated by **Klein BA**. *Damselflies of Texas*. University of Texas Press.
- Klein BA**, Klein A, Wray MK, Mueller UG, Seeley TD. 2010. Sleep Deprivation impairs precision of waggle dance signaling in honey bees. *Proceedings of the National Academy of Sciences, U.S.A.* 107:22705-22709. doi:10.1073/pnas.1009439108  
*Science podcast*  
*NatureNews: www.nature.com/news/2010/101213/full/news.2010.672.html*  
*NewScientist: www.newscientist.com/article/dn19864-sleepy-bees-slur-their-waggle-dance-moves.html*  
*Journal of Experimental Biology: Cadena. 2011. Sleepless nights... 214:iv.*
- Klein BA**, Olzowy KM, Klein A, Saunders KM, Seeley TD. 2008. Caste-dependent sleep of worker honey bees. *Journal of Experimental Biology*. 211:3028-3040. doi:10.1242/jeb.017426  
*Media coverage: Deutsches Bienen Journal, Dec. 2008.*
- Wray MK, **Klein BA**, Mattila HR, Seeley TD. 2008. Honeybees do not reject dances for 'implausible' locations: reconsidering the evidence for cognitive maps in insects. *Animal Behaviour*. 76:261-269. doi:10.1016/j.anbehav.2008.04.005  
*Media coverage: NatureNews, 24 Jun. 2008.*
- Taylor RC, **Klein BA**, Stein J, Ryan MJ. 2008. Faux frogs: Multimodal signalling and the value of robotics in the study of animal behaviour. *Animal Behaviour*. 76:1089-1097. doi:10.1016/j.anbehav.2008.01.031  
*Media coverage: NewScientist.com, www.youtube.com/watch?v=OYrVugWRQsA*
- Klein BA**. 2007. Insects in Art. *In: Encyclopedia of Human-Animal Relationships: A Global Exploration of Our Connections with Animals*. Bekoff, M., ed. Greenwood Press, Westport, CT, USA. 1:92-99.
- Klein BA**, Bukowski TC, Avilés L. 2005. Male residency and mating patterns in a subsocial spider. *Journal of Arachnology*. 33:703-710. doi:10.1636/S03-62.1
- Klein BA**. 2003. Signatures of sleep in the paper wasp *Polistes flavus*. Master's thesis, Univ. of Arizona. Tucson, AZ, USA.  
*Media coverage: ScienceNOW, 7 Aug. 2002.*
- Klein BA**. 2003. Par for the palette: Insects and arachnids as art media. *In: Insects in Oral Literature and Traditions*. Motte-Florac, E. and J.M.C. Thomas, eds. Peeters, Paris, France.
- Bernays EA, **Klein BA**. 2002. Quantifying the symbiont contribution to essential amino acids in aphids: the importance of tryptophan for *Uroleucon ambrosiae*. *Physiological Entomology*. 27:275-284. doi:10.1046/j.1365-3032.2002.00297.x
- Engel MS, **Klein BA**. 1997. *Neocorynurella*, a new genus of Augochlorine bees from South America (Hymenoptera: Halictidae). *Deutsche Entomologische Zeitschrift*. 44:155-163.

#### *Journal SLEEP abstracts:*

- Klein BA**, Rath L, Klein A, Ghosh SS, Galizia G, Kleineidam C. 2013. Neural imaging of honey bees sensing odors during sleep. *SLEEP*. 36:A57.
- Klein BA**, Stiegler MS, Klein AT, Tautz J. 2008. Mapping sleep across a society: Spatial and temporal analysis of worker honey bee sleep. *SLEEP*. 31:A31-A32.

- Klein BA, Seeley TD.** 2007. Work schedules impact sleep schedules in foraging honey bees. *SLEEP*. 30:A38.
- Klein BA.** 2006. Caste-dependent change in the sleep of a worker honey bee. *SLEEP*. 29:A32.
- Klein BA.** 2003. Signatures of sleep in a paper wasp. *SLEEP*. 26:A115-A116.

