

# Josephine Taylor

PERSONAL INFORMATION: Born Nov. 17, 1962 in Crockett, Texas

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CURRENT POSITION: Professor, Department of Biology, Stephen F. Austin State University, 2009 – present (Assistant Professor 1992 - 2000, Associate Professor 2000 – 2009)

EDUCATION:

B.S., Agriculture, Agricultural Education major, Teachers Certificate for Production Agriculture, May 1985; Teachers Certificate for Biology, August 1985  
Stephen F. Austin State University, Nacogdoches, Texas 75962

Ph.D., Plant Pathology, June 1990, University of Georgia, Athens, Georgia 30602  
Title of Dissertation: "A Study of Host and Nonhost Resistance to the Pearl Millet Rust Fungus"  
Major Professor: Charles W. Mims

EXPERIENCE RELATED TO GRADUATE WORK:

Graduate Teaching Assistant, Department of Biology, Stephen F. Austin State University, 1985-86  
Course: Introductory Genetics

Graduate Teaching Assistant, Department of Plant Pathology, University of Georgia, 1986-89  
Courses: Introductory Plant Pathology, Introductory Mycology

Laboratory Instructor, Department of Plant Pathology, University of Georgia, Spring 1990  
Course: Introductory Plant Pathology

Postdoctoral appointment in the laboratory of Dr. L. R. Griffing, Department of Biology, Texas A&M University, 1990-1992

Research topic: Binding and receptor-mediated endocytosis of *Phytophthora megasperma* glucan elicitor by soybean protoplasts

PRIMARY RESEARCH PUBLICATIONS:

Mims, C. W., J. Taylor, and E. A. Richardson. 1989. Ultrastructure of the early stages of infection of peanut leaves by the rust fungus *Puccinia arachidis*. Canadian Journal of Botany 67:3570-3579.

Taylor, J., and C. W. Mims. 1991. Fungal development and host cell responses to the rust fungus *Puccinia substriata* var. *indica* in seedling and mature leaves of susceptible and resistant pearl millet. Canadian Journal of Botany 69:1207-1219.

- Taylor, J., and C. W. Mims. 1991. Infection of and colony development within leaves of susceptible and resistant pearl millet and two nonhosts by the rust fungus *Puccinia substriata* var. *indica*. *Mycologia* 83:565-577.
- Villanueva, M. A., J. Taylor, X. Sui, and L. R. Griffing. 1993. Endocytosis in plant protoplasts: Visualization and quantitation of fluid phase endocytosis using silver-enhanced bovine serum albumin-gold. *Journal of Experimental Botany* 44s:275-281.
- Griffing, L. R., M. A. Villanueva, J. Taylor, and S. Moon. 1995. Confocal epipolarization microscopy of gold probes in plant cells and protoplasts. Pp. 109-121 in: *Methods in Cell Biology*, Vol. 49, Academic Press.
- Taylor, J., and S. Clark. 1996. Infection and fungal development of *Tubakia dryina* on sweet gum (*Liquidambar styraciflua*). *Mycologia* 88:613-618.
- Wiggers, R. J., J. Taylor, and J. G. West. 1997. Conidial germination and infection by *Diplocarpon rosae* on susceptible and resistant rose species. *Mycologia* 89:103-108.
- Wilson, S., and J. Taylor. 1997. Ultrastructural differences between normal and albino water oak (*Quercus nigra*) leaves. *Tex. J. Micros.* 28:40-42.
- Taylor, J., and D. Birdwell. 2000. A scanning electron microscopic study of the infection of water oak (*Quercus nigra*) by *Taphrina caerulescens*. *Mycologia* 99:309-311.
- Taylor, J. 2001. Pycnothyrium ultrastructure in *Tubakia dryina*. *Mycological Research*. 105:119-121.
- Wiggers, R.J., J. Taylor, and J.A. Margoitta. 2003. Blackspot disease of roses. *Recent Res. Devel. Mycol.* 1:9-22.
- Gravatt, D.A., and J. Taylor. 2004. Description of asexual reproduction in a Texas succulent *Sedum wrightii* (Crassulaceae). *Sida* 21:943-950.
- Li, S., Z. Zhang, A. Cain, B. Wang, M. Long, and J. Taylor. 2005. Antifungal activity of camptothecin, trifolin, and hyperoside isolated from *Camptotheca acuminata*. *Journal of Agricultural and Food Chemistry* 53:32-37.
- Mims, C.W., E.A. Richardson, and J. Taylor. 2007. Ultrastructure of teliospores and promycelium and basidiospore formation in the four-spored form of *Gymnoconia nitens*, one of the causes of orange rust of *Rubus*. *Canadian Journal of Botany* 85:926-934.
- Wagner, S. C., D. McDonald, T. Watson, J. Taylor, and A.B. Sowards. 2009. The lichen/GIS project, teaching students how to use bioindicator species to assess environmental quality. *Journal of Microbiology and Biology Education* 10:9-18.
- Rahman H., Taylor J., Clack B.A., Stewart R.S., and Canterbury S.C. 2013. Effects of storage conditions on the morphology and titer of lentiviral vectors. *Tex J. Micros.* 44: 30-36.

#### INSTRUCTIONAL DEVELOPMENT PUBLICATIONS:

Wagner, S. C., R. Havner, and J. Taylor. 2012. Connecting undergraduates to the work of minority scientists. National Study of Education in Undergraduate Science (NSEUS) Background Research Paper No. 18. Tuscaloosa, AL: University of Alabama. <http://nseus.org/wp-content/uploads/2012/02/Background-Research-Paper-No.-18.pdf>.

Taylor, J., S.C. Wagner, and S. Canterbury. 2012. Cooking from scratch: Development of inquiry based activities for the general microbiology laboratory. National Study of Education in Undergraduate Science (NSEUS) Background Research Paper No. 29. Tuscaloosa, AL: University of Alabama. <http://nseus.org/wp-content/uploads/2012/12/Background-Research-Paper-No.-29.pdf>.

#### MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS:

-Mycological Society of America; Councilor for Cell Biology/Physiology 1998-2000; Program Committee Chair 2007-2008.

-American Phytopathological Society (APS); Southern Division of APS.

-Texas Society for Microscopy; Secretary 1996-98, President 1999-2000, 2010-2011.

#### GRANTS AND CONTRACTS:

Pathogenicity studies of *Taphrina caerulescens*, causal organism of oak leaf blister disease, \$9,178, Stephen F. Austin State University, 1994-95.

Incidence of dogwood leaf scorch caused by *Glomerella cingulata* and an examination of the host-pathogen relationship, \$7,308.00, Stephen F. Austin State University, 1996-97.

Plum Pox Survey. Texas Department of Agriculture through USDA/APHIS and Specialty Crop – Pest Eradication/Survey Program. \$48,000, March 15 – Sept. 15, 2002.

Wagner, Stephen C. (Principal), Taylor, Josephine, and Sowards, Alan B., "Angelina Nacogdoches Partnership Phase I", Sponsored by Texas Teacher Quality Grants Program, U.S. Dept. of Education, Federal, \$85,000.00. (2008-2009).

Wagner, Stephen C. (Principal), Taylor, Josephine, and Sowards, Alan B., "Angelina Nacogdoches Partnership Phase II", Sponsored by Texas Teacher Quality Grants Program, U.S. Dept. of Education, Federal, \$185,000 (2009-2012).