

## JOHN D. HORNER CURRICULUM VITAE

### Office Address:

Department of Biology, Box 298930, Texas Christian University, Fort Worth, TX 76129

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e-mail: [J.Horner@TCU.edu](mailto:J.Horner@TCU.edu)

Website: <http://www.bio.tcu.edu/staff/john-d-horner/>

### EDUCATION:

- Ph.D. 1987. Biology (Ecology). University of New Mexico.
- M.S. 1983. Biology (Ecology). University of New Mexico.
- B.S. 1979. Biology. Louisiana State University in Shreveport.

### PROFESSIONAL EXPERIENCE:

- 2004- Professor of Biology and Faculty of the Environmental Science Program, College of Science and Engineering, Texas Christian University.
- 1996-04. Associate Professor of Biology and Faculty of the Environmental Science Program, College of Science and Engineering, Texas Christian University.
- 1990-96. Assistant Professor of Biology and Faculty of the Environmental Science Program, AddRan College of Arts and Sciences, Texas Christian University.
- 1988-90. National Science Foundation Postdoctoral Research Fellow and Faculty Associate, Department of Biology, Bucknell University.  
Adjunct Assistant Professor, Department of Biology, University of New Mexico.
- 1987-88. Postdoctoral Research Associate, College of Forestry and Environmental Studies, Yale University.

### RESEARCH INTERESTS:

- Ecosystem ecology.
- Evolutionary ecology.
- Plant-herbivore interactions.
- Ecological roles of plant secondary metabolites.
- Modes of speciation.
- Ecology and evolution of carnivorous plants.

### SOCIETY MEMBERSHIP:

- American Society of Naturalists
- Ecological Society of America
- Sigma Xi
- Society for the Study of Evolution
- Phi Beta Kappa

### PUBLICATIONS:

- Abrahamson, W.G., J.M. Brown, S.K. Roth, D.V. Sumerford, J.D. Horner, M.D. Hess, S.T. How, T.P. Craig, R.A. Packer, and J.K. Itami. 1994. Gallmaker speciation: An assessment of the roles of host-plant characters and phenology, gallmaker competition, and natural enemies. Pages 208-222 *In*: Price, P.W., W.J. Mattson, and Y.N. Baranchikov (eds.). *The Ecology and Evolution of Gall-forming Insects*. Proceedings of a Symposium Held at Krasnoyarsk, Siberia, August 1993. USDA Forest Service, North Central Experiment Station, General Technical Report NC-174.
- Bhattarai, G. P. and J. D. Horner. 2009. The importance of pitcher size in prey capture in the carnivorous plant, *Sarracenia alata* Wood (Sarraceniaceae). *American Midland Naturalist* 161: 264-272.
- Carmickle, R. N. and J. D. Horner. 2019. Impact of the specialist herbivore *Exyra semicrocea* on the carnivorous plant *Sarracenia alata*: a field experiment testing the effects of tissue loss and diminished prey capture on plant growth. *Plant Ecology* 220(6): 553-561. DOI 10.1007/s11258-019-00935-y

