

LIGHT REQUIREMENTS OF BRACTED TWISTFLOWER (*STREPTANTHUS BRACTEATUS*)

Norma Fowler¹

¹Section of Integrative Biology, University of Texas at Austin, Austin, TX 78712

One of the challenges of conserving endangered species is determining their habitat requirements. As a species becomes rarer, habitat destruction and habitat degradation can make the remaining occupied habitat a poor guide to the species' habitat preferences. Populations in the more favorable sites may have been lost due to development, agriculture, etc. Furthermore, perennial species and species with persistent seed banks may persist in sites that were once favorable but no longer are.

I tested the hypotheses that *Streptanthus bracteatus*, which in Travis County is now found mostly in closed woodlands, does not require a closed canopy and that more open habitat would be more favorable. A transplant experiment was conducted in the spring of 2009 in which the understory was thinned in 10 of 20 paired woodland plots. Some of the plots had lost canopy cover due to oak wilt, increasing the range of light levels. The results of this experiment indicate that *S. bracteatus* is favored by light levels higher than those found in the undisturbed plots. These results are consistent with the results of earlier experiments conducted by E. Ramsey with plants of this species grown outdoors in pots.

Other species of *Streptanthus* are adapted to disturbances and other open sites. It may be that *S. bracteatus* also evolved as a disturbance-adapted species, perhaps of recently-burned woodlands. Our results suggest that increasing densities of *Juniperus ashei* in central Texas woodlands are degrading its remaining habitat (in addition to the known threats from deer, mountain bikes, development, etc.).