

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

21 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. Tom Hughes Park was visited for approximately 2 hours on 3 July 1996 and for about 1 hour on 9 August 1996.

Location/Physical Setting

Tom Hughes Park is one of three small parcels in the county park system that bear the name of various members of the Hughes family. This five-acre tract lies on steep slopes along the eastern shoreline of Lake Travis about a mile and a half east-northeast of Mansfield Dam. Access to the site is via Park Road which, a couple of miles and several hairpin turns east of its junction with Marshall Ford Road, terminates in the park's parking lot.

Like most of the county parks along the shoreline of Lake Travis, Tom Hughes Park is underlain entirely by hard limestones and softer marls of the Glen Rose Formation (Cretaceous). Differential weathering of these strata generally produces a stairstep topography wherein the steps (benches) are underlain by hard limestone and the risers by softer marls. Such is the case at Tom Hughes Park. The parking lot lies on one of the Glen Rose benches, which was undoubtedly widened a bit during construction. The short slope upward to the eastern park boundary is moderate, but slopes toward the lake can only be described as steep. In a short horizontal distance the elevation within the park drops from a little above 780 feet down to 681 feet, the normal pool level of Lake Travis.

Only one soil mapping unit is indicated on pertinent portions of sheet 32 of the Travis County soil survey (Werchan et al., 1974): 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 dominant vegetation in this park is a mixed evergreen-deciduous woodland dominated by Ashe juniper (*Juniperus ashei*) and various hardwoods, including Texas oak (*Quercus buckleyi*),

plateau live oak (*Quercus fusiformis*), and Texas ash (*Fraxinus texensis*). This woodland is generally short in stature, with larger trees seldom exceeding 15 feet in height. Cover in this canopy layer is patchy, but cover in the subtending shrub layer is quite high. Woody species diversity is also greater in this layer, particularly on steep rocky slopes below the parking lot. Common components include Lindheimer silk tassel (*Garrya ovata* subsp. *lindheimeri*), shin oak (*Quercus sinuata* var. *breviloba*), Mexican buckeye (*Ungnadia speciosa*), evergreen sumac (*Rhus virens*), shrubby boneset (*Eupatorium havanense*), brush myrtlecroton (*Bernardia myricifolia*), and Texas colubrina (*Colubrina texensis*).

Shrub cover is considerably reduced on the south-facing slope above the entrance road at the south end of the park. This drier site supports a small area of a midgrass grassland type often found on Glen Rose slopes. Common species include seep muhly (*Muhlenbergia lindheimeri*) and tall grama (*Bouteloua pectinata*), with little bluestem (*Schizachyrium scoparium*) and various shortgrass of lesser importance.

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 amorphia (*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

Populations of two of the target species, Texas amorphia and Heller marbleseed, were encountered at Tom Hughes Park; these populations are discussed below. None of the other target species was encountered.

The principal target during the August visit was Glass Mountains coral-root. Despite painful scrutiny beneath almost all of the Ashe junipers within the park (except, it must be admitted, those on the dangerously steep slope south of the entrance road at the southern tip of the park), no *Hexalectris* of any sort was encountered. This survey should have revealed any populations of Texabama croton or canyon mock-orange; both are apparently absent from the park. Surveys at other seasons will be required to determine the presence of bracted twistflower and Buckley tridens.

TEXAS AMORPHA AT TOM HUGHES PARK. Two clusters of one of the species, Texas amorphia, were encountered along the eastern perimeter boundary fence north of the parking lot. Thirteen stems,

all emanating from a circle less than 3 feet in diameter, were found 20 feet west of the fence from a point between the fourth and fifth “no trespassing” sign up from the lakeshore bluff, or perhaps 150 feet downslope from the parking lot. These stems, which represent an unknown number of individual plants, ranged in size from about 5 feet down to about 4 inches. All were in a clump of not particularly robust Ashe juniper and Texas oak which provided relatively light shading. A second cluster of Texas amorpha was found about 100 feet upslope, i.e., ca. 50 feet downslope from the parking lot, and 2 to 10 feet west of the fence. This cluster contained 9 stems ranging in height from 9-10 feet down to 4 inches. Like the first, this cluster was also under Texas oak and Ashe juniper, but shading in this spot was considerably higher. Several large amorpha shrubs can be seen on the other side of the fence just a few feet below the parking lot; one stem of one of these shrubs has grown through the fence onto the park side.

HELLER’S MARBLESEED AT TOM HUGHES PARK. Ten stems of this rare endemic, representing probably 5 plants, were observed at Tom Hughes Park on 3 July 1996. (A larger number of stems and plants might be found earlier in the season.) Eight stems were found along the east (or right-hand) side of a foot trail leading north (downslope) from the parking lot. To locate this particular trail, begin at the swinging pipe gate at the east end of the parking lot and walk 53 paces along the south end of the white lines delimiting parking spaces, then turn and walk directly to the edge of the woodland. To locate the plants along this trail, walk downslope about 40 paces to a point at which the trail bifurcates. Heller’s marbleseed is found on the right side of the right fork about 6 to 10 feet from the split. The other two stems were found by walking the same contour to the east perhaps 100 feet. All plants were found in loamy soil in deep shade of this rather diverse juniper-oak woodland or shrubland.

Results of General Plant Inventory

Approximately 128 plant species have been observed within the park to date— a fraction of the number that might be found within the park during spring surveys in a wetter year. Nonetheless, the current tally includes (in addition to the marbleseed and amorpha discussed above) six other Edwards Plateau endemics: plateau gerardia (*Agalinis edwardsiana*), blackfoot spurge (*Chamaesyce angusta*), sevenleaf creeper (*Parthenocissus heptaphylla*), Engelmann sage (*Salvia engelmannii*), mountain grape (*Vitis monticola*), and twistleaf yucca (*Yucca rupicola*). None is considered a species of conservation concern. Information about the occurrence of these species within the park can be gleaned from the attached park plant list; general information about these endemics will be presented in a separate appendix at the end of the set of park reports.