

RARE PLANT SURVEY AND GENERAL PLANT INVENTORY
OF FRITZ HUGHES PARK, TRAVIS COUNTY, TEXAS,
SUMMER 1996

23 September 1996 Draft

During the summer of 1996, botanical surveys were conducted on all Travis County parks west of the Balcones Escarpment. The goals of these surveys were to locate populations of rare, unusual, or management-sensitive plant species and, at each park, to conduct a general inventory resulting in an annotated checklist of all plant species observed. Fritz Hughes Park was visited for approximately 1 hour on 3 July 1996.

Location/Physical Setting

Fritz Hughes Park is a tiny five acre tract along the eastern shoreline of Lake Austin (the impounded Colorado River) just less than one rivermile south of Mansfield Dam. It is a classic "postage-stamp park" in that it is tiny and surrounded by private residential development which, although relatively unobtrusive at the moment and having little negligible effect on the park's few extant botanical resources, will undoubtedly increase in density with the lakeward spread of urban Austin. This park, if retained at all as public land, is destined for a future of increased development and decreased biodiversity. Nonetheless, it is an interesting little park that is home to a couple of interesting assemblages of plant species.

Most of this tract is underlain by Pleistocene terrace deposits of the Colorado River (Garner et al., 1976; Proctor et al., 1981). These sandy deposits form the flat upper terrace of the eastern four-fifths of the park. The narrow lower terrace along the shoreline of Lake Austin at the west end of the park is mantled by silty Recent alluvium. Just south of the entrance road in the extreme southeast corner of the park is a low hill a few feet taller than the upper terrace on which Glen Rose Limestone (Cretaceous) is exposed. Elevation within the park ranges from a little over 540 feet down to 483 feet, the normal pool level of Lake Austin.

Three soil mapping units are indicated on pertinent portions of sheet 32 of the Travis County soil survey (Werchan et al., 1974). Soils of the upper terrace are mapped as Hardeman fine sandy loam, 2 to 5 percent slopes. Hardeman soils are deep well drained sandy loams that developed over old alluvium. The surface layer is brown fine sandy loam; the underlying layer is light brown fine sandy loam. The soils are calcareous, mildly alkaline Typic Ustochrepts and are assigned to the Sandy Loam range site. Soils of the slope between the upper and lower terraces are mapped as Hardeman fine sandy loam, 5 to 12 percent slopes. Soils on the Glen Rose outcrop are Brackett soils and Rock outcrop, steep. Brackett soils are shallow, well drained soils of limestone uplands. The surface layer is light brownish-gray gravelly clay loam or gravelly loam

about 4 inches thick; the next layer, about 10 inches thick, is pale-brown clay loam. These soils are calcareous, moderately alkaline Typic Ustochrepts and are assigned to the Steep Adobe range site.

Vegetation

The vegetation of the upper terrace of Fritz Hughes Park is best described as a lawn dotted with shade trees and a concrete basketball court. This lawn is mown on a regular basis but has not been sodded with non-native grasses (such as St. Augustine grass, *Stenotaphrum secundatum*) and thus still supports a number of native species. Many are weedy generalists found in any unshaded disturbed upland situation in central Texas. But a few are weedy species that exhibit great fidelity to sandy soils, which in Travis County are essentially found only on ancient and modern river terraces. The current survey, conducted in early July after and a prolonged winter-spring drought, turned up only one such species, including radiant copperleaf (*Acalypha radians*), but others should be expected. Principal shade trees include hackberry (*Celtis laevigata* and/or *Celtis reticulata*), honey mesquite (*Prosopis glandulosa*) and Ashe juniper (*Juniperus ashei*). In the shade of these trees, particularly in the southwest corner of the upper terrace where hackberries are closely spaced, straggler daisy (*Calyptracarpus vialis*) is the dominant ground cover.

Decidedly different is the vegetation of the low Glen Rose outcrop in the southeastern corner of the park. This area supports a little finger of Ashe juniper woodland typical of Glen Rose slopes above the river terrace. A list of limestone upland species found here but absent from terrace deposits elsewhere in the park would include Texas kidneywood (*Eysenhardtia texana*), agarito (*Berberis trifoliolata*), nodding lettuce (*Chaptalia nutans*), Lindheimer milkwort (*Polygala lindheimeri*) and Alabama lipfern (*Cheilanthes alabamensis*).

Between the upper terrace and the lower terrace is a fairly steep alluvial slope which supports a narrow strip of dense deciduous woodland clearly dominated by hackberry. An assortment of shrubs and small trees are present (see park plant list), most of which intermingle with the lower part of the canopy, giving the woodland strip an appearance of impenetrability that is accentuated by entangling mass of woody vines including Mustang grape (*Vitis mustangensis*), Carolina snailseed (*Cocculus carolinus*), and ivy treebine (*Cissus incisa*).

Between this slope and the shoreline is a narrow lower terrace that is mostly dedicated to parking lot and access to a boat ramp. Where present, soils reflect their proximity to the water table. However, for whatever reason, the vegetation of the lower terrace is currently rather mundane and weedy.

Much more interesting is the vegetation of the shoreline itself, most of which is shaded either by black willow (*Salix nigra*) or by thickets of hackberry, Mustang grape, and roughleaf dogwood (*Cornus drummondii*). These perennially wet soils support a fairly high number of emergent aquatic and riparian species (see park plant list). Two of these species, sandpaper vervain (*Verbena scabra*) and Frank sedge (*Carex frankii*) have seldom been collected in Travis County,

perhaps because suitable habitat along the shoreline of Lake Austin is largely inaccessible to boatless botanists.

Target Rare Plant Species

Six rare plant species were sought in appropriate habitat at all of the sixteen parks included for survey during this project: Texas amorpha (*Amorpha roemerana*), Texabama croton (*Croton alabamensis* var. *texensis*), Glass Mountains coral-root (*Hexalectris nitida*), Heller marbleseed (*Onosmodium helleri*), canyon mock-orange (*Philadelphus ernestii*), and Buckley tridens (*Tridens buckleyanus*). A seventh rare plant species, bracted twistflower (*Streptanthus bracteatus*), cannot be detected during summer of a drought year and was essentially omitted from this project. Information about the relative rarity, distribution, habitat, etc., of each of these species will be provided in a separate appendix at the end of the set of park reports.

Results of Rare Plant Surveys

Fritz Hughes Park contains no suitable habitat for any of the six target rare plant species mentioned above. During the visit of 3 July 1996 virtually all of this small park was examined, and no freak occurrences of any rare plant species came to light. None are anticipated.

Results of General Plant Inventory

About 118 plant species were observed at Fritz Hughes Park during the survey of 3 July 1996. A significant number of these species (17, or 14%) are non-native; none is endemic to the Edwards Plateau or to the state of Texas. Information about the status of all of these species is provided in the preliminary checklist attached to this report. A more complete inventory of the herbaceous flora will require additional visits during April and May of a normal year.