## Presentations

### *Science meetings:*

- Klein BA, Schneider S.** 2014. Following the lead of a sleep-deprived dancer: Honey bees (*Apis mellifera*) following waggle dancers respond differently if the dancers had lost sleep. Entomological Society of America, Portland, OR, USA.
- Klein BA, Rath L, Klein A, Ghosh SS, Galizia G, Kleineidam C.** 2013. Imaging the brains of honey bees sensing odors while they sleep. Entomological Society of America, Austin, TX, USA. Sleep Research Society, Baltimore, MD, USA.
- Klein BA.** 2012. The insect in science and art. Society for Literature, Science, & the Arts, Milwaukee, WI, USA.
- Klein A, Ghosh SS, Klein BA, Rath L, Galizia G, Kleineidam C.** 2012. Applying human brain image processing methods to honeybee calcium image data. Neuroinformatics, Munich, Germany.
- Klein BA, Seeley TD.** 2011. The graphical display of animal behaviour. Deutsche Zoologische Gesellschaft, Saarbrücken, Germany.
- Klein BA, Klein A, Wray MK, Mueller UG, Seeley TD.** 2010. Sleep deprivation impairs precision of waggle dance signaling in honey bees. International Union for the Study of Social Insects (IUSSI), Copenhagen, Denmark.
- Klein BA, Stiegler MS, Klein A, Tautz J.** 2009/2008. Mapping sleep across a society: Spatial and temporal analysis of worker honey bee sleep. Sleep in Non-Mammalian Models conference, Janelia Farm, VA, USA. Entomological Society of America. Reno, NV & Indianapolis, IN, USA. Sleep Research Society, Baltimore, MD, USA.
- Klein BA, Seeley TD.** 2007. Work schedules impact sleep schedules in foraging honey bees. Sleep Research Society, Minneapolis, MN, USA.
- Klein BA, Seeley TD.** 2006. Temporal availability of food resources affects sleep schedules of honey bees. Entomological Society of America. Indianapolis, IN, USA.
- Klein BA.** 2006. Caste-dependent sleep of worker honey bees. IUSSI. Washington D.C., USA. Sleep Research Society of America. Salt Lake City, UT, USA.
- Klein BA.** 2005. Sleep in a society of honey bees. Entomological Society of America. Fort Lauderdale, FL, USA.
- Klein BA.** 2005. Experimental art: esthetics uncovered in the science of entomology. Entomological Society of America (cultural entomology symposium). Fort Lauderdale, FL, USA.
- Klein BA.** 2004. Hitchhiking: Dynamics of leaf-riding in tropical leaf-cutter ants. IUSSI, North American Section. Camp Tontozona, AZ, USA.
- Klein BA.** 2003. Signatures of sleep in a paper wasp. Entomological Society of America. Cincinnati, OH, USA. Associated Professional Sleep Societies. Chicago, IL, USA.
- Klein BA.** 2003. Fabricating insects: the unnatural history of insects on display. Entomological Society of America (cultural entomology symposium). Cincinnati, OH, USA.
- Klein BA.** 2003. Depriving an insect of sleep. Entomological Society of America, Pacific Branch. Tucson, AZ, USA.
- Klein BA.** 2002. Quiescent paper wasps. Ecological Society of America. Tucson, AZ, USA.
- Klein BA.** 2000. Male residency and mating patterns in a subsocial spider. HexaPodium, Tucson, AZ, USA.

Klein BA. 2000. Insects and arachnids as art media. 1<sup>st</sup> International Symposium: Insects in Oral Literature and Traditions. Villejuif, France.

*Invited talks:*

Science Foo Camp: participant at the Googleplex, CA (2015)

Investigating sleep in honey bees.

Tulane University, New Orleans, LA, USA (2014)

UC Riverside – Riverside, CA, USA (2014)

University of Wisconsin – Madison, WI, USA (2013)

Upper Midwest Environmental Sciences Center (UMESC), La Crosse, WI, USA (2013)

University of Illinois at Urbana – Champaign, USA (2013)

St. Mary's University, Winona, Minnesota, USA (2013)

University of Wisconsin – Milwaukee, USA (2013)

University of Minnesota, Minneapolis, Minnesota, USA (2012)

Smithsonian Tropical Research Institute, Panama City, Panama (2012)

University of Zurich, Switzerland (2012)

Smithsonian Institute (2011)

University of Konstanz, Germany (2010)

University of Lausanne, Switzerland (2010)

Indian Institute of Science, Bengaluru, India (2010) [www.ias.ac.in/currensci/contents.htm](http://www.ias.ac.in/currensci/contents.htm)

Rice University, Houston, TX, USA (2009)

University of Copenhagen, Denmark (2009)

University of Zurich, Switzerland (2008)

UC Berkeley, CA, USA (2007)

Freie Universität Berlin, Germany (2007)

Indiana State University, Terre Haute, IN, USA (2006)

Max Planck Institute, Andechs, Germany. (2006)

Sleep Research Society (trainee symposium), Salt Lake City, UT, USA (2006)

Insects incorporated: How bees and their relatives have impacted our histories, our culture, our lives, UW-Stevens Point, WI, USA (2014)

Science of art & art of science. UW-L Visiting Artist series (2013)

Visualizing behavior. Plenary address, 1<sup>st</sup> Internat. Conf. Science Art, Moscow, Russia (2012)

Insect esthetics and the importance of imagery in entomology.

