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Habitat requirements of the bracted twistflower, *Streptanthus bracteatus* (Brassicaceae), a rare plant of central Texas

PROGRESS REPORT

submitted by:

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Progress to date

• In close consultation with city staff (Bill Reiner, Lisa O'Donnell), the Vireo Preserve on Loop 360 has been selected as the site of this experiment. I am particularly appreciative of the time that Bill, Lisa, and other city staff members spent with me investigating possible sites for this experiment. I feel confident that the Vireo Preserve is the best option for this experiment, because of its location relative to existing *Streptanthus* populations (neither too near nor too far), its security, its geology (the presence of a Walnut Formation cap over the Glen Rose), and the possibility of cutting/trimming woody plants there.

• Together with Lisa O'Donnell, we have identified 10 experimental plots where *Streptanthus* transplants will experience relatively high light conditions. We also identified locations for ten control plots, one next to each experimental plots, in deep shade. Four of the ten experimental plots take advantage of canopy openings created by oak wilt. The other six use natural canopy openings.

• Lisa and I worked out a protocol for cutting/trimming woody plants to open up the sub-canopy in the high light plots. I wrote it up and submitted a written copy to Lisa, who approved it. We have begun to cut/trim woody plants.

Cutting/trimming will be primarily of relatively fast-growing species that regrow readily, especially *Ilex* and *Rhus* species. Only small (stem diameter < 1") *Juniperus ashei* will be cut down. Dead branches of all species will be freely trimmed. Live branches of *Quercus buckleyi* will not be cut.

• We are now growing the *Streptanthus* plants (still seedlings at present) that will be transplanted into the experimental plots.

• We are still designing a watering system for the experiment. It will involve temporary water tanks along the road, hoses from them down to the plots, and some sort of drip irrigation (probably 'leaky hose') in the plots. The plot locations were selected to make gravity-fed watering possible. Of course, we hope that there will be enough rainfall during the experiment to make watering unnecessary.