- Craig, T.P., J.D. Horner, and J.K. Itami. 1997. Hybridization studies on the host races of *Eurosta solidaginis*: Implications for sympatric speciation. *Evolution* 51: 1552-1560.
- Craig, T.P., J.K. Itami, W.G. Abrahamson, and J.D. Horner. 1993. Behavioral evidence for host-race formation in *Eurosta solidaginis*. *Evolution* 47: 1696-1710.
- Craig, T.P., J.K. Itami, W.G. Abrahamson, and J.D. Horner. 1999. Oviposition preference and offspring performance of *Eurosta solidaginis* on genotypes of *Solidago altissima*. *Oikos* 86: 119-128.
- Craig, T. P., J. K. Itami, and J. D. Horner. 2007. Geographic variation in the evolution and coevolution of a tritrophic interaction. *Evolution* 61: 1137-1152.
- Craig, T.P., J.K. Itami, J.D. Horner, and W.G. Abrahamson. 1994. Host shifts and speciation in gall-forming insects. Pages 194-207 In: Price, P.W., W.J. Mattson, and Y.N. Baranchikov (eds.). The Ecology and Evolution of Gall-forming Insects. Proceedings of a Symposium Held at Krasnoyarsk, Siberia, August 1993. USDA Forest Service, North Central Experiment Station, General Technical Report NC-174.
- Craig, T.P., J.K. Itami, C. Shantz, W.G. Abrahamson, and J.D. Horner. 2000. The influence of host plant variation and intraspecific competition on oviposition preference and offspring performance in the host races of *Eurosta solidaginis*. *Ecological Entomology* 25: 1-12.
- Craig, Timothy P., John D. Horner, and Joanne K. Itami. 2001. Genetics, experience and host plant preference in *Eurosta solidaginis*: Implications for host shifts and speciation. *Evolution* 55(4): 773-782.
- Cross, A. T., A. R. Davis, A. Fleischmann, J. D. Horner, A. Jürgens, D. J. Merritt, G. L. Murza, and S. R. Turner. 2018. Reproductive biology and prey-pollinator conflicts. In: A. M. Ellison and L. Adamec (eds.), *Carnivorous Plants: Physiology, ecology, and evolution*, Oxford University Press, Oxford, p. 294-313. DOI 10.1093/oso/9780198779841.003.0022
- Darnowski, D., U. Bauer, M. Méndez, J. Horner, and B. Płachno. 2018. Prey selection and specialization by carnivorous plants. In: A. M. Ellison and L. Adamec (eds.), *Carnivorous Plants: Physiology, ecology, and evolution*, Oxford University Press, Oxford, p. 285-293. DOI 10.1093/oso/9780198779841.003.0021
- Gehrmann, W.H., D. Jamieson, G.W. Ferguson, J.D. Horner, T.C. Chen, M.F. Holick. 2004. A comparison of Vitamin D-synthesizing ability of different light sources to irradiances measured with a Solarmeter model 6.2 UVB meter. *Herpetological Review* 35: 361-364.
- Gehrmann, W.H., J.D. Horner, G.W. Ferguson, T.C. Chen, and M.F. Holick. 2004. A comparison of responses by three broadband radiometers to different ultraviolet-B sources. *Zoo Biology* 23: 355-363.
- Green, M. L. and J. D. Horner. 2007. The relationship between prey capture and characteristics of the carnivorous pitcher plant, *Sarracenia alata* Wood. *American Midland Naturalist* 158: 424-431.
- Horner, J.D. 1983. Phenological and Stress-induced Changes in Phenolic Composition of Douglas-fir Foliage. M.S. Thesis, University of New Mexico.
- Horner, J.D. 1987. The Effects of Manipulation of Nitrogen and Water Availability on the Polyphenol Content of Douglas-fir Foliage: Implications for Ecosystem Theory. Ph.D. Dissertation, University of New Mexico.
- Horner, J.D. 1988. Astringency of Douglas-fir foliage in relation to phenology and xylem pressure potential. *Journal of Chemical Ecology* 14: 1227-1237.
- Horner, J.D. 1990. Nonlinear effects of water deficits on foliar tannin concentration. *Biochemical Systematics and Ecology* 18: 211-213.
- Horner, J. D. 2014. Phenology and pollinator-prey conflict in the carnivorous plant, *Sarracenia alata*. *American Midland Naturalist* 171: 153-156.

