



## ABSTRACTS

Floristics and community composition of riparian buffer zones of different size for the Texas Colorado River

Matthew Sheik<sup>a,b</sup> and Allan Nelson<sup>b</sup>

<sup>a</sup> Department of Biological Sciences, Marshall University, Huntington, WV 25755

<sup>b</sup> Department of Biological Sciences, Tarleton State University, Stephenville, TX 76402

Riparian zones serve as important ecotones between aquatic and terrestrial ecosystems. These zones contain high levels of biodiversity and play a key role in maintaining the health of both aquatic and terrestrial lifeforms. The purpose of the study was to see if there was any difference in community composition between a ‘broad’ versus ‘narrow’ riparian zone. The two study sites lie within the Lampasas Cut Plain ecoregion and Cross Timbers and Prairies ecoregion in Mills County, Texas. Data for the broader zone was taken from a previous study and data for the narrow zone was collected from two 12.5m by 50m quadrats that ran along the river with the longest side running parallel with the river bank. Plants were also analyzed to determine new county records and/or major range extensions for Mills and San Saba counties. It was found that the dominant tree species for the broader zone was Cedar elm (*Ulmus crassifolia*) and had a lower richness and larger trees as well as lower Shannon-Index, Evenness, and Richness values than the narrow zone. This suggests that the broader zone may have reached the successional climax, which is reported to be Cedar Elm/Sugarberry. Absence of sugarberry is most likely due to herbivore disturbance. Cedar elm, Green Ash (*Fraxinus pennsylvanica*) and Pecan (*Carya illoinesnsis*) were dominant trees within the narrow zone which is younger and moving toward climax. A total of twenty county records were collected for Mills and San Saba counties with Pencil Cactus (*Opuntia leptocaulis*), Bermuda Grass (*Cynodon dactylon*) and Red Mulberry (*Morus rubra*) being major range extensions.