

Janis Kathleen Bush, Ph.D.
Director, Academic Environmental Science Programs
Associate Professor
College of Sciences
University of Texas at San Antonio
1 UTSA Circle
San Antonio, Texas 78249
janis.bush@utsa.edu

EDUCATIONAL BACKGROUND

<i>Organization and Location</i>	<i>Degree</i>	<i>Year</i>
University of Texas at San Antonio San Antonio, Texas	B.S. Biology	1981
University of Texas at San Antonio San Antonio, Texas	M.S. Biology	1984
University of Texas at El Paso El Paso, Texas	Ph.D. Environmental Science and Engineering	2002

PROFESSIONAL EMPLOYMENT HISTORY

(1) Present Position:

2011-Present	Director, Environmental Science Academic Programs, College of Sciences, University of Texas at San Antonio
2010-Present	Associate Professor, College of Sciences, University of Texas at San Antonio
2008-Present	Director, Teaching and Research in Environmental Ecology Program, Center for Research and Training, College of Sciences, University of Texas at San Antonio

(2) Previous Positions:

2004-2007	Assistant Professor, Department of Earth and Environmental Sciences, the University of Texas at San Antonio
2001-2004	Senior Lecturer, Department of Biology, the University of Texas at San Antonio
1995-2001	Lecturer III, Department of Biology, the University of Texas at San Antonio
1985-1995	Teaching Associate, Department of Life Sciences, the University of Texas at San Antonio
1985	Environmental Technician, Morrison and Knutson Engineering Co.

- 1984-1985 Research Associate, Department of Soil and Crop Sciences, Texas A&M University, College Station, Texas
- 1982-1983 Teaching Assistant, Division of Life Sciences, the University of Texas at San Antonio
- 1982 Research Assistant, Landscape study: plant succession and climax communities in the San Antonio Missions National Historical Park, U.S. Department of the Interior, National Park Service
- 1981 Research Assistant, Department of Physiology, the University of Texas Health Science at San Antonio
- 1979-1981 Laboratory Assistant, Department of Microbiology, the University of Texas Health Science at San Antonio

AWARDS AND HONORS

- 2008 Who's Who in America, 63rd Edition
- 2004, 2006 Who's Who Among America's Teachers
- 2001 National Science Foundation Scholarship (University of Texas at El Paso/Dissertation)
- 1997 Faculty Excellence Award – University of Texas at San Antonio Students and Disability Services
- 1984 American Association of University Women Scholarship

RESEARCH/SCHOLARLY/CREATIVE ACTIVITIES SUMMARY

REFEREED PUBLICATIONS:

(1) Journal Articles (bold names indicate supervised students)

1. O. W. Van Auken and J. K. Bush. 2011. Photosynthetic rates of two species of Malvaceae, *Malvaviscus arboreus* var. *drummondii* (wax mallow) and *Aboutilon Theophrasti* (velvetleaf). *Southwestern Naturalist* (in press).
2. Bush, J. K. and O. W. Van Auken. 2010. Competition between *Schizachyrium scoparium* and *Buchloe dactyloides*: The role of soil nutrients. *Journal of Arid Environments* 74:49-53. DOI 10.1016/j.jaridenv.2009.07.012.
3. Van Auken, O. W. and J. K. Bush. 2009. The role of photosynthesis in the recruitment of juvenile *Quercus gambelii* into mature *Q. gambelii* communities. *Journal of the Torrey Botanical Society* 136:465-478.
4. **Young, G. P.** and J. K. Bush. 2009. Assessment of the allelopathic potential of *Juniperus ashei* on the germination and growth of *Bouteloua curtipendula*. *Chemical Ecology* 35:74-80. DOI IO 10.1007/s100886-008-9585-1.

5. Bush, J. K. 2008. Soil nitrogen and carbon after twenty years of riparian forest development. *Soil Science Society of America Journal*. 72:815-822. DOI:1.2136/sssaj2007.0120.
6. Woodard, H. J., L. Hossner, and J. K. Bush. 2008. Ameliorating caustic properties of aluminum extraction residue to establish vegetative cover. *Journal of Environmental Health and Sciences*. 43:1157-1166.
7. Bush, J. K. 2008. Above- and belowground growth of seedlings of an early and late successional species in infertile and fertile soils. *Southwestern Association of Naturalist*. 53:39-44
8. Van Auken, O. W., J. K. Bush, **A. Richter**, and J. Karges. 2007. Structure of isolated populations of *Populus tremuloides* (quaking aspen) in the Davis Mountains of far-western Texas, USA. *Natural Areas Journal*. 27:303-312.
9. Bush, J. K., **A. Richter**, and O. W. Van Auken. 2006. Two decades of vegetation change on the terraces of a south Texas river. *Bulletin of the Torrey Botanical Club*. 133:280-288.
10. **Ryniker, K. A.**, J. K. Bush, and O. W. Van Auken. 2006. Structure of *Quercus gambelii* communities in the Lincoln National Forest, New Mexico, USA. *Forest Ecology and Management*. 233:69-77
11. Van Auken, O. W. and J. K. Bush. 2006. Competition between *Helianthus paradoxus* (puzzle sunflower or Pecos sunflower) and *Distichlis spicata* (saltgrass). *Phytologia*. 88:17-37
12. Bush, J. K. 2006. The role of soil moisture, salinity, and oxygen on the growth of *Helianthus paradoxus* (Asteraceae) in an inland salt marsh of west Texas. *Journal of Arid Environments*. 60:22-36; doi:10.1016/j.jaridenv.2005.05.007.
13. Bush, J. K. 2006. Abiotic factors affecting the growth of a threatened North American sunflower, *Helianthus paradoxus* (Asteraceae). *Plant Ecology*. 183:215-225. doi10.1007/s11258-005-9018-y.
14. Bush, J. K. and O. W. Van Auken. 2004. Relative competitive ability of *Helianthus paradoxus*, *H. annuus*, and *H. petiolaris* (Asteraceae) in varying soil salinities. *International Journal of Plant Sciences*. 165:303-310.
15. Van Auken, O. W. and J. K. Bush. 1998. Spatial relationships of *Helianthus paradoxus* (Compositae) and associated salt marsh plants. *Southwestern Naturalist*. 43: 313-320.
16. Bush, J. K. and O. W. Van Auken. 1997. The effects of neighbors and grazing on the growth of *Helianthus paradoxus*. *Southwestern Naturalist*. 42: 416-422.
17. Van Auken and J. K. Bush. 1997. The importance of neighbors, soil pH, phosphorus, and nitrogen for the growth of two C₄ grasses. *International Journal of Plant Sciences*. 158:325-331.