- Horner, J.D. and W.G. Abrahamson. 1992. Influence of plant genotype and environment on oviposition preference and offspring survival in a gallmaking herbivore. *Oecologia* 90: 323-332.
- Horner, J.D., and W.G. Abrahamson. 1999. Influence of plant genotype and early-season water deficits on oviposition preference and offspring performance in *Eurosta solidaginis* (Diptera: Tephritidae). *American Midland Naturalist* 142: 162-172.
- Horner, J.D., R.G. Cates, and J.R. Gosz. 1993. Effects of resource manipulation on the correlation between total phenolics and astringency in Douglas-fir. *Journal of Chemical Ecology* 19:1429-1437.
- Horner, J.D., R.G. Cates, and J.R. Gosz. 1987. Tannin, nitrogen, and cell wall composition of green vs. senescent Douglas-fir foliage: within- and between-stand differences in stands of unequal density. *Oecologia* 72: 515-519.
- Horner, J.D., T.P. Craig, and J.K. Itami. 1999. The influence of oviposition phenology on survival in host races of *Eurosta solidaginis*. *Entomologia Experimentalis et Applicata* 93: 121-129.
- Horner, J. D., J. Cross Steele, C. Underwood, and D. Lingamfelter. 2012. Age-related changes in characteristics and prey capture of seasonal cohorts of *Sarracenia alata* pitchers. *American Midland Naturalist* 167: 13-27.
- Horner, J.D., J.R. Gosz, and R.G. Cates. 1988. The role of carbon-based plant secondary metabolites in decomposition in terrestrial ecosystems. *The American Naturalist* 132: 869-883.
- Horner, J. D., E. Hodcroft, A. Hale, and D. Williams. 2014. Genetic variation, clonality, and origin of isolated western populations of the carnivorous pitcher plant, *Sarracenia alata* Wood. *Journal of the Torrey Botanical Society* 141: 326-337.
- Horner, J. D., J. K. Itami, and T. P. Craig. 2008. The effects of host race, gender and host-plant dispersion on alighting behavior, mating, and oviposition in *Eurosta solidaginis*. *Entomologia Experimentalis et Applicata* 128: 274-282.
- Horner, J. D., B. J. Płachno, U. Bauer, and B. Di Giusto. 2018. Prey attraction by carnivorous plants. In: A. M. Ellison and L. Adamec (eds.), *Carnivorous Plants: Physiology, ecology, and evolution*, Oxford University Press, Oxford, p. 157-166. DOI 10.1093/oso/9780198779841.003.0022
- Horner, J. D. and B. Schatz. 2016. Resorption of trap nitrogen during senescence and the benefit of prey capture in the carnivorous plant, *Sarracenia alata*. *Plant Ecology* 217(8): 985-991. DOI 10.1007/s11258-016-0623-8.
- Itami, J.K., T.P. Craig, and J.D. Horner. 1998. Factors affecting gene flow between the host races of *Eurosta solidaginis*. Pages 375-407. In: Mopper, S. and S. Y. Strauss (eds.). Genetic Structure and Local Adaptation in Natural Insect Populations: Effects of Ecology, Life History, and Behavior. Chapman and Hall, New York.
- Van Horne, B., T.A. Hanley, R.G. Cates, J.D. McKendrick, and J.D. Horner. 1988. Influence of seral stage and season on leaf chemistry of southeastern Alaska deer forage. *Canadian Journal of Forest Research* 18: 90-99.
- White, C.S., J.R. Gosz, J.D. Horner, and D.I. Moore. 1988. Seasonal, annual and treatment-induced variation in available nitrogen pools and nitrogen cycling processes in soils of two Douglas-fir stands. *Biology and Fertility of Soils* 6: 93-99.
- White, C.S., D.I. Moore, J.D. Horner, and J.R. Gosz. 1988. Nitrogen mineralization-immobilization response to field N and C perturbations: An evaluation of a theoretical model. *Soil Biology and Biochemistry* 20: 101-105.
- Winer, Z.M. and J.D. Horner. 2022. Floral herbivory in the carnivorous plant, *Sarracenia alata*. *Arthropod-Plant Interactions* in press.

