

CURRICULUM VITAE
CHARLES E. BEARD

PROFESSIONAL ADDRESS

Entomology, Soils, and Plant Sciences
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EMPLOYMENT HISTORY

- Entomologist I, Department of Entomology, Clemson University. 1994-1998
- Research Specialist II, Entomology, Soils, and Plant Sciences, Clemson University. 1998-Present

EDUCATION

- B.S. Biology, Mercer University, June 1981, G.P.A. 3.35/4.00.
- M.S. Georgia College, June 1986, G.P.A. 3.75/4.00. Thesis Title: Desiccation resistance in gametophytes of *Polypodium polypodioides* L.
- Ph.D. Plant Physiology, Clemson University, May 2002, G.P.A. 3.58/4.00. Dissertation Title: Colonization of black flies (Diptera: Simuliidae) by trichomycete fungi (Zygomycota) in South Carolina, USA

TEACHING EXPERIENCE

- Instructor, Waycross College Dept. of Natural Sciences. 1987-1988
- Instructor, South Georgia College Dept. of Natural Sciences. 1988
- Graduate Teaching Assistant, Georgia College Dept. of Biology. 1983-1985
- Graduate Teaching Assistant, Clemson University Dept. of Biological Sciences. 1989-1994
- Guest Lecturer. 1999. Insect Pathology, Clemson University, Clemson, South Carolina.
- Instructor, Clemson University Dept. of Biological Sciences. 2005, 2006. Plant Form and Function
- Guest Lecturer. 2007. Introductory Mycology, Clemson University, Clemson, South Carolina

RELATED PROFESSIONAL EXPERIENCE

- Counselor and instructor of environmental awareness, Camp Tumbling Waters, 1983
- Field Worker, Fossils of Kaolin Deposits of Bibb County Georgia, 1984-1985
- Judge, Eatonton Elementary School Science Fair, 1984
- Judge, Baldwin County Junior Science Fair, 1985
- Field Worker, Plant Survey, Webb Consulting, Clemson, SC. 1992
- Tutor for STEP (Science and Technology Entrance Program), Clemson University. 1991-1994

- Contributor, Plant Form and Function Lab Manual, Clemson University, 1993
- Plant Problem Clinic, Clemson University Herbarium, 1993-1994
- Judge, R. C. Edwards Middle School Science Fair, 2004

AWARDS

- 1999, 2006. Outstanding Classified Staff Award (Technical). College of Agriculture, Forestry, and Life Sciences. Clemson University.

COMPETITIVE FUNDING

- “The nature of symbiotic interactions in running-water ecosystems: Trichomycete fungi and black fly hosts.” National Science Foundation award DEB 0075269 (\$271,563).
Authors: J W. McCreadie, P. H. Adler, C E. BEARD, and T M. McInnis. 2000-2003.

MEMBERSHIP

- Beta Beta Beta, Biological Honor Society, 1979-1981
- Association of Southeastern Biologists- 1991- present
- Sigma Xi, Scientific Honor Society, 1996-present
- Mycological Society of America-1997-present

AD HOC REVIEWER

- National Science Foundation. 2003. (1)
- Mycologia. 2003, 2004, 2006, 2007. (6)
- Linda Berg, *Introductory Botany: Plants, People, and the Environment*. Thomson Higher Education. 2006. One chapter.

PRESENTATIONS AT PROFESSIONAL MEETINGS

- BEARD, C. and T. M. McInnis. 1993. Amino acids and sugar alcohols as osmotica in the marine fungus *Lagenidium callinectes*. Association of Southeastern Biologists, Norfolk, Virginia.
- BEARD, C. and T. M. McInnis. 1994. Nutrition of the marine fungus *Lagenidium callinectes* related to a marine existence. Association of Southeastern Biologists, Orlando Florida.
- BEARD, C., P. H. Adler and J. McCreadie. 1995. Trichomycete fungi in black flies of North America. Association of Southeastern Biologists, Knoxville Tennessee.
- BEARD, C., P. H. Adler and J. M. McCreadie. 1996. Seasonality of symbiotic trichomycete fungi in black flies of upstate South Carolina. Association of Southeastern Biologists, Statesboro, Georgia.
- BEARD, C., P. H. Adler and J. McCreadie. 1996. Fungus fun in black flies or gut fillings. Northeast Regional Black Fly Project (NE-118), Flamingo Florida.
- McCreadie, J. W., C. E. BEARD and P. H. Adler. 1996. Abiotic determinants of the occurrence of the fungal gut symbiont *Harpella melusinae*. 70th Annual Meeting Southeastern Branch, Entomological Society of America, Biloxi, Mississippi.
- BEARD, C., and P. H. Adler. 1996. Black fly guts and the fungi that love them. South Carolina Entomological Society, Clemson, South Carolina.

