

DANA L. WRENSCH



Professional Preparation

B. Sc. 1968: The Ohio State University - Zoology
M. Sc. 1970: The Ohio State University - Genetics
Ph. D. 1972: The Ohio State University - Genetics

Appointments

Associate Professor, Department of Entomology, The Ohio State University (OSU), 1989 - present
Director, General Biology Program, OSU, 1990 - 1992
Adjunct Associate Professor, Department of Entomology, OSU, 1984 - 1989
Adjunct Assistant Professor, Department of Entomology, OSU, 1977 - 1984
Adjunct Assistant Professor, Department of Genetics, 1982 - 1985, Department of Zoology, 1985 - 1986, Department of Botany, 1986
Assistant Professor, Department of Botany and Bacteriology, Ohio Wesleyan University, 1981

Top Honors and Awards

Acarology Recognition Award
President, Acarological Society of America 1996-97
President, Sigma Xi, OSU Chapter (1995-96)
President, OSU - AAUP (1994-96)
Elected to OSU Faculty Senate (1994-97); Faculty Senate Alternate 2001-2004
Honoree, Sphinx and Mortar Board Senior Honorary Societies (1994)
Bucket & Dipper OSU Junior Honor Society, Honorary Faculty Member (1993)
Honoree, Council on Academic Excellence for Women (1991)
Elected AAUP OSU Chapter Vice-President (1991 - 1994)
University Fellowship (4 Year), The Ohio State University (1968 - 1972)

Program capsules

Research: Current: Using computer technology to animate processes of development; Recent: Arthropod Genetics and Population Biology, Cytogenetics of Holokinetic Chromosomes and Inverted Meiosis, Acarology, Evolutionary Genetics. Biology of spider mites and other Acari of economic importance.

Teaching: Courses in entomology for science and non-science majors, acarology lectures in Acarology Summer Program, and, an upper level biology of human diversity course.

Extension/Outreach: Faculty Advisor for Chimes, Junior Honorary Society at OSU

Three Most Important Scholarly Accomplishments, Last Five Years

My three are all one, and it's ongoing. I have been developing classroom and laboratory models that can be used to illustrate classic ideas in development. Using concepts about constraint, contingency, "something from nothing - that moves" and rules known about the geometry of plant and animal growth, I have generated a number of unusual exercises for students. Biology doesn't expect students to have a background in 3-dimensional geometry and topology so these activities are new and highly interesting to students. I have created a variety of

hands-on activities, but recognize that ultimately the most useful approach would be something involving computer model building.

Five Selected Publications

- Potter, D.A., D.L. Wrensch, & D.E. Johnston. 1976. Aggression and mating success in male spider mites. *Science* 193: 160-161.
- Young, S.S.Y., D.L. Wrensch & M. Kongschuensin. 1986. Control of sex ratio by female spider mites. *Entomol. Exp. Appl.* 40: 53-60.
- Wrensch, D.L. 1993. Evolutionary flexibility through haploid males, or how chance favors the prepared genome. pp. 118 – 49. IN *Evolution and Diversity of Sex Ratio in Insects and Mites*. D.L. Wrensch and M. Ebbert (Eds.), Chapman and Hall Inc., NY.
- Wrensch, D.L. & M. Ebbert. (Eds). 1993. *Evolution and Diversity of Sex Ratio in Insects and Mites*. Chapman and Hall Inc., NY. 630 pp.
- Wrensch, D.L., J.B. Kethley & R.A. Norton. 1994. Cytogenetics of Holokinetic Chromosomes and Inverted Meiosis: Keys to the Evolutionary Success of Mites, with Generalizations on Eukaryotes. pp. 282 – 342. IN *Mites: Ecological and Evolutionary Analyses of Life-History Patterns*. M. Houck (Ed.), Chapman & Hall, NY.

Five Selected GRANTS

- 1998-2000. USDA NWNCRS \$13,940. grant to L. K. Tanigoshi, Washington State University and D. L. Wrensch, funding administered through WSU (two continuations).
1993. (4/1/93 – 3/31/95). \$29,660. “An Integrated Pest Management Approach to Control of Tracheal Mites on Honey Bees” (with B.H. Smith (PI), G.R. Needham and S. Cobey, OSU Dept. of Entomology). Calif. Dept. Food & Agr. OSU RF Proj. No. 727743.
1991. Ohio State University Seed Grant. \$13,779. “Genetics of Sex Ratio Regulation in Spider Mites”.
- 1990 – 1993. USAID. “IPM of Scarlet Mite on Tea Using Genetically Improved Predacious Mites”. Co-PI's Dr. John Briggs, OSU and Dr. S. Soelaksono, Institut Teknologi Bandung, Java, Indonesia. \$150,000. Funded 9/1/90 - 9/1/93.
- 1988 – 1990. Grant from Office of Human Relations, The Ohio State University, with Dr. Edith Taylor, Department of Botany. Awarded \$18,600

Professional Service Highlights, Last 5 Years

- Editorial Board, *Experimental and Applied Acarology* (1988 – present)
- Chair, Committee A, OSU-AAUP
- College of Biological Sciences Honors Committee (2002 - present)
- Honorary Faculty Advisor, Student Alumni Council (2002 - present)

Synergistic Activities

1. As Director of the General Biology Program at Ohio State, I was directly responsible for the revising the curriculum of 7 courses serving over 7000 students annually. In particular, I coordinated a small team trying to develop interactive multimedia computer assisted instruction in two non-science majors course.