**PAPERS PRESENTED AT PROFESSIONAL MEETINGS:**

- Abrahamson, W.G., J.M. Brown, T.P. Craig, J.D. Horner, J.K. Itami, and S. Torgerson How. 1994. Herbivore speciation: The role of host-plant traits. International Compositae Conference, Kew Gardens, London, England.
- Abrahamson, W.G., J.M. Brown, S.K. Roth, D.V. Sumerford, J.D. Horner, M.D. Hess, S.T. How, T.P. Craig, R.A. Packer, and J.K. Itami. 1993. Gallmaker speciation: An assessment of the roles of host-plant characters and phenology, gallmaker competition, and natural enemies. International Symposium on Gall-forming Insects, Krasnojarsk, Russia.
- Bhattacharai, G. P. and J. D. Horner. 2008. Deciphering the importance of pitcher size in prey capture in the carnivorous plant, *Sarracenia alata* Wood. Association of Southeastern Biologists annual meeting, Spartanburg, SC.
- Carmickle, R. N. and J. D. Horner. 2017. Turning the tables all over again: The impact of a specialist herbivore on a carnivorous plant. National meeting of the Ecological Society of America, Portland, OR.
- Carmickle, Rachel and J. Horner. 2017. Preliminary investigations of the effects of herbivory on the carnivorous plant *Sarracenia alata* by the specialist herbivore *Exyra semicrocea*. National meeting of the Botanical Society of America, Fort Worth, TX.
- Carmickle, R. and J. Horner. 2017. Losses to a specialist herbivore in a carnivorous plant. Texas Tech 8<sup>th</sup> Annual Biological Sciences Symposium, Lubbock, Texas.
- Cassle, S. and J. Horner. 2004. Plant characteristics correlated with prey capture in the pitcher plant, *Sarracenia alata* Wood. Southwestern Association of Naturalists.
- Cates, R.G., J.D. Horner, and J.R. Gosz. 1985. The role of secondary compounds in nitrogen cycling: II. The relationship between tree and site characteristics on foliage terpene content. Ecological Society of America national meeting, Minneapolis, MN. (*Bulletin of the Ecological Society of America* 66: 153.)
- Craig, T.P., K. Cazares, J.K. Itami, and J.D. Horner. 1994. Host plant preference of two host races of *Eurosta solidaginis* and their hybrids. Southwest Association of Biologists annual meeting, Flagstaff, AZ.
- Craig, T.P., K.E. Cazares, J.K. Itami, and J.D. Horner. 1995. Host plant preference of two host races of *Eurosta solidaginis* and their hybrids. Ecological Society of America national meeting, Snowbird, UT. (*Bulletin of the Ecological Society of America* 76: 315.)
- Craig, T.P., J.D. Horner, and J.K. Itami. 1993. Gallmaker speciation: An assessment of adaptations of gallmaking insects in relation to modes of speciation. International Symposium on Gall-forming Insects, Krasnojarsk, Russia.
- Craig, T.P., J.K. Itami, and J.D. Horner. 1994. Pre- and post-zygotic barriers to gene flow between host races of *Eurosta solidaginis* (Diptera: Tephritidae). Joint national meetings of the Ecological Society of America and the American Institute of Biological Sciences, Knoxville, TN.
- Craig, T.P., J.K. Itami, and J.D. Horner. 1996. Host race formation in *Eurosta solidaginis*. Endless Forms: A Symposium on Speciation in Tribute to Guy Bush, Asilomar, CA.
- Craig, T. P., J. K. Itami, and J. D. Horner. 2011. Geographic mosaic of speciation. Presented at the International Symposium of Evolutionary Ecology Across Trophic Levels. Lewisburg, PA.
- Gosz, J.R., J.D. Horner, and R.G. Cates. 1985. The role of secondary compounds in nitrogen cycling: III. Effects of irrigation, fertilization, and carbohydrate amendment on nitrogen mineralization potential. Ecological Society of America national meeting, Minneapolis, MN. (*Bulletin of the Ecological Society of America* 66: 180.)