18. Van Auken, O. W. and J. K. Bush. 1997. Growth of *Prosopis glandulosa* in response to changes in aboveground and belowground interference. *Ecology*. 78:1222-1229.
19. Bush, J. K. and O. W. Van Auken. 1995. Interactions between seedlings of an early and late successional woody species. *Southwestern Naturalist*. 40:379-387.
20. Bush, J. K. and O. W. Van Auken. 1995. Woody plant growth related to planting time and clipping of a C₄ grass. *Ecology*. 76:1603-1609.
21. Van Auken, O. W., J. K. Bush and D. D. Diamond. 1994. Changes in growth of two C₄ grasses (*Schizachyrium scoparium* and *Paspalum plicatulum*) in monoculture and mixture: influence of soil depth. *American Journal of Botany*. 81:15-20.
22. Van Auken, O. W., J. K. Bush and D. D. Diamond. 1992. The role of light and nutrients in determining dominance of *Paspalum plicatulum* (Michx.) and *Schizachyrium scoparium* (Michx.) Nash, two C₄ grasses. *Bulletin of Torrey Botanical Club*. 119:401-406.
23. Van Auken, O. W., J. K. Bush and D. D. Diamond. 1992. Changes in species composition and biomass in the Coastal Prairie of Texas when light and nutrients are altered. *Canadian Journal of Botany*. 70:1777-1783.
24. Hossner, L. R., H. J. Woodard and J. K. Bush. 1992. Growth and selenium uptake of range plants propagated in uranium mine soil. *Journal of Plant Nutrition*. 15:2743-2761.
25. Van Auken, O. W. and J. K. Bush. 1992. *Diospyros texana* Scheele (Ebenaceae) seed germination and seedling light requirements. *Texas Journal of Science*. 44:167-174.
26. Van Auken, O. W. and J. K. Bush. 1992. Factors affecting the density and distribution of the pteridophyte *Selaginella lepidophylla* in the Chihuahuan Desert. *Southwestern Naturalist*. 37:274-279.
27. Bush, J. K. and O. W. Van Auken. 1991. Importance of time of germination and soil depth for *Prosopis glandulosa* seedling growth. *American Journal of Botany*. 87:247-257.
28. Van Auken, O. W. and J. K. Bush. 1991. Influence of shade and herbaceous competition on the seedling growth of two woody species. *Madroño*. 38:149-157.
29. Van Auken, O. W. and J. K. Bush. 1990. Importance of grass density and time of planting on *Prosopis glandulosa* seedling growth. *Southwestern Naturalist*. 35:411-415.
30. Van Auken, O. W. and J. K. Bush. 1990. Influence of light levels, soil nutrients, and competition on seedling growth of *Baccharis neglecta* (Asteraceae). *Bulletin of Torrey Botanical Club*. 117:438-444.