DNK Hall, Central House of Artists, Moscow, Russia (2012)

Plenary address, Joint meeting: Entom. Soc. of Canada & Acadian Entom. Soc., Halifax, Canada (2011)

Visualizing nature.

Srishti School of Art, Design and Technology, Bengaluru, India (2010)

Centre for the Study of Culture and Society, Bengaluru, India (2010)

Center for the Study of Science, Technology, and Policy (CSTEP), Bengaluru, India (2010)

Cultural entomology.

University of Wisconsin – Stevens Point, WI, USA (2014)

Augustana College, Rock Island, IL, USA (2014)

Smithsonian Institute, Washington DC, USA (2011)

University of Konstanz, Germany (2010)

Alternate careers for biologists. Salisbury University, Maryland, USA (2009)

Insects and folk art. Austin Friends of Folk Art, TX, USA (2009)

Tropical biodiversity and stories of science. Santa Cruz Museum of Natural History, CA, USA (2008)

Robotic frogs and sleeping bees. University of Berne, Switzerland (2008)

Fabricating insects: the unnatural history of insects on display. Turtle Bay Exploration Park, Redding, CA, USA (2005)

Storytelling and role-playing. AMNH teachers' symposia, NY, USA (1998)

Science and art in the museum.

Career Day, University of Arizona, Tucson, AZ, USA (2001)

Arizona Entomological Society, Tucson, AZ, USA (2001)

Insects in art. New York Entomological Society, NY, USA (1998)

Art and science. Ricks College, Rexburg, ID, USA (1996)

## Professional activities

### *Scientific consultation:*

Kuper, P. *In prep.* Ruins (graphic novel).

BBC, *Invisible Worlds* television production (2009)

American Museum of Natural History, *Dinosaurs: Ancient Fossils, New Discoveries* exhibit (2004)

Lyman, F. 1998. Inside the Dzanga-Sangha Rain Forest. Workman, NY

BBC & Smithsonian Tropical Research Institute, Panama (1993)

### *Reviews:*

Proposals: National Science Foundation (USA), National Research Foundation (South Africa)

Journals: Anim Behav, Apidologie, Behav Ecol, Insects, J Apicultural Res, J Exper Biol, J Insect Physiol, PLOS ONE

## Educator

### *Mentorship/supervision prior to UW-L:*

Undergrads: 20 students at Univ. of AZ, Cranberry Lake Biol. Station, Univ. of Würzburg, UT, Cornell

Master's (Schriftliche Hausarbeit) thesis, Martin Stiegler, Univ. Würzburg, Germany (2006-2007)

### *Course design & lecture:*

Animal Behavior (UW-L, 2014)

Visual impact: the use and abuse of visual information

Univ. Konstanz, Germany (2011-2012)

Schwerpunktprogramme (SPP) short course for German PhD students (2012)

Creating visuals for scientific publication (short courses)

Max Planck Institute: Seewiesen, Germany (2011), Radolfzell, Germany (2012)

### *Graduate teaching assistance:*

Invertebrate Zoology: UT (spring 2009, 2008)

Entomology: UT (fall 2008, 2007, 2006, 2004, and spring 2009, 2006)

Animal Behavior: Cranberry Lake Biol. Station, NY (spring 2006); Univ. of Arizona (fall 2001, 2000)

Aquatic Entomology: UT (fall 2005)

Field Biology: UT (spring 2004)

Teaching Biology: Univ. of Arizona (fall 2002)

### *Guest teaching:*

Production of Knowledge in the Natural and Social Sciences course, Centre for Contemporary Studies, Indian Institute of Science, Bengaluru, India (2010)

*Media coverage: Current Science, [www.ias.ac.in/currsci/contents.htm](http://www.ias.ac.in/currsci/contents.htm)*

Behavioral biology course: Univ. Würzburg, Germany (2010)

Teacher training course: Salisbury Univ., MD (2009)