- Green, M. L. and J. D. Horner. 2007. The relationship between prey capture and characteristics of the carnivorous pitcher plant, *Sarracenia alata* Wood. Southwestern Association of Naturalists annual meeting, Stephenville, TX.
- Horner, J.D. 1984. Phenological and stress-induced changes in phenolic composition of Douglas-fir. Ecological Society of America national meeting, Ft. Collins, CO. (*Bulletin of the Ecological Society of America* 65: 143.)
- Horner, J.D. 1988. Astringency (tannin content) of immature foliage of Douglas-fir can be better predicted by water status than by tissue age. Ecological Society of America national meeting, Davis, CA. (*Bulletin of the Ecological Society of America* 69: 172.)
- Horner, J. D. 2011. Prey capture and population genetics in the carnivorous plant, *Sarracenia alata* Wood. Presented at the International Symposium of Evolutionary Ecology Across Trophic Levels. Lewisburg, PA. .
- Horner, J. D. 2015. Nitrogen resorption from senescing pitchers and the marginal return of prey capture in the carnivorous plant, *Sarracenia alata*. Botany 2015 (Botanical Society of America annual meeting). Edmonton, Alberta, Canada.
- Horner, J.D. and W.G. Abrahamson. 1990. The hierarchy of plant resistance to herbivores: Effects of plant genotype and resource supply to the host plant on oviposition preference and offspring survival in a gallmaking herbivore. Ecological Society of America national meeting, Snowbird, UT. (*Bulletin of the Ecological Society of America* 71:192.)
- Horner, J.D. and W.G. Abrahamson. 1992. Effects of plant genotype and water deficits on oviposition preference and offspring performance in a gallmaking herbivore. Ecological Society of America national meeting, Honolulu, HI. (*Bulletin of the Ecological Society of America* 73:212.)
- Horner, J.D., S.M. Andersson, A. El-Sayed, and D.M. Suckling. 2018. Volatiles of flowers and traps of the carnivorous plant, *Sarracenia alata*. Ecological Society of America national meeting, New Orleans, LA.
- Horner, J.D., R.G. Cates, and J.R. Gosz. 1985. The role of secondary compounds in nitrogen cycling: I. Site- and age-specific differences in foliar tannin and lignin contents. Ecological Society of America national meeting, Minneapolis, MN. (*Bulletin of the Ecological Society of America* 66: 197.)
- Horner, J.D., T.P. Craig, and J.K. Itami. 1995. The influence of phenology of emergence on survival of host races of a gallmaking fly. Ecological Society of America national meeting, Snowbird, UT. (*Bulletin of the Ecological Society of America* 76: 342.)
- Horner, J. D., T. P. Craig, and J. K. Itami. 2007. Geographic variation in the evolution and coevolution of a tritrophic interaction. Society for the Study of Evolution (SSE), the American Society of Naturalists (ASN), and the Society for Systematic Biology (SSB) joint annual international meeting, Christchurch, New Zealand. June 2007.
- Horner, J. D., T. P. Craig, and J. K. Itami. 2011. Evidence for plant genotype x insect genotype interaction in the *Eurosta* – *Solidago* system. Presented at the Joint annual international meeting of the Society for the Study of Evolution, the American Society of Naturalists, and the Society for Systematic Biology, Norman, OK.
- Horner, J. D., J. Cross Steele, C. Underwood, and D. Lingamfelter. 2011. Age-related changes in characteristics and prey capture in seasonal cohorts of *Sarracenia alata* pitchers. Ecological Society of America national meeting, Austin, TX.
- Horner, J., E. Hodcroft, A. Hale, and D. Williams. 2010. Genetic variation in populations of a carnivorous plant (*Sarracenia alata* Wood). Presented at the joint annual meeting of the Society for the Study of Evolution, the American Society of Naturalists, and the Society of Systematic Biologists, Portland, OR. June 2010.

- Horner, J. D., J. K. Itami, and T. P. Craig. 2006. The effects of experimental manipulation of host-plant distribution on mating between host races of *Eurosta solidaginis*. Society for the Study of Evolution (SSE), the American Society of Naturalists (ASN), and the Society for Systematic Biology (SSB) joint annual meeting, State University of New York at Stony Brook,
- Horner, J. D., J. K. Itami, and T. P. Craig. 2006. Can host-plant presence and dispersion affect gene flow between host races? A symposium on the Genetics of Speciation, organized jointly by the American Genetics Association and Molecular Ecology, the University of British Columbia, Vancouver.
- Horner, J.D., J.R. Gosz, and R.G. Cates. 1986. The effects of nitrogen and water availability on tannin and cell wall composition of Douglas-fir foliage. Ecological Society of America national meeting, Syracuse, NY. (*Bulletin of the Ecological Society of America* 67: 188.)
- Horner, J.D., J.R. Gosz, and R.G. Cates. 1989. The effects of natural and treatment-induced differences in nitrogen and water availability on the tannin and lignin composition of Douglas-fir foliage. Ecological Society of America national meeting, Toronto, Ontario, Canada. (*Bulletin of the Ecological Society of America* 70: 145.)
- Kang, K. and J.D. Horner. 2021. The effects of pollen limitation on seed production in the Pale Pitcher Plant (*Sarracenia alata*). Ecological Society of America national meeting, Long Beach, CA.
- Roth, S., W.G. Abrahamson, and J.D. Horner. 1990. Recognition of host-plant chemical cues by ovipositing *Eurosta solidaginis*. Pennsylvania Academy of Science.
- Schatz, B.A. and J.D. Horner. 2014. Making the most of a meal: Nitrogen resorption from senescing pitchers and the benefit of prey capture in the carnivorous plant, *Sarracenia alata*. Ecological Society of America national meeting. Sacramento, CA.
- Segala, M.C. and J.D. Horner. 2021. Shading, feeding, and their interaction affect pitcher morphology in *Sarracenia alata*. Ecological Society of America national meeting, Long Beach, CA.
- Zsigray, B.M., A.J. Livingston-Anderson, J. Korstian, T.P. Craig, J.K. Itami, D.A. Williams, and J.D. Horner. 2016. Genetic and morphological differentiation among host races of *Eurosta solidaginis*. Joint meeting of the Society for the Study of Evolution, the American Society of Naturalists, and the Society of Systematic Biologists. Austin, TX.
- Winer, Z.M. and J.D. Horner. 2019. Floral herbivory in a carnivorous plant. Ecological Society of America national meeting, Louisville, KY.