31. Van Auken, O. W. and J. K. Bush. 1990. Interaction of two C₃ and C₄ grasses with seedlings of *Acacia smallii* and *Celtis laevigata*. *Southwestern Naturalist*. 35:316-321.
32. Bush, J. K. and O. W. Van Auken. 1990. Growth and survival of *Prosopis glandulosa* seedlings associated with shade and herbaceous competition. *Botanical Gazette*. 151:234-239.
33. **Cohn, E. J.**, O. W. Van Auken, and J. K. Bush. 1989. Competitive interactions between *Cynodon dactylon* and *Acacia smallii* seedlings at different nutrient levels. *American Midland Naturalist*. 121:265-272.
34. Van Auken, O. W. and J. K. Bush. 1989. *Prosopis glandulosa* growth: influence of nutrients and simulated grazing of *Bouteloua curtipendula*. *Ecology*. 70:512-516.
35. Bush, J. K. and O. W. Van Auken. 1989. Soil resource levels and competition between a woody and herbaceous species. *Bulletin of Torrey Botanical Club*. 116:22-30.
36. Van Auken, O. W. and J. K. Bush. 1988. Dynamics of establishment, growth and development of black willow and cottonwood in the San Antonio River forest. *Texas Journal of Science*. 40:269-277.
37. Van Auken, O. W. and J. K. Bush. 1988. Competition between *Schizachyrium scoparium* (Michx.) Nash and *Prosopis glandulosa* Torr. *American Journal of Botany*. 75:782- 789.
38. Van Auken, O. W. and J. K. Bush. 1987. Influence of plant density on the growth of *Prosopis glandulosa* Torr. var. *glandulosa* and *Buchloe dactyloides*. *Bulletin of Torrey Botanical Club*. 114:406-415.
39. Van Auken, O. W. and J. K. Bush. 1987. Interspecific competition between *Prosopis glandulosa* Torr. (mesquite) and *Diospyros texana* Scheele. (Texas persimmon). *American Midland Naturalist*. 118:392-401.
40. Bush, J. K. and O. W. Van Auken. 1987. Some demographic and allometric characteristics of *Acacia smallii* in successional communities. *Madroño* 34:250-259.
41. Bush, J. K. and O. W. Van Auken. 1987. Light requirements for growth of *Prosopis glandulosa* seedlings. *Southwestern Naturalist*. 32:463-473.
42. Bush, J. K. and O. W. Van Auken. 1986. Changes in nitrogen, carbon, and other soil properties during secondary succession. *Soil Science Society of America Journal*. 50:1597- 1601.
43. Bush, J. K. and O. W. Van Auken. 1986. Light requirements of *Acacia smallii* and *Celtis laevigata* in relation to secondary succession. *American Midland Naturalist*. 115:118- 122.

44. Van Auken, O. W. and J. K. Bush. 1985. Secondary succession on terraces of the San Antonio River in south Texas. *Bulletin of Torrey Botanical Club*. 112:158-166.
45. Bush, J. K. and O. W. Van Auken. 1984. Woody species composition of the upper San Antonio River gallery forest. *Texas Journal of Science*. 36:139-149.

(2) Book Chapters and Other Publications

46. Bush, J. K. 2008. The potential role of mycorrhizae on the growth and establishment of *Juniperus* seedlings. Pages 111-130 In: O. W. Van Auken, editor. *Western North American Juniperus Communities: A Dynamic Vegetation Type*. Ecological Studies 196. Springer, New York.

(3) Conference Proceedings

47. Van Auken, O.W. and, J. K. Bush. 2007. The importance of competition in the isolation and establishment of *Helianthus paradoxus* (Asteraceae) In: McDonald, C. (ed.), *Rare plants of the Southwestern United States*; Las Cruces, NM: US Forest Service.

NON-REFEREED PUBLICATIONS:

(1) Book Chapters and Other Publications

1. Murray, K. E., J. K. Bush, J. K. Haschenburger, and R. H. French. 2007. *Technical and Field Guide: Management Practices of Natural Waterways*. Prepared for: Departments of Public Works and Development Services, City of San Antonio.
2. Van Auken, O. W., J. K. Bush, and S. A. Elliott. 2006. *Principles of Ecology Laboratory Manual*. 2nd edition. Pearson Education.
3. Van Auken, O. W. and J. K. Bush. 1995. *Ecology - Laboratory Manual*. Burgess Publishing. Minnesota.

(2) Conference Proceedings

1. Bush, J. K. and O. W. Van Auken. 2005. Competitive ability of *Helianthus paradoxus* (puzzle or Pecos sunflower). In: Delmatier, C.; Oxley, F. (eds.), *Texas Plant Conservation Conference - 2004*; Austin, Texas: Lady Bird Johnson Wildflower Center.
2. Van Auken, O.W. and J. K. Bush. 2004. Growth of *Helianthus paradoxus*, puzzle or pecos sunflower (Asteraceae), in response to disturbances In: Delmatier, C.; Oxley, F.; Clary, K.; Poole, J. (eds.), *Plant Conservation Conference - 2003 Proceedings*; Austin, Texas: Lady Bird Johnson Wildlife Center and United States Fish and Wildlife Service:1-21.
3. Van Auken, O. W. and J. K. Bush. 1984. Changes in plant communities of the San Antonio Missions National Historical Park. In: *Proceedings of the second annual Mission Research conference*, G. Cruz, Ed. pp. 28-33. USGPO.

SCHOLARLY PRESENTATIONS

PAPER PRESENTATIONS: Over 100 abstracts presented at various state, regional, and national meetings. Representatives are below. (**Bold names indicate supervised students**).