Comparative Physiology course: UT (2009)

UT SAGE (Seminars for Adult Growth and Enrichment) (2008)

Sleep course: Univ. of Arizona (2003)

Desert Biota courses: MSU, held in Southwestern USA

Southwest desert course: Western Washington Univ. (2000)

Animal Drawing course: AMNH (1999)

### *K-12 teaching:*

GK-12 Fellow, Covington Middle School, Austin, TX (spring 2005)

[www.esi.utexas.edu/k-12-a-the-community/gk-12-program/137-gk-12-past-participants](http://www.esi.utexas.edu/k-12-a-the-community/gk-12-program/137-gk-12-past-participants)

Inquiry-based educator, Content through Inquiry Project, Tucson, AZ schools (2001)

High school educator, AMNH Education Dept. courses (1998-1999):

Insects in art & history; Ant magnified—insects and art; Molding & casting

#### *Public outreach:*

Talks and art exhibit: University of Wisconsin – Stevens Point, WI, USA (2014)

Talks and art exhibit: Augustana College, Rock Island, IL, USA (2014)

10 Quintillion & Counting: Art & Science of the Insect, UW-L STEAM workshop (2014)

SLEEP. Science Under the Stars lecture series, Brackenridge Field Lab, Austin, TX, USA (2009)

Storytelling and role-playing workshop: Turtle Bay Exploration Park, Redding, CA, USA (2005)

Development of ant identification key: [www.sbs.utexas.edu/Muelleru/AntOutreach/index.html](http://www.sbs.utexas.edu/Muelleru/AntOutreach/index.html) (2003)

Resource guide/lecturer: expedition of Peruvian Amazon (International Expeditions/AMNH, 2000)

AMNH tours: school groups, teachers, trustees, visiting scientists (1997-1999)

History of natural history museums (lectures): The World Financial Center, NY, USA (1998)

Making microbes with the masses workshop: AMNH (1998)

Today Show (ABC): AMNH *Hall of Biodiversity* (1998)

#### *Science videos:*

Infrared videography of honey bees for traveling exhibit “The Machine Inside, Biomechanics” at the Field Museum (2014) and for the BBC series “Invisible Worlds” (2009)

Termite communication: [www.youtube.com/watch?v=PcpdXtw7PvA](http://www.youtube.com/watch?v=PcpdXtw7PvA) (2008)

Ant dissection: [www.youtube.com/watch?v=j3zgj3pnRN8](http://www.youtube.com/watch?v=j3zgj3pnRN8) (2005)

#### *Cultural entomology:*

India Institute of Science, Bengaluru, India (2010)

Wild Basin Nature Ctr., Austin, TX (2007)

Bob Bullock Museum, Austin, TX (2004)

Entomophagy lecture & feast: Watermargin Cooperative, Cornell Univ. (1993)

#### *Insect presentations, tours:*

School groups, K-12 (AZ, IL, MA, MD, MI, MO, NJ, NY, TX, WI)

Explore UT: university-wide open house, Austin, TX (2005)

Zen Center of New York City (1998)

Earth Watch: Barro Colorado Island, Panama (1993)

#### *Radio:*

Wisconsin Public Radio: “The Newsmakers” <http://www.wpr.org/robofrog> (2013)

Voice of Russia (2012)

DRadio Wissen, German radio (2012)

Science podcast (2010)

“The Awkward Off,” KVRX, Austin, TX (2009)

Modern rock radio station “Bug Guy” appearances: Springfield, MO (1996)

## **Art**

#### *Illustrations/models in science publications:*

Wilson EO. 2013. Letters to a Young Scientist. Liveright Publ.

Mueller UG. et al. (*in prep.*) Fungus Growing Ants of the United States.

Abbott JC. 2011. Illustrated by B.A. Klein. Damselflies of Texas. University of Texas Press.

Loiácono M, Margaría C. 2010. Insectos y hombres: una diversidad de interacciones. Argentina.

Rabeling C, Brown JM, Verhaagh M. 2008. Newly discovered sister lineage sheds light on early ant evolution. PNAS. 105:14913-14917.

Rittschof CC, Seeley TD. 2008. The buzz-run: how honey bees signal ‘Time to go!’ Animal Behaviour. 75:189-197.

Moczek AP. 2007. Developmental plasticity and the origins of diversity: a case study on horned beetles.

*In: Phenotypic plasticity in insects: mechanisms and consequences.* Edited by: T.N. Ananthakrishnan and D. Whitman. Science Publishers, Inc. Plymouth, UK.