- BEARD, C., and P. H. Adler. 1997. Distribution of the trichomycete fungi in black flies. Association of Southeastern Biologists, Greenville, South Carolina.
- BEARD, C. E., and P. H. Adler. 1997. Black fly guts and the fungi that love them. South Carolina Entomological Society, Florence, South Carolina.
- BEARD, C. E., and P. H. Adler. 1998. There's a SOOP (*Smittium* Or Other Partner) in my fly. Southeastern Extension & Research Association Information Group, Vero Beach, Florida.
- BEARD, C. E., and P. H. Adler. 1998. Hidden fungal diversity in insects of South Carolina's streams. Ecology and Biological Resource Symposium, Clemson, South Carolina
- BEARD, C. E., P. H. Adler, J. W. McCreadie and T. M. McInnis. 1999. Distribution predictors of the trichomycete fungus *Harpella melusinae* in the southeastern United States. XVI International Botanical Congress, St. Louis, Missouri. (Poster)
- BEARD, C. E., and P. H. Adler. 2000. Trichomycetes I: Coming soon to a black fly near you. Black flies in the new millennium. International Black Fly Meeting, Brock University, St. Catharines, Ontario, Canada.
- BEARD, C. E., and P. H. Adler. 2000. Trichomycetes II. Phenology of trichomycete fungi in Simuliidae. Black flies in the new Millennium. International Black Fly Meeting, Brock University, St. Catharines, Ontario, Canada.
- BEARD, C. E., and P. H. Adler, C. A. Stoops. 2001. Journeys through black flies: pathogens we've met along the way. Southeastern Extension & Research Association Information Group, Archbold Biological Station, Lake Placid, Florida.
- McCreadie, J. W., P. H. Adler and C. E. BEARD. 2001. The nature of the symbiotic relationship between Trichomycete fungi and larval black flies. Annual Meeting of the Entomological Society of America, San Diego, California.
- BEARD, C. E., and P. H. Adler. 2001. Trichomycetes from black flies in northwestern South Carolina are seasonal. Joint meeting of the American Phytopathological Society, Mycological Society of America, and Society of Nematologists, Salt Lake City, Utah.
- BEARD, C. E. and P. H. Adler. 2002. Black Flies: The melting pot habitat. Southeastern Extension & Research Association Information Group, Archbold Biological Station, Lake Placid, Florida.
- BEARD, C. E., P. H. Adler, and J. W. McCreadie. 2002. Recent advances in trichomycete ecology and physiology. Symposium speaker (**Invited**). Seventh International Mycological Congress. Oslo, Norway.
- BEARD, C. E., M. Knight, and P. H. Adler. 2002. Trichospore germination in the fungus *Harpella melusinae*. Mycological Society of America, Corvallis, Oregon.
- BEARD, C. E. 2003. There is no escape: the world-wide distribution of the black fly symbiont *Harpella* spp. The Founding Meeting of the North American Black Fly Association (NABFA). Archbold Biological Station, Lake Placid, Florida.
- McCreadie, J., P. Adler, and C. E. BEARD. 2003. Trichomycetes, black flies and symbiosis. The Founding Meeting of the North American Black Fly Association (NABFA). Archbold Biological Station, Lake Placid, Florida.
- McCreadie, J. W., P. Adler and C. BEARD. 2003. Flies, fungus and symbiosis: insights from an insect's colon. Annual Meeting of the Entomological Society of America. Cincinnati, Ohio.

- BEARD, C. E. and P. H. Adler. 2004. Geographic distribution of the trichomycete genus *Harpella*. Annual Meeting of the Mycological Society of America. Asheville, NC.
- BEARD, C. E. and P. H. Adler. 2004. If there's a black fly, will we come? Black fly finds in the Southeast US. Meeting of the North American Black Fly Association (NABFA). Archbold Biological Station, Lake Placid, Florida.
- Kim, S. K., P. H. Adler, and C. E. BEARD. 2004. Interaction of trichomycete fungi with other endosymbionts in larval black fly (Diptera: Simuliidae) hosts. Meeting of the North American Black Fly Association (NABFA). Archbold Biological Station, Lake Placid, Florida.
- Kim, S. K., P. H. Adler and C. E. BEARD. 2004. Nature of interactions of endosymbiotic organisms in their larval black fly hosts (Diptera: Simuliidae). Paper No. 2. 50th Annual Meeting of the South Carolina Entomological Society. Columbia, SC.
- BEARD, C. E. 2005. Black flies, tanning, and health concerns. Meeting of the North American Black Fly Association (NABFA). Archbold Biological Station, Lake Placid, Florida.
- BEARD, C. E. 2006. What do black flies have that mosquitoes don't: culturing gut fungi of black flies. Meeting of the North American Black Fly Association (NABFA). Archbold Biological Station, Lake Placid, Florida.
- BEARD, C. E. 2006. Culturing the black fly (Diptera: Simuliidae) symbiote *Harpella melusinae* (Zygomycota: Trichomycetes). Meeting of the South Carolina Entomological Society, Hickory Knob State Park, South Carolina.
- BEARD, C. E. and P. H. Adler 2006. Pathogens in black flies. Meeting of the South Carolina Entomological Society, Hickory Knob State Park, South Carolina.
- BEARD, C. E. and P. H. Adler. 2007. Trichospore shapes of the trichomycete fungus *Harpella melusinae* Annual Meeting of the Mycological Society of America. Baton Rouge, LA.