1. Bush, J. K. and C. A. Negrete. 2011. Educating through field-based research and career development to increase retention of students pursuing college degrees in agriculture. 57th Annual NACTA (North American Colleges and Teachers of Agriculture Conference. Edmonton, Canada. 55 (suppl. 1): 41.
2. **Conner, J.** and J. K. Bush. 2011. Volatilization of bornyl acetate, camphor, and bornyl acetate from *Juniperus ashei*. 114th Annual Meeting of the Texas Academy of Science. Austin, Texas.
3. **Cozort, J. L. M.** and J. K. Bush. 2011. Effects of grazing and soil nutrients on the competition between *Prosopis glandulosa* (Fabaceae) and *Buchloe dactyloides* (Poaceae). 114th Annual Meeting of the Texas Academy of Science. Austin, Texas.
4. **Matiella, T.** and J. K. Bush. 2011. The effects of carbon dioxide and air pollution on milkweed species (Asclepiadaceae) and monarch butterfly larvae and adults (*Danus plexippus*). 114th Annual Meeting of the Texas Academy of Science. Austin, Texas.
5. **Boeck, A. K.,** O. W. Van Auken, and J. K. Bush. 2010. Gas exchange rates of *Heliotropium tenellum* in central Texas cedar glades. 95th Annual Meeting of the Ecological Society of America. Pittsburgh, Pennsylvania.
6. **Boeck, A. K.,** O. W. Van Auken, and J. K. Bush. 2010. Gas exchange rates of *Heliotropium tenellum* in central Texas cedar glades. Hispanic Leadership in Agriculture and the Environment Annual Research Symposium. Corpus Christi, Texas.
7. **Boeck, A. K.,** O. W. Van Auken, and J. K. Bush. 2010. Gas exchange rates of *Heliotropium tenellum* in central Texas cedar glades. Provost Research Symposium. University of Texas at San Antonio, San Antonio, Texas.
8. **Boeck, A. K.,** O. W. Van Auken, and J. K. Bush. 2010. Gas exchange rates of *Heliotropium tenellum* in central Texas cedar glades. UTSA College of Science Research Conference, San Antonio, TX.
9. **Boeck, A. K.,** O. W. Van Auken, and J. K. Bush. 2009. Abiotic and biotic factors that influence the germination and growth of *Heliotropium tenellum*. Annual Meeting for SACNAS – Advancing Hispanics/Chicanos & Native Americans in Science, Dallas, TX.
10. **Conner, J. C.,** J. K. Bush, and J. Engelberth. 2010. Volatilization of camphor for *Juniperus ashei*. Provost Research Symposium. University of Texas at San Antonio, San Antonio, Texas.

11. **Cozort, J. L. M.** and J. K. Bush. 2010. Effects of grazing and soil nutrients on the competition between *Prosopis glandulosa* and *Buchloe dactyloides*. 95th Annual Meeting of the Ecological Society of America. Pittsburgh, Pennsylvania.
12. **Cozort, J. L. M.** and J. K. Bush. 2010. Effects of grazing and soil nutrients on the competition between *Prosopis glandulosa* and *Buchloe dactyloides*. Provost Research Symposium. University of Texas at San Antonio, San Antonio, Texas.
13. **Cozort, J. L. M.** and J. K. Bush. 2010. Effects of grazing and soil nutrients on the competition between *Prosopis glandulosa* and *Buchloe dactyloides*. UTSA College of Science Research Conference, San Antonio, TX.
14. **Cozort, J. L. M.** and J. K. Bush. 2009. Effects of grazing and soil nutrients on the competition between *Prosopis glandulosa* and *Buchloe dactyloides*. UTSA College of Science Research Conference, San Antonio, TX.
15. **Grotte, R.** and J. K. Bush. 2009. Role of abiotic factors on foraging activity patterns of western harvester ant – genus *Pogonomymex*. UTSA College of Science Research Conference, San Antonio, TX.
16. **Guerrero, J.** and J. K. Bush. 2009. A comparison of morning and afternoon water potential in *Platanus wrightii* and *Quercus hypoleucoides* in southeastern Arizona. UTSA College of Science Research Conference, San Antonio, TX.
17. **Guerrero, M.** and J. K. Bush. 2009. *Pinus ponderosa* age and growth rate in a dendrochronology field study in the Coronado National Forest, Arizona. UTSA College of Science Research Conference, San Antonio, TX.
18. **Morales, N.** and J. K. Bush. 2009. The effects of soil salinity and soil moisture on the growth of *Agalinis calycina*. UTSA College of Science Research Conference, San Antonio, TX.
19. **Mueller, M.**, Sharma, J. and J. K. Bush. 2009. Survey of benthic macro-invertebrates in Cibolo Creek Nature Preserve. UTSA College of Science Research Conference, San Antonio, TX.
20. **Shippy, T.** and J. K. Bush. 2009. Potential allelopathic effects of *Juniperus ashei* on germination and growth of *Bouteloua curtipendula*. UTSA College of Science Research Conference, San Antonio, TX.
21. Bush, J. K. and O. W. Van Auken. 2009. Competition between *Schizachyrium scoparium* and *Buchloe dactyloides*: the role soil nutrients. 112th Annual Meeting of the Texas Academy of Sciences, Junction, Texas.
22. Bush, J. K. and O. W. Van Auken. 2009. Competition between *Schizachyrium scoparium* and *Buchloe dactyloides*: the role of soil depth. 112th Annual Meeting of the Texas Academy of Sciences, Junction, Texas.