## RESEARCH GRANTS:

2021. Native Plant Society of Texas. Effects of Compounds Derived from Smoke on Germination of *Sarracenia alata*. \$1077.
2021. Native Plant Society of Texas. Impacts of Pollen Donor Distance and Nutrient Availability on Reproductive Success in *Sarracenia alata*. \$2500.
2021. TCU CSE Science and Engineering Research Center. Effects of Compounds Derived from Smoke on Germination of *Sarracenia alata*. \$800.
2021. TCU CSE Science and Engineering Research Center. Impacts of Pollen Donor Distance and Nutrient Availability on Reproductive Success in *Sarracenia alata*. \$1500.
2019. TCU CSE Science and Engineering Research Center. Effects of floral herbivory on pollen limitation, pollinator behavior, and seed production in the pale pitcher plant. \$2000.

- 2019. TCU CSE Science and Engineering Research Center. The effect of herbivory and light on the expression of carnivorous traits in a plant. \$1911.
- 2018. TCU Research and Creative Activities Fund. Floral Herbivory: The reduction of fitness through reduced pollen competition. \$4014.
- 2016. TCU Research and Creative Activities Fund. Cost of Herbivory to a Carnivorous Plant. \$3945.
- 2014. TCU Research and Creative Activities Fund. Conservation of Nitrogen by a Carnivorous Plant. \$3901.
- 2012. TCU Research and Creative Activities Fund. Identifying Cryptic Species Using Genetic Markers. \$3779..
- 2008. TCU Research and Creative Activities Fund. Avoidance of Pollinator-Prey conflict in a Carnivorous Plant. \$3945.
- 2007. TCU Research and Creative Activities Fund. A Test of the Geographic Mosaic Theory of Coevolution. \$3960.
- 2005. TCU Research and Creative Activities Fund. The Origin of Species: Plant Chemistry Associated with Host Acceptance in a Plant-feeding Insect. \$3845
- 2004. TCU Research and Creative Activities Fund. Effects of fire on plant characteristics and prey capture in a carnivorous plant. \$3496.
- 1999. TCU Research and Creative Activities Fund. Contrasting effects of supplemental prey and mineral nutrient supply in a carnivorous plant. \$3422.
- 1998. TCU Research and Creative Activities Fund. The effects of herbivory on prey capture and fitness in a carnivorous plant. \$3301.
- 1997. TCU Research Fund. The influence of light environment on prey capture in a carnivorous plant. \$3367.
- 1994. TCU Research Fund. The effect of interactions between insect genotype and plant genotype on host shifts, specialization, and speciation. \$3300.
- 1993. National Science Foundation (BSR-9107150). Research Experiences for Undergraduates Supplement Grant: Chemical correlates of host-plant preference in host races of *Eurosta solidaginis*. \$5000.
- 1991. National Science Foundation (BSR-9107150). Host expansion and speciation in phytophagous insects: Behavioral, ecological, and genetic factors (Collaborative proposal. With W. G. Abrahamson, T. P. Craig, and J. K. Itami.) 4 years, \$401,807.
- 1991. TCU Research Fund. Effects of water deficits on production of plant secondary metabolites. \$3422.
- 1990. TCU Research Fund. Influence of plant chemistry on host selection by a plant-feeding insect. \$2503.
- 1987. National Science Foundation (BSR-8706947). Collaborative Research: Manipulation of N and water availability, belowground production of plant secondary metabolites, and ecosystem processes. With J. R. Gosz and K. A. Vogt. 1 year, \$150,000.

