

**CURRICULUM VITAE**

**Name:** X. Ben Wu  
**Title:** Professor and Associate Dean for Faculty Affairs  
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**A. Education/Training**

INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
University of Tennessee, Knoxville, TN	Ph.D.	1991	Ecology
University of Tennessee, Knoxville, TN	M.S.	1990	Management Science
University of Tennessee, Knoxville, TN	M.S.	1988	Ecology
Lanzhou University, Lanzhou, China	B.S.	1982	Botany-Plant Ecology

**B. Positions and Employment**

1995-present Texas A&M University

Presidential Professor for Teaching Excellence (2009-), Arthur and Wilhelmina Doré Thaman University Professor for Undergraduate Teaching Excellence (2017-2020), John Kincaid University Professor for Undergraduate Teaching Excellence (2012-2015), Associate Dean of Faculties and Director of Center for Teaching Excellence (2009-2014) Associate Dean for Faculty Affairs, College of Agriculture and Life Sciences (2019-) Professor (2007-), Associate Department Head for Graduate Programs (2007-2009), Associate Professor (2001-2006), and Assistant Professor (1995-2000), Department of Ecology and Conservation Biology (formerly Ecosystem Science and Management)

1992-1995 The Ohio State University

Adjunct Assistant Professor (1994-95), Postdoctoral Research Associate (1993-1995), and University Postdoctoral Fellow (1992-1993), School of Natural Resources

**C. Awards and Honors (selected from 30)**

- Dean's Outstanding Achievement Award in Administration, College of Agriculture and Life Sciences, Texas A&M University, 2022.
- US Department of Agriculture National Award for Excellence in College and University Teaching in Food and Agricultural Sciences, 2018.
- Dean's Outstanding Achievement Award in Teaching, College of Agriculture and Life Sciences, Texas A&M University, 2017.
- Distinguished Achievement Awards for Teaching (University-Level), Association of Former Students of Texas A&M University, 2016.
- SEC Faculty Achievement Award, Southeastern Conference Universities, 2015.

- Award for Innovative Excellence in Teaching, Learning, and Technology, the International Conference on College Teaching and Learning, 2009.
- Dick Kleberg, Jr. Endowed Lectureship at the King Ranch Institute for Ranch Management, Texas A&M University-Kingsville, 2007
- Michael Breheny Prize for the Best Paper in *Environment and Planning B*, 2006.

#### D. Professional Experience

- *Service to scientific/education community*: **Member**, Steering Committee for NSF-RCN Faculty Developer Network for Undergraduate Biology Education (FDN-UBE) (2014-2020); **Member**, Committees of Visitors (COV), NSF Division of Undergraduate Education (DUE) (2016); **Member**, National Research Council Committee on Barriers and Opportunities in Completing 2- and 4-Year STEM Degrees (2013-2016); **Co-chair**, Quality Enhancement Plan (QEP) committee for the decennial reaffirmation of accreditation of Texas A&M University (2011-2012);
- *Faculty development efforts*: Conducted over 40 workshops (1-3 hour) on topics such as active and inquiry-based learning, engaging students with technology, blended learning, teaching large classes, peer review of teaching, decoding the discipline, implicit biases, and habits and skills of successful new faculty. Conducted five 2-5-day workshops in the US, Asia, and Middle East on teaching and learning, inquiry-based approaches in undergraduate STEM courses, and academic leadership.
- *Broadening the participation of groups underrepresented in STEM*: **Member**, STRIDE (Strategies and Tactics for Recruiting to Improve Diversity and Excellence) Committee (2011-present), Texas A&M; **Project Director**, Sloan Minority Ph.D. Program in Ecosystem Science and Management (2007-2012); **Co-PI** (TAMU lead) for three USDA-HSI grants.

#### E. Grants Received (selected)

*Acquired over \$22,847,000 research funds (over 94% external) as PI or co-PI; directly responsible for directing over \$5,585,000 of these funds.*

- Enhancing Livestock Production from Rangelands in the Great Plains, USDA-NIFA, \$9,994,340, 2019-2024, co-PI.
- Virtual Ecological Inquiry (VEI) - A virtual environment for inquiry-based learning and education research, NSF CCLI/TUSE, \$199,950, 2010-2014, PI.
- Strengthening educational capacities in geospatial science and technology for agricultural and natural resources management, USDA-HSI, \$290,000, 2008-2010, co-PI.
- Development of data-based validation framework for state-and-transition models, USDA-CSREES, \$464,000, 2007-2010, co-PI.
- Geospatial ecosystem management program, USDA-HSI, \$240,000, 2007-2009, co-PI.
- Building a research bridge between an HSI and a land-grant university for doctoral studies in environmental science, USDA-CSREES, \$300,000, 2005-2007, co-PI.
- Integrating science, education and IT in a cross-cultural setting, NSF, \$89,192, 2004-2007; co-PI.
- Scaling soil C and N storage in a changing savanna parkland landscape: Spatial structure, prediction and uncertainty assessment, NSF, \$398,000, 2001-2005, PI.