23. **Matiella, T.** and J. K. Bush. 2009. Effects of carbon dioxide on three species of milkweed and monarch butterfly larvae. 112th Annual Meeting of the Texas Academy of Sciences, Junction, Texas.
24. **Martinez, F.** and J. K. Bush. 2009. Changes in small mammal populations following a prescribed burn. 112th Annual Meeting of the Texas Academy of Sciences, Junction, Texas.
25. Van Auken, O. W. and J. K. Bush. 2009. Leaf photosynthesis of successional species below a *Quercus gambelii* canopy. 112th Annual Meeting of the Texas Academy of Sciences, Junction, Texas.
26. Van Auken, O. W. and J. K. Bush. 2009. Photosynthesis rates of *Aesculus pavia* var. *flavens* (red buckeye, Hippocastanaceae). 112th Annual Meeting of the Texas Academy of Sciences, Junction, Texas.
27. **Young, G. P.** and J. K. Bush. 2009. Assessment of the allelopathic potential of *Juniperus ashei* on germination and growth of *Bouteloua curtipendula*. 112th Annual Meeting of the Texas Academy of Sciences, Junction, Texas.
28. Bush, J. K. and O. W. Van Auken. 2008. A comparison of photosynthetic rates of two species of Malvaceae, *Malvaviscus arboreus* var. *drummondii* (turk's cap) and *Abutilon theophrasti* (velvet leaf mallow). 56th Annual Meeting Southwestern Association of Naturalists, Memphis, Tennessee.
29. Bush, J. K. and O. W. Van Auken. 2008. Effects of light intensity on photosynthetic parameters of *Quercus gambelii* (Gambel's oak) in open and woodland communities in New Mexico. 56th Annual Meeting Southwestern Association of Naturalists, Memphis, Tennessee.
30. **Martinez, F.** and J. K. Bush. 2008. Small mammalian population changes following a prescribed burn. 56th Annual Meeting Southwestern Association of Naturalists, Memphis, Tennessee.
31. Van Auken, O. W. and J. K. Bush. 2008. Photosynthetic rates of *Aesculus pavia* var. *flavescens* (red buckeye, Hippocastanaceae). 56th Annual Meeting Southwestern Association of Naturalists, Memphis, Tennessee.
32. Van Auken, O. W. and J. K. Bush. 2008. Leaf photosynthesis of successional species below a *Quercus gambelii* canopy. 56th Annual Meeting Southwestern Association of Naturalists, Memphis, Tennessee.
33. Bush, J. K. 2007. Changes in surface soil nitrogen and carbon during secondary succession: A twenty year perspective. 55th Annual Meeting Southwestern Association of Naturalists, Stephenville, Texas.
34. Bush, J. K. 2007. Growth of *Rhus virens* and *Rhus lanceolata* at varying light levels. 55th Annual Meeting Southwestern Association of Naturalists, Stephenville, Texas.

35. Bush, J. K. and O. W. Van Auken. 2007. Photosynthetic rates of *Quercus gambelii* (Gambel's oak) in open and woodland communities. 55th Annual Meeting Southwestern Association of Naturalists, Stephenville, Texas.
36. **Holderfield, C.** and J. K. Bush. 2007. Procedures for determining the germination of *Agalinis calycina*. 55th Annual Meeting Southwestern Association of Naturalists, Stephenville, Texas.
37. Sharma, J., R. Huettel, and J. K. Bush. 2007. Distribution of nematodes in a west Texas salt marsh. 55th Annual Meeting Southwestern Association of Naturalists, Stephenville, Texas.
38. **Young, G.** and J. K. Bush. 2007. The evaluation of a native grass (*Bouteloua curtipendula*) in relation to canopy position of *Juniperus ashei*: potential role of allelopathy. 55th Annual Meeting Southwestern Association of Naturalists, Stephenville, Texas.
39. **Young, G. P.**, J. Sharma, R. Huettel, and J. K. Bush. 2007. Survey of nematode communities associated with *Juniperus ashei*. Journal of Nematology 39:83.
40. Sharma, J., R. N. Huettel, and J. K. Bush. 2006. Spatial zonation of nematodes in a west Texas salt marsh. 45th Annual Meeting of the Society of Nematologists. Kauai, Hawaii.
41. **Young, G.** and J. K. Bush. 2006. The allelopathic potential of *Juniperus ashei*. 109th Annual Meeting of the Texas Academy of Science, Beaumont, Texas.
42. Bush, J. K., **F. A. Richter** and O. W. Van Auken. 2006. Community changes on terraces of a south Texas River. 109th Annual Meeting of the Texas Academy of Science, Beaumont, Texas.
43. **Richter, F. A.**, O. W. Van Auken, and J. K. Bush. 2006. Description of populations of *Populus tremuloides* (quaking aspen) in the Davis Mountains of western Texas, USA. 109th Annual Meeting of the Texas Academy of Science, Beaumont, Texas.
44. **Ryniker, K. A.**, O. W. Van Auken, and J. K. Bush. 2005. Demographic characteristics of *Quercus gambelii* stands in the White Mountain Wilderness, Lincoln National Forest, south central New Mexico. 108th Annual Meeting of the Texas Academy of Science, Edinburg, Texas.
45. Bush, J. K. and **M. Mikolajczyk**. 2005. Seed structure and germination of Leoncita False Foxglove (*Agalinis calycina*). 53st Annual Meeting Southwestern Association of Naturalists, Huntsville, Texas.
46. **Richter, F. A.**, J. K. Bush, and O. W. Van Auken. 2005. Age distribution of quaking aspen (*Populus tremuloides*) in the Davis Mountains. 53st Annual Meeting Southwestern Association of Naturalists, Huntsville, Texas.
47. **Ryniker, K. A.**, O. W. Van Auken, and J. K. Bush. 2005. Comparative stand structure of Gambel Oak (*Quercus gambelii*) stands in south central New Mexico. 53st Annual Meeting Southwestern Association of Naturalists, Huntsville, Texas.