**INSTRUCTIONAL GRANTS:**

- 2007. TCU/Instructional Development Grant, Identification of biological research station for tropical biology fieldwork. With M. Misamore. \$3,400.
- 2000. TCU Research and Creative Activities Fund Lectureship Awards. 2000/2001 Seminar Series in Biology. \$2000.
- 1996. TCU Undergraduate Research Project. 1996. Support of the Murphy Undergraduate Research Program in the Biological Sciences. \$500.
- 1995. TCU Undergraduate Research Project. 1995. Support of the Murphy

- Undergraduate Research Program in the Biological Sciences. \$750.
1994. TCU Research Fund Lectureship Awards. 1994/1995 Seminar Series in Biology. \$1990.
1993. TCU Research Fund Lectureship Awards. 1993/1994 Seminar Series in Biology. \$1960.
- TCU Instructional Development Grant. Implementation of a molecular biology laboratory exercise in BIOL 1504. With P. Hartman. \$2786.

**REVIEWER:**

National Science Foundation, Division of Environmental Biology, Ecology Program, Ecological and Evolutionary Physiology Program, Ecosystems Program, and Graduate Research Fellowship Program.

United States Department of Agriculture, National Research Initiative Competitive Grants Program, Forest/Rangeland/Crop Ecosystems Program and Plant Responses to the Environment Program.

The Nature Conservancy, Ecosystem Research Program.

Manuscripts for *American Journal of Botany*, *American Midland Naturalist*, *Biology Letters*, *Ecological Entomology*, *Ecology*, *Environmental Entomology*, *Entomologia Experimentalis et Applicata*, *Evolution*, *Evolutionary Ecology*, *Forest Ecology and Management*, *Horticultural Science*, *Oecologia*, *Plant Ecology*, *Population Ecology*, *SIDA*, *Southeastern Naturalist*, and *Southwestern Naturalist*.

Spencer, K. C. (ed.) 1988. *Chemical Mediation of Coevolution*. Academic Press, NY.

Price, Peter W., William J. Mattson, and Yuri N. Baranchikov (eds.). 1994. *The Ecology and Evolution of Gall-forming Insects*. Proceedings of a Symposium Held at Krasnoyarsk, Siberia, August 1993. USDA Forest Service, North Central Forest Experiment Station, General Technical Report NC-174.

**COURSES TAUGHT:**

- Introductory Biology II (Coordinator, Freshman-level course, team-taught)
- Introductory Biology II Laboratory (Coordinator, Freshman-level course, team-taught)
- Ecology (Upper-division course, team-taught)
- Introduction to Biological Research (Upper-division course, team-taught)
- Teaching of Biology (Upper-division course)
- Plant Biology (Upper-division course)
- Biological Research and Writing (Upper-division course)
- Terrestrial Ecosystems (Graduate-level course)
- Evolution (Upper-division undergraduate/graduate-level course)
- Behavioral Ecology (Upper-division undergraduate/graduate-level seminar)
- Solving the Biodiversity Crisis (Upper-division undergraduate/graduate-level seminar)
- Evolutionary Medicine (Upper-division undergraduate/graduate-level seminar)
- Scientific Presentation (Graduate-level seminar)
- Evolution and the Human Condition (Upper-division Honors undergraduate course)
- Introduction to Scientific Research and Writing (Graduate-level seminar)

**GRADUATE ADVISORY COMMITTEES:**

60+ Biology M.S. and M.A. Students, 30+ Environmental Science M.S. and M.A. Students

**INVITED SEMINARS:**

University of Minnesota Duluth, February 2021.