- Mueller UG, Gerardo NM, Aanen DK, Six DL, Schultz, TR. 2005. The evolution of agriculture in insects. *Annual Review of Ecology, Evolution, and Systematics*.
- Moczek AP. 2005. The evolution and development of novel traits, or how beetles got their horns. *Bioscience*. 55:937-951.
- Roubik DW. 2004. Sibling species among *Glossura* and *Glossuropoda* in the Amazon region (Hymenoptera; Apidae: Euglossini). *Journal of the Kansas Entomological Society*. 77:235-253.
- Roubik DW, Hanson, PE. 2004. *Orchid bees of tropical America: Biology and field guide*. InBio Press, Heredia, Costa Rica.
- Solomon SE, et al. 2004. Nesting biology of the fungus growing ants *Mycetarotes* Emery (Attini, Formicidae). *Insectes Sociaux*. 51:333-338.
- Engel MS. 2000. Classification of the bee tribe Augochlorini (Hymenoptera: Halictidae). *Bulletin of the American Museum of Natural History*. 250:4-89.
- Ward B. 2000. *Eyewitness Books: Epidemic*. Dorling Kindersley Publ., Inc. New York, NY.
- DeSalle R, ed. 1999. *Epidemic! World of Infectious Disease*. The New Press. New York, NY.
- Lyman F. 1998. *Inside the Dzanga-Sangha Rain Forest*. Workman Publ. New York, NY.
- Conway G, et al. 1997. Jak1 kinase is required for cell migrations and anterior specification in zebrafish embryos. *Proceedings of the National Academy of Sciences USA*. 94:3082-3087.
- Seeley TD. 1996. *Wisdom of the Hive: the Social Physiology of Honey Bee Colonies*. Harvard Univ. Press. Cambridge, MA. (*adapted from original*)
- Vance SA. 1996. Morphological and behavioural sex reversal in mermithid-infected mayflies. *Proceedings of the Royal Society of London Series B-Biological Sciences*. 263:907-912.
- Conway G. 1995. A novel gene expressed during zebrafish gastrulation identified by differential RNA display. *Mechanisms of Development*. 52:383-391.

#### *Gallery and art museum exhibits:*

- The Buzz Stops Here*: Juror, Art.Science.Gallery., Austin, TX (2015)
- Beyond the Hive*: Univ. of Wisconsin – Stevens Point, WI (2014)
- Insects Inspire Art*: Augustana College, Rock Island, IL (2014)
- Jeepest Creepers - Bugs in Art*: Traveling exhibit; i.d.e.a. Museum, Mesa, AZ (2014-2018)
- FACETS - Bees, Art and Science* (translated): Schloss Sayn, Germany (2014)
- ECLOSION*: Co-curation, Art.Science.Gallery., Austin, TX (2013)
- UnEarthed*: Alice C. Sabatini Art Gallery, Topeka, KS (2013)
- Metanexus Institute, <http://www.metanexus.net/visual-exploration/thermal-society> (2012)
- Science Art*: DNK Hall, Central House of Artists, Moscow, Russia (2012)
- Featured member: Art & Science Collaborations, Inc., [www.asci.org/artikel1214.html](http://www.asci.org/artikel1214.html) (2012)
- Focus on Nature XII*: NY State Museum, [www.nysm.nysed.gov/illustrations/fon/exhibitions/index.html](http://www.nysm.nysed.gov/illustrations/fon/exhibitions/index.html) (2012)
- Engaging Insects*: USM Art Gallery, Gorham, ME (2011)
- Projection of art on bands: *Boy with a Fish* (Ithaca Festival, NY, 2011),  
*Gorch Fock* (Emo's, Austin, TX, 2004), *Lori Surfer & Co.* (Room 710, 2003)
- Book of Hours*: Arnold Klein Gallery, [www.lmstudio.com/BOH/](http://www.lmstudio.com/BOH/) (2010)
- Entomologia*: Observatory, Proteus Gowanus art complex, Brooklyn, NY (2010)
- Invisible Worlds*: Filmed and edited infrared sequences for BBC program (2009)
- Horizon*: Arnold Klein Gallery, Royal Oak, MI (2009)
- Insects and Art*: Royal Entomological Society, University of Plymouth, UK (2008)
- Dionysium*: Alamo Drafthouse, South Lamar, Austin, TX (2006)
- Art Wing*: Entomological Soc. of America, Fort Lauderdale, FL (2005)
- Numbers*: Arnold Klein Gallery, Royal Oak, MI (2004)
- The Great Insect Fair*: HUB Gallery, PennState Univ. (2002)
- Bugs! A Children's Exhibition of Bugs in Art*: Anchorage Museum of History and Art, AK (2001)
- Mimesis* (Museum of Contemporary Art: Hazmat Gallery, Tucson, AZ (2001)
- Insects and Arachnids as Art Media*: designed and installed showcase exhibit for Univ. of Arizona (2001)