48. **Silvester, B.D.** and J. K. Bush. 2004. Repeatability in measurements of photosynthesis and respiration in *Celtis laevigata* seedlings, 52st Annual Meeting Southwestern Association of Naturalists, San Antonio, Texas.
49. Bush, J.K., **F. A. Richter**, and O. W. Van Auken. 2004. Two decades of vegetation change on terraces of the San Antonio River, 52st Annual Meeting of the Southwestern Association of Naturalists, San Antonio, Texas.
50. Bush, J. K. and O. W. Van Auken. 1996. Importance of mycorrhizae in the competition between *Juniperus asheii* and *Quercus fusiformis*. Abstract Supplement to the Annual Botanical Society of America Meeting, Seattle, Washington.
51. Van Auken, O. W. and J. K. Bush. 1996. Temporal and spatial changes in density of *Helianthus paradoxus*. Abstract Supplement to the Annual Botanical Society of America Meeting, Seattle, Washington.
52. Bush, J. K. and O. W. Van Auken. 1995. Growth of *Prosopis glandulosa* in response to aboveground and belowground interference. Abstract Supplement to Ecology Society of America Meeting, Snowbird, Utah.
53. Van Auken, O. W. and J. K. Bush. 1995. The importance of soil pH, phosphorus, and nitrogen levels on the growth of two C₄ grasses. Abstract Supplement to Ecology Society of America Meeting, Snowbird, Utah.
54. Van Auken, O. W. and J. K. Bush. 1994. Factors that influence the growth of *Helianthus paradoxus*. Abstract Supplement to the Annual Botanical Society of America Meeting, Knoxville, Tennessee.
55. Van Auken, O. W. and J. K. Bush. 1994. Growth of *Prosopis glandulosa* roots in microsites with various nutrient levels. Abstract Supplement to Ecology Society of America Meeting, Knoxville, Tennessee.
56. Van Auken, O. W. J. K. Bush, and D. D. Diamond. 1992. Competitive growth of two C₄ grasses: influences of soil depth. Abstract Supplement to the Annual Botanical Society of America Meeting, Honolulu, Hawaii.
57. Van Auken, O. W., J. K. Bush, and D. D. Diamond. 1992. Changes in species composition and biomass in the Coastal Prairies of Texas when light and nutrients are altered. Abstract Supplement to Ecology Society of America Meeting, Honolulu, Hawaii.
58. Bush, J. K. and O. W. Van Auken. 1991. The effects of clipping and time of planting of grass on the mortality and growth of a woody seedling. Abstract Supplement to the Annual Botanical Society of America Meeting, San Antonio, Texas.

GRANTING ACTIVITIES (Funded \$2,091,000; Pending \$312,500)

- 2011-2013 United States Department of Agriculture/Southern Research Station
\$50,000
Principal Investigator
Instructional/Research
“The Role of Channel Instability on the Storage and Release of Seeds for Tree Biodiversity”
- 2011-2015 United States Department of Agriculture/Southern Research Station
\$100,000
Principal Investigator
Instructional/Research
“Using field based inquiry of nutrient fluxes in riparian forests for graduate training”
- 2011 University of Texas at San Antonio, Office of the Vice President for Research
\$3,000
Principal Investigator
Research
“Effects of herbivory on *Quercus stellata*”
- 2010-2012 United States Department of Agriculture
\$298,000
Principal Investigator
Research/Instructional
“Educating through field-based research and career development to increase retention of students pursuing college degrees in agriculture.”
- 2009-2010 University of Texas at San Antonio, Office of the Vice President for Research, Tenure-Track Research Award Competition
\$22,000
Principal Investigator
Research
“Synergistic effects of chemicals released from mountain cedar and global warming on native grasses and plant community structure”

- 2008-2010 United States Department of Agriculture
\$245,000
Principal Investigator
Research/Instructional
“A model to integrate mentoring between community entities to promote and enhance career development for underrepresented minorities in agriculture and natural resources”
- 2008-2012 United States Department of Agriculture
\$900,000
Co-Principal Investigator
Instructional/Joint Venture with Texas A & M and the US Forest Service
“Hispanic leadership in agriculture and the environment”
- 2006-2007 City of San Antonio
\$50,000
Co-Principal Investigator
Research/Service
“Management practices for natural waterways”
- 2005-2007 United States Department of Agriculture
\$350,000
Co-Principal Investigator
Instructional/Research
“Building a research-based bridge between an Hispanic serving institution and a land grant university for graduate studies in environmental sciences”
- 1994-1995 United States Fish and Wildlife Department
\$100,000
Co-Principal Investigator
Research
“Factors affecting the growth and distribution of *Helianthus paradoxus*”
- 1995 Faculty Development – University of Texas at San Antonio
\$2,000
Principal Investigator
Instructional
“Improving course instruction for general ecology”
- 1994 Faculty Development – University of Texas at San Antonio
\$2,000
Principal Investigator
Research
“*Helianthus paradoxus*”