INVITED UNIVERSITY PRESENTATIONS

- BEARD, C. E. 2006. Trichomycete research. High Point University, High Point, North Carolina.

PUBLICATIONS

- Adler, P. H., Z. Wang and C. E. BEARD. 1996. First records of natural enemies from Chinese blackflies (Diptera: Simuliidae). *Medical Entomology and Zoology* 47:291-292.
- BEARD, C. E. and P. H. Adler. 2000. Bionomics, axenic culture and substrate-related variation in trichospores of *Smittium megazygosporum*. *Mycologia* 92:296-300.
- BEARD, C. E. and P. H. Adler. 2002. Seasonality of trichomycetes in larval black flies from South Carolina, USA. *Mycologia* 94 200-209.
- BEARD, C. E. and P. H. Adler. 2003. Zygosporangia of selected Trichomycetes in larval Diptera of the families Chironomidae and Simuliidae. *Mycologia* 95:316-319.
- BEARD, C. E., J. W. McCreadie, and P. H. Adler. 2003. Prevalence of the Trichomycete fungus *Harpella melusinae* (Harpellales: Harpellaceae) in larval black flies (Diptera: Simuliidae) across a heterogeneous environment. *Mycologia* 95:577-583.

- McCreadie, J. W. and C. E. BEARD. 2003. The microdistribution of the trichomycete *Smittium culisetae* in the hindgut of the black fly host *Simulium vittatum*. *Mycologia* 95: 998-1003.
- Reeves, W. K., C. E. BEARD, and D. A. Craig. 2004. Trichomycete symbiotes of *Crozetia seguyi*, a primitive black fly. *Journal of Invertebrate Pathology* 87:67-69.
- McCreadie, J. W., C. E. BEARD, and P. H. Adler. 2005. Context-dependent symbiosis between black flies (Diptera: Simuliidae) and trichomycete fungi (Harpellales: Legeriomycetaceae). *Oikos* 108:362-370.
- Nelder, M. P., J. W. McCreadie, and C. E. BEARD. 2005. Laboratory investigations of trichomycete host usage in a *Smittium*-simuliid model. *Mycologia* 97:338-345.
- Nelder, M. P., C. E. BEARD, P. H. Adler, S.-K. Kim, and J. W. McCreadie. 2006. Harpellales (Zygomycota: Trichomycetes) associated with black flies (Diptera: Simuliidae): world review and synthesis of their ecology and taxonomy. *Fungal Diversity* 22: 121-169.

ENCYCLOPEDIA ARTICLES

- BEARD, C. E. 2008. Trichomycetes. In, Capinera, J. L. (ed.), *Encyclopedia of Entomology*. Springer, (In press).

UNIVERSITY COMMITTEES

- 1992. Plant Ecologist Faculty Search Committee.
- 1996-2003. Department of Entomology Systematics Resources Committee.
- 2005. Department Chair Evaluation Committee.

PROFESSIONAL SOCIETY SERVICE

- 1996. Session moderator. Aquatic Ecology. Association of Southeastern Biologists, Statesboro, Georgia.
- 2004-2008. Education Committee. Mycological Society of America

MENTORING

- 2001. Mentor (Mathematics), Pendleton Elementary School
- 2001. High School Student, Governor's School of Science and Technology, Summer research project. Paper presented at South Carolina Junior Academy of Science by Matt Knight. Awarded Best Student Presentation.

SPECIALIZED TRAINING

- 1996. Visited the lab of Dr. Robert Lichtwardt, the leading authority on trichomycete fungi and author of the book *Trichomycetes: Fungal Associates of Arthropods*. Learned techniques and discussed areas of research that need to be addressed.