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Oral Presentation

THE GENETIC STATUS OF THE BRACTED TWISTFLOWER, *STREPTANTHUS BRACTEATUS* (BRASSICACEAE): AN IMPERILED GEOENDEMIC SPECIES OF THE BALCONES CANYONLANDS

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Abstract—The Bracted Twistflower, *Streptanthus bracteatus* Gray (Brassicaceae) is a rare geoenemic plant that is restricted to sites near the Balcones Escarpment of central Texas that are also undergoing rapid urbanization and other human impacts. Only a handful of remaining populations remain (± 15), with eight of these on public land (where some of the most severe impacts are occurring). Several of these populations are threatened or have undergone severe and well-documented population declines. In an effort to avert listing of this species under the ESA, a consortium of government agencies, educational institutions, NGOs, and local volunteers has been organized to support, manage and augment existing populations, and to establish new populations in suitable protected habitat. As a component of this effort, we used DNA-based microsatellite markers to ascertain the population-genetic status of potential sources of seed for the establishment and augmentation of persistent populations.

Our studies indicate that several populations of the species (but not all) have undergone severe or catastrophic population declines in their recent evolutionary history. Several of the smaller populations show a level of extreme inbreeding that highly unusual for the species as a whole. Overall, there does not appear to be dramatic genetic subdivision between populations, suggesting that seed banking and translocation will be a viable approach to conservation of this species.