- 1993 Nature Conservancy
\$2,000
Co-Principal Investigator
Research
“The use of fire to control *Festuca arundinaceae* and woody plants on Clymer Meadow, a tall grass prairie”
- 1993 Nature Conservancy
\$2,000
Co-Principal Investigator
Research
“Factors affecting the growth and distribution of *Helianthus paradoxus* – the puzzle sunflower”
- 1992 Nature Conservancy
\$1,500
Co-Principal Investigator
Research
“Distribution of *Festuca arundinaceae* in Clymer Prairie”
- 1992 Nature Conservancy
\$1,500
Co-Principal Investigator
Research
“Management requirements of a low density species with limited range”
- 1989 National Science Foundation
\$12,000
Co-Principal Investigator
Research
“Woody plant growth related to planting time and clipping of a C₄ grass”

OTHER STUDENT SUPPORT FUNDS

- 2011 Gift by Albert Vale, Cliff Waller, and Alvarez Research Excellence Fund for graduate students in natural resources and conservation.
\$50,000
Instructional/Research/Training

TEACHING ACTIVITIES

COURSES TAUGHT: (all at The University of Texas at San Antonio)

*Classes developed and added to the biology curriculum at the University of Texas at San Antonio

(1) Graduate:

Environmental Statistics
Advanced Plant Ecology
Experimental Design and Analysis
Conservation Biology*
Ornithology*

(2) Undergraduate:

Ecology
Field Biology
Desert Biology
Human Physiology
Ornithology*
Wildlife Biology*
Conservation Biology*
Plant Physiology
Plant Ecology
Biology II
Global Change
Experimental Design, Analysis and Presentation
Introduction to Environmental Systems I
Life Sciences Laboratory
Biology Laboratory
Ecology Laboratory
Field Biology Laboratory
Genetics Laboratory
Microbiology Laboratory
Physiology Laboratory
Plant Sciences Laboratory
Introduction to Environmental Systems I
Introduction to Environmental Systems II

CURRICULUM DEVELOPMENT: For the new (2005) bachelor's degree in Environmental Science at the University of Texas at San Antonio: Introduction to Environmental Systems I (lecture and lab), Introduction to Environmental Systems II (lecture and lab), Environmental Ecology (lecture and lab), Global Change (lecture and lab).

MENTORING: In 2008, I founded the TREE (Teaching and Research in Environmental Ecology) Program. The program's mission is to educate and assist students of diverse backgrounds to become leaders in natural resources and conservation, in order to protect our natural resources and promote sustainability. The program trains undergraduate and graduate students in scientific research, and develops leadership qualities through various workshops. The program has been funded, in part, by the United States Department of Agriculture. Eight undergraduate fellows of the program have completed bachelor's degrees, and four of those are currently working on advanced degrees, two are applying to graduate schools, and one is working for the US Fish and Wildlife Service. Three students have completed master's degrees, and one of those is working on her doctorate. One fellow has completed their doctorate in environmental science and engineering.

UNDERGRADUATE STUDENTS SUPERVISED: (an asterisk indicates the student had an abstract or publication from the research)

Bush, Brian	Groff, Ruth	Morales, Marlene
Carmona, Juan	Hammerem, David	Mueller, Blake
Chadwick, Jaime	Hauger, Shaunna	Reddy, A-Raju
Conner, Joshua*	Holderfield, Carrie*	Richter, Frederick*
Cozort, Jewell Lee	Lambeck, Carlton	Ryniker, Kimberlie*
Devin, Dawn	Lee, Sophia	Shippy, Tina*
Dowd, Matthew	McGowan, James	Silvester, Brandon*
Frail, Troy	McQuire, Nora	Sosa, Gabriela
Furuya, Mitsuru	Mikoljczyk, Mari*	Staudt, Shannon
Gonzalez, Claudia	Moore, Katherine	Wlodarczyk, Chris

THESES AND DISSERTATIONS SUPERVISED:

(1) Current:

Terri Matiella – Ph. D. Student, Environmental Science and Engineering

Nicholas Morales – M.S. Student, Environmental Science

(2) Completed:

Fernando Martinez – Ph. D. Student, Environmental Science and Engineering – 2011

Dissertation title: “Herbivory effects of *Quercus durandii*, *Quercus fusiformis*, and *Quercus texana*”

Terri Matiella – M.S. In Environmental Science – 2009

Thesis title: “The effects of carbon dioxide on three species of milkweed (Asclepiadaceae) and monarch butterfly (*Danaus plexippus*) larval feeding preference”

Gwen Young – Ph. D. Environmental Science and Engineering- 2007

Dissertation title: “Potential allelopathic effects of *Juniperus ashei* on native flora and fauna”

Martha Ariza – M. S. Environmental Sciences- 2007

Thesis Title: “Comparison of soil properties in *Acacia farnesiana* (huisache) and *Prosopis glandulosa* (honey mesquite) communities”

Fernando Martinez – M. S. in Environmental Sciences – 2006

Thesis title: “Small mammalian population changes following a prescribed burn”

Kim Ryniker – B. S. Honors College Thesis Student – 2005

Thesis title: “Structure of *Quercus gambelii* communities in the Lincoln National Forest, New Mexico, USA”