*Earth*: Arnold Klein Gallery, Royal Oak, MI (2001)

*Insectal art*: curated art within HexaPodium scientific meeting, Tucson, AZ (2000)

*Bugs*: Click Gallery, Royal Oak, MI (2000)

#### *Natural history museum exhibits:*

Biology models/sculptures and illustrations featured in museums, including:

Bronx Zoo, Bronx, NY *Congo Rainforest* permanent exhibit

American Museum of Natural History, NY, NY

*Hall of Biodiversity* permanent exhibit

*Epidemic!: The World of Infectious Disease* traveling exhibit

*Endangered!* temporary exhibit

*Up in Central Park* temporary exhibit

Royal Tyrrell Museum (Alberta, Canada), Earthworks (Kansas City, MO), Living Desert Museum

(Palm Desert, CA), Sternberg Museum of Natural History (Hays, KS), Museum of the Rockies

(Bozeman, MT), Needles Visitor Center (Canyonlands, UT), Salato Wildlife Education Center

(Frankfort, KY), Smithsonian traveling exhibit, Public Museum of Grand Rapids (Grand Rapids, MI)

#### *Other art:*

AMNH illustrations: *Hall of Biodiversity* activity book, Planetarium & Education Dept. websites

Chicken in a Snowstorm Press collaborations (with Karen Anne Klein)

Logos: MS River Research Consortium (2014, 2015), Southwestern Association for Biologists (2007)

#### **Awards**

Competitive Pell Grant for Science (2015)

Lesson Study Project Grants, Center for Advancing Teaching & Learning, UW-L (three in 2014)

Top-10 listing for ECLOSION exhibit, Austin Chronicle arts section (2014)

Faculty Research Grants, UW-L (2012, 2013)

Carol A. Dobrunz Endowment Fund Award, UW-L (2013)

International Science & Engineering Visualization Challenge (SciVis) finalist, NSF (2012)

Hamilton Book Award runner-up (illustrated Damselflies of Texas by J.C. Abbott) (2012)

Labby Award finalist, *The Scientist*, <http://the-scientist.com/2012/08/08/2012-labby-video-finalists/> (2012)

International Development Fund Grant, UW-L (2012)

Travel Award, UW-L (2012)

Smithsonian Tropical Research Institute Fellowship (2011)

George C. Eickwort Student Research Award, <http://iussi.cyberbee.net/awards/> (2010)

IUSSI travel award (2010)

George H. Mitchell Award for Excellence in Graduate Research (2009)

University Continuing Fellowship, UT (2009)

Deutscher Akademischer Austauschdienst (DAAD) Fellowship (2008)

Carl Gottfried Hartman Graduate Fellowship (2008)

Ecology, Evolution and Behavior Dept. Travel Fellowship (2008)

Texas Academy of Sciences Student Research Competition Award (2007, 2008)

Teaching Assistant Awards, UT (Entomology: 2005, Invertebrate Zoology: 2008)

National Science Foundation Doctoral Dissertation Improvement Grant (2007)

UTOPIA Grant (2007)

Texas EcoLab grants (2005, 2006, 2007)

Dorothea Bennett Memorial Graduate Research Fellowship awards (2004, 2005, 2007)

Sleep Research Society: Honorable Mention Abstract award (2006)

IUSSI: Honorable Mention poster award (2006)

President's Prize: Honorable Mention, Entomol. Soc. America (2003, 2005, 2006)

Continuing University Tuition Fellowship, UT (2005)



Environmental Science Institute GK-12 Fellowship (2005)  
Sleep Research Society Trainee Research Excellence Award (2003)  
Mellon Foundation Grant (2002)  
National Science Foundation Research Training Grants (2002)  
Cornell Arts Grant (1993)

**Addendum activities and interests**

Scientific illustration and natural history exhibit design and production.  
Cultural entomology (insects in all realms, spheres and permutations of human interaction and representation), and the history and art of natural history museums.