Texas Wesleyan University, November 2011.  
University of Texas at Arlington, May 2009.  
T.M. Barkley Plant Science and Ecology Seminar, Botanical Research Institute/TCU,  
September 2004.  
Sigma Xi Colloquium, TCU Chapter: Lunchtime Ruminations of an Evolutionary Ecologist,  
2001.  
University of Texas at Arlington, TX, 18 November 1999.  
University of Central Florida, Orlando, FL, 22 March 1995.  
University of Minnesota and Minnesota Community College Research Seminars/ Field  
Biology Workshops/Faculty Development Workshops, Minneapolis, MN, 15 May 1994.  
Cedar Creek Natural History Area/University of Minnesota, Bethel, MN, 20 June 1994.  
Center for Energy and Environment Research and University of Puerto Rico, San Juan,  
Puerto Rico, 7 November 1989.  
Luquillo Experimental Forest, El Verde, Puerto Rico, 6 November 1989.  
Belowground Forest Ecology Workshop, Yale University and Harvard Forest, Petersham,  
MA, 27-30 March 1989.  
Northeastern University, Boston, MA, 18 March 1989.  
University of Kansas, Lawrence, KS, 20 April 1988.  
Museum of Northern Arizona, Flagstaff, AZ, 30 March 1988.  
Northern Arizona University, Flagstaff, AZ, 30 March 1988.  
Cornell University, Ithaca, NY, 9 March 1988.  
University of Utah, Salt Lake City, UT, 17 February 1988.  
San Diego State University, San Diego, CA, 5 February 1988.  
Appalachian State University, Boone, NC, 19 March 1987.  
Long-Term Ecological Research Intersite Workshop, Lake Itasca, MN, February 1983.

#### **DEPARTMENTAL, COLLEGE, UNIVERSITY, AND COMMUNITY SERVICE**

2019- . Department of Biology Advisory Committee.  
2016- . Department of Biology Curriculum Committee.  
2015. Department of Biology Chair (fall).  
2012-15; 2017 - .  
Research and Creative Activities Fund Committee, Chair.  
2012. Dean's Research Award Committee.  
2009-12. University Compliance and Affirmative Action Committee.  
2009-12. College of Science and Engineering Advisory Committee, TCU.  
2008-09. College of Science and Engineering Curriculum Committee.  
2008. College of Science and Engineering Review of Geology Program.  
2006-11. Science and Engineering Research Committee (SERC) Advisory Committee.  
2005-15. Department of Biology Advisory Committee, TCU.  
2003-06; 2017 - 2021. Graduate Council, TCU.  
2003-22 . Institutional Biosafety Committee, TCU.  
2003-06. College of Science and Engineering Advisory Committee, TCU.  
2003-06. Student Research Symposium Committee, TCU. (Chair 2006)  
2003-04. Future Direction of the Environmental Science Program Advisory Committee  
(2003 - present), TCU.  
2000-03. University Advisory Committee, TCU.  
1999-04. Student Organizations Committee, TCU.  
1998-14. Chairperson, Committee on Graduate Studies, Department of Biology, TCU.  
1998-99. Chairperson, Advisory Committee, Environmental Science Program, TCU  
1997. Department of Biology, Curriculum Evaluation Committee, TCU.

- 1997-04. Biosphere 2 Committee, TCU.
- 1996-03. Department of Biology Advisory Committee, TCU.
- 1996-97. University Academic Computing Committee, TCU.
- 1996-99. Environmental Science Program Advisory Committee, TCU.
- 1995. Ad Hoc Committee, Teaching of Science to Non-majors, AddRan College of Arts and Sciences, TCU.
- 1995-03. Chairperson, Committee for Murphy Undergraduate Research Program in Biology, TCU.
- 1994-98. Committee on Graduate Studies, Department of Biology, TCU.
- 1994. Chairperson, *Ad Hoc* Committee for the Development of Evaluation of Instruction in Team-taught Courses.
- 1993-97. AddRan College of Arts and Sciences Curriculum Committee, TCU.
- 1992-- Board Member, Lewisville Lake Environmental Learning Area Consortium.
- 1990-95. Faculty Committee, Clifford E. Murphy Memorial Program for Undergraduate Research in the Biological Sciences, TCU.
- 1985. Faculty Search Committee, Plant Physiological Ecologist, UNM.
- 1984. Faculty Search Committee, Plant Population/Community Ecologist, UNM.

**HONORS:**

College of Science and Engineering, Dean's Teaching Award Nominee, TCU, 2013, 2014.

Profiled Faculty, AED Prehealth Professions Alumni Newsletter, TCU, 1994.

Mortar Board Preferred Professor, TCU, 1993, 2006.

Phi Beta Kappa, 1984.

Graduate Scholarship, UNM, 1979.

B.S. Magna Cum Laude, LSU-S, 1979.

University Academic Award in Biology, LSU-S, 1979.

University Academic Award in General Studies, LSU-S, 1976.