THESES AND DISSERTATIONS COMMITTEES:

(1) Current:

Eric Botts, M.S. Biology
Jennifer Guerrero, M.S. Environmental Science
Terri Nelson-Dickenson, M S. Biology

(2) Completed:

Anna Boeck, M. S. Biology
Wendy Cooley, M. S. Biology
Mitsura Furuya, M.S. Environmental Science
Jason Gagliardi, M.S. Environmental Science
Matthew Grunstra, Ph. D. Environmental Science and Engineering
Marcie Hart, M.S. Environmental Science
Helen Holdsworth, M.S. Environmental Science
Tracy Johnston, M.S. Environmental Science
Amando Nasto, M.S. Environmental Science
Justin Ng, M.S. Environmental Science
Evelynn Mitchell, Ph. D. Environmental Science and Engineering
Neal Simpson, M.S. Environmental Science
E Rob Wayne, Ph. D. Environmental Science and Engineering

SERVICE ACTIVITIES

All Institutional service activities while at the University of Texas at San Antonio (Note: Departmental Service from 2004-2007 – Department of Earth and Environmental Science; from 2007 to present –Office of Environmental Sciences).

UNIVERSITY SERVICE		
Administrative Title/Committee Served	Year	Committee Role
Departmental		
Director, Environmental Science Academic Programs	Present	
Undergraduate Advisor of Record, Environmental Science	2005-2007, 2010-Present	
Graduate Advisor of Record, Environmental Science	2010-Present	
Department Representative – State Employee Charitable Campaign	2007-2008	
Laboratory coordinator - Introduction to Environmental Systems I Laboratory I (ES 2021) and Introduction to Environmental Systems II Laboratory (ES 2031)	2005-2008	
Coordinator of Doctoral Student Teaching Assistants	2007	
<i>Ad-Hoc</i> Core Curriculum Committee for the Assessment by the Southern Association of Colleges and Schools Review	2008-2009	Chairperson
<i>Ad-Hoc</i> Departmental Committee/ Environmental Science Section/ 08-10 Undergraduate Catalog Revision	2006	Chairperson
<i>Ad-Hoc</i> Faculty Search Committee for Aqueous Geochemist Position	2008-2009	Member
<i>Ad-Hoc</i> Committee – Environmental Science Group Strategic Plan Committee	2008	Member
<i>Ad-Hoc</i> Curriculum Committee	2008	Member
<i>Ad-Hoc</i> Committee – Earth and Environmental Science Self Study	2006-2007	Member
<i>Ad-Hoc</i> Scholarship Committee	2004-2005, 2007	Member
College (College of Sciences)		
Representative – Texas Space Consortium	2006 – Present	
Graduation Marshall	2008 – 2010	
<i>Ad-Hoc</i> Summer Research Conference Organization Committee	2008	Member
<i>Ad-Hoc</i> Scholarship Committee	2007, 2008	Member
<i>Ad-Hoc</i> Graduate Student Recruitment Committee	2007	Member
<i>Ad-Hoc</i> Strategic Plan Committee – Faculty and Staff	2007	Member

Center (Center of Research and Teaching in the Sciences)		
Director, Teaching and Research in Environmental Ecology (TREE) Program	2008-Present	
Co-Director, Hispanic Leadership in Agriculture and the Environment Program	2008-Present	
<i>Ad-Hoc</i> Search Committee for Web-designer position	2008, 2009	Chairperson
Advisory Board	2008-Present	Member
Inter-College Level		
Doctoral Studies Committee - Environmental Science and Engineering Doctoral Program	2008-2011	Member
University Level		
Core Curriculum Committee	2010-Present	Member
Core Curriculum Assessment Committee	2008-Present	Member
<i>Ad-Hoc</i> Fall Convocation Committee	2008, 2009, 2010, 2011	Member
<i>Ad-Hoc</i> University Creed Committee	2010-Present	Member
<i>Ad-Hoc</i> University of Texas at San Antonio Future Commencement Task Force	2009	Member
Faculty Grievance Committee	2004-2005, 2006-2007	Member
Faculty Senate <i>Ad-Hoc</i> Subcommittee – Evaluation, Merit, Rewards, and Workload	2005	Member
Faculty Senate	2004	Member

PROFESSIONAL SERVICE ACTIVITIES	
Regional	Year
Associate Editor, Southwestern Naturalist	2008-Present
Exxon/Mobil National Science Fair – University of Texas at San Antonio Reception Hostess for the College of Science.	2006
Associate Editor, Texas Journal of Science	2004-2005
Reviewer for Student Research Proposal for the Texas Academy of Sciences.	2008
National/International	
Reviewer and Interviewer for the David H. Smith Conservation Research Fellowship Program	2006-2011
Reviewer for National Science Foundation	2010
Reviewer of for the Oak Ridge Associated Universities Ralph E. Powe Junior Faculty Enhancement Award.	2009
Reviewer for the following journals: Allelopathy Journal, American Journal of Botany, Annals of Forest Science, BioScience, Ecoscience, Forest Ecology and Management, Journal of Arid Environments, Journal of Coastal Research, Journal of Ecology, International Journal of Plant Sciences, Plant and Soil, Plant Ecology, Plant Growth Regulation, Soil Science Society of America Journal, Texas Journal of Science	2004-2011