**LIST OF PUBLICATIONS (since 2018; out of 104 total)**

- Li Z, Angerer JP, Jaime X, Yang C, Wu XB. 2022. Estimating rangeland fine fuel biomass in western Texas using high-resolution aerial imagery and machine learning. *Remote Sensing* 14:4360. <https://doi.org/10.3390/rs14174360>
- Li Z, Angerer JP, Wu XB. 2022. The impacts of wildfires of different burn severities on vegetation structure across the western United States rangelands. *Science of the Total Environment* 845:157214, <https://doi.org/10.1016/j.scitotenv.2022.157214>.
- Li Z, Angerer JP, Wu XB. 2022. Prefire vegetation structure of high severity wildfires in non-herbaceous dominated rangelands in the western United States. *Earth's Future* 10(10), e2021EF002624. <https://doi.org/10.1029/2021EF002624>.
- Jin B, Cheng H, Sun G, Li F, Wu XB. 2022. Multi-parallel structure and a generalized conceptual model of livestock track network. *Catena* 216:106361. <https://doi.org/10.1016/j.catena.2022.106380>.
- Macik M, Wu XB, Sandoval C. 2022. The impact of authentic inquiry on undergraduate students' self-reported understanding of scientific practices. *Education Research International* 2022, 8137386. <https://doi.org/10.1155/2022/8137386>.
- Wilcox BP, Fuhlendorf SD, Walker JW, Twidwell D, Wu XB, Goodman LE, Treadwell M, Birt A. 2022. Saving imperiled grassland biomes by recoupling fire and grazing: A case study from the Great Plains. *Frontiers in Ecology and the Environment* 20(3):179–186, <https://doi.org/10.1002/fee.2448>.
- Li W, Hooper D, Wu L, Bakker J, Gianuca A, Wu XB, Taube F, Wang C, Bai Y. 2021. Grazing regime alters plant community structure via patch-scale diversity in semiarid grasslands, *Ecosphere*, 12.6:e03547. <https://doi.org/10.1002/ecs2.3547>.
- Li Z, Angerer JP, Wu XB. 2021. Temporal patterns of large wildfires and their burn severity in rangelands of western United States. *Geophysical Research Letters*, 48:e2020GL091636. <https://doi.org/10.1029/2020GL091636>.
- Wu XB, Sandoval C, Knight SL, Jaime XA, Macik M, Schielack JF. 2021. Web-based authentic inquiry experiences in large introductory classes consistently associated with significant learning gains for all students. *International Journal of STEM Education*, 8:31. <https://doi.org/10.1186/s40594-021-00290-3>.
- Kim J, Popescu SC, Lopez RR, Wu XB, Silvy NJ. 2020. Vegetation mapping of No Name Key, Florida using lidar and multispectral remote sensing. *International Journal of Remote Sensing* 41.24: 9469-9506. <https://doi.org/10.1080/01431161.2020.1800125>.
- Cheleuitte-Nieves C, Perotto-Baldivieso HL, Wu XB, Cooper SM. 2020. Environmental and landscape influences on the spatial and temporal distribution of a cattle herd in a South Texas rangeland. *Ecological Processes* 9:39. <https://doi.org/10.1186/s13717-020-00245-6>.
- Jin B, Sun G, Zhang Y, Zou M, Ni X, Luo K, Zhang X, Cheng H, Li F, Wu XB. 2019. Goat track networks facilitate efficiency in movement and foraging. *Landscape Ecology* 34:2033–2044. <https://doi.org/10.1007/s10980-019-00877-w>.
- Miller KS, Brennan LA, Perotto-Baldivieso HL, Hernandez F, Grahmann ED, Okay AZ, Wu XB, Peterson M, Hannusch H, Mata J, Robles J, Shedd T. 2019. Correlates of habitat fragmentation and northern bobwhite abundance in the Gulf Prairie Landscape Conservation Cooperative. *Journal of Fish and Wildlife Management*. 10:3-18. <https://doi.org/10.3996/112017-JFWM-094>.

- Zhou Y, Boutton TW, Wu XB. 2019. A Three-Dimensional Assessment of Soil  $\delta^{13}\text{C}$  in a Subtropical Savanna: Implications for Vegetation Change and Soil Carbon Dynamics. *Soil Systems* 3(4), 73. <https://doi.org/10.3390/soilsystems3040073>.
- Cheleuitte-Nieves C, Perotto-Baldivieso HL, Wu XB, Cooper SM. 2018. Association patterns reveal congregation-dispersal dynamics among cattle in South Texas rangelands, USA. *Ecological Processes* 7:29. <https://doi.org/10.1186/s13717-018-0141-9>.
- Zhou Y, Boutton TW, Wu XB. 2018. Soil C:N:P stoichiometry responds to vegetation change from grassland to woodland. *Biogeochemistry* <https://doi.org/10.1007/s10533-018-0495-1>.
- Zhou Y, Boutton TW, Wu XB. 2018. Woody plant encroachment amplifies spatial heterogeneity of soil phosphorus to considerable depth. *Ecology* 99:136–147.
- Zhou Y, Boutton TW, Wu XB. 2018. Soil phosphorus does not keep pace with soil carbon and nitrogen accumulation following woody encroachment. *Global Change Biology* 24(5):1992-2007.
- Zhou Y, Boutton TW, Wu XB, Wright C, Dion A. 2018. Rooting strategies in a subtropical savanna: a landscape-scale three-dimensional assessment. *Oecologia* 186(4):1127–1135.
- Zhou Y, Mushinski RM, Hyodo A, Wu XB, Boutton TW. 2018. Vegetation change alters soil profile  $\delta^{15}\text{N}$  at the landscape scale. *Soil Biology & Biochemistry* 119:110-120.