

## GRASSES OF PHIL HARDBERGER PARK



**BIG BLUESTEM**  
*Andropogon gerardii*



**INDIANGRASS**  
*Sorghastrum nutans*



**SWITCHGRASS**  
*Panicum virgatum*



**LITTLE BLUESTEM**  
*Schizachyrium scoparium*



**EASTERN GAMAGRASS**  
*Tripsacum dactyloides*



**CANADA WILDRYE**  
*Elymus canadensis*



**SIDEOATS GRAMA**  
*Bouteloua curtipendula*



**CEDARSEDGE**  
*Carex planostachys*



**TEXAS WINTERGRASS**  
*Nassella leucotricha*



**KR BLUESTEM**  
*Bothriochloa ischaemum*



**AUSTRALIAN BLUESTEM**  
*Bothriochloa bladhii*



**JOHNSONGRASS**  
*Sorghum halepense*

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Note: Photos taken in Phil Hardberger Park West by Floyd Waller and Master Naturalist Wendy Drezek.

**Most of us, who are non-botanist lay persons, do not take time to observe the beauty and the structure or diversity of grasses in nature.** In the city, few people stop to think of the importance of the grass family in their daily lives. For those fortunate to have a lawn, the concern is rather to keep it mowed, watered and fertilized, or even just to keep it alive in our frequent years of drought. In nature, grass is just grass--cows eat it, wildlife take shelter in it, and wildfires burn it.

The Phil Hardberger Parks offer the city-dweller the opportunity to experience some of the diversity of grasses and other flora in relatively natural settings. PHP (West) has an additional attraction in the restoration project of a Prairie-Savanna site where an area has been cleared, re-seeded and re-planted with the desirable native grasses that would have occurred in early times. This area will exhibit the greatest variety of species, including some which are often hard to find in native rangeland due to their loss from overgrazing by livestock.

The Prairie-Savanna site offers a collection of tall and mid-height grasses that naturally occur in that vegetation type stretching through the middle of the United States from Canada to Texas. The "big four" most desirable prairie grasses are:

Big Bluestem (*Andropogon gerardii*)  
Indiangrass (*Sorghastrum nutans*)  
Switchgrass (*Panicum virgatum*)  
Little Bluestem (*Schizachyrium scoparium*)

These are considered the "tall" grasses of the Tall-grass Prairie region and typically grow in excess of three feet, often up to five or six feet or more. Big Bluestem is often called "turkeyfoot," because of the appearance of the seed head, which has three to five branches resembling the toes of a turkey. Indiangrass is sometimes called Yellow Indiangrass, because when it is flowering the seed head is covered by brilliant yellow stamens; otherwise, the seed head is recognized by its golden, tawny-brown color. Switchgrass can often be spotted by its larger bunches, with the bluish-green color of its wide, flat, leaf blades and its open, spreading, many-branched, small-seeded top. Little Bluestem is usually not quite as tall as the other three species, commonly 2.5 to 3 feet. It occurs in dense clusters of stiffly erect stems and narrow leaves that look like long-bristled brooms when they mature in late summer.

Other mid-height grasses in this area are Eastern Gamagrass (*Tripsacum dactyloides*) and Purpletop (*Tridens flavus*). Eastern Gamagrass is a relative of cultivated corn or maize. It forms large basal bunches of wide leaves and leaning stems with two or three branched seed heads with tips that resemble corn tassels. Purpletop is a plant about 2.5 to 3.5 feet tall with flat, dark green leaves and a multi-drooping, branched seed head that is usually dark wine or purple-colored, with its lower stem and branches covered with a waxy varnish that attracts dust. Among the mid-height grasses, Canada Wildrye (*Elymus canadensis*) and Virginia Wildrye (*Elymus virginicus*) are two cool-season grasses that resemble both one another and cultivated wheat or rye. Canada Wildrye has a nodding seed head with curving, curling awns or bristles. Virginia Wildrye usually has a short, stiff seed head with straight, stiff awns.

A very important, mid-height grass that occurs almost everywhere throughout the continental US is one that has been adopted to represent our state of Texas, since it occurs in all regions of our state. This distinctive plant is Sideoats Grama (*Bouteloua curtipendula*), which is easily recognized by its short inflorescence (seed head) branches, which when mature tend to hang in a single drooping row on one side of the stem, giving rise to the common name. Other important mid-height grasses are Texas Cupgrass (*Eriochloa sericea*) and Silver Bluestem (*Bothriochloa laguroides* var. *torreyana*). Texas Cupgrass grows in dense, dark green bunches with its short inflorescence branches tightly appressed to the main stem. Silver Bluestem can be spotted from a distance by its shiny, silver-white, 2 to 3 inch, spike-like seed head.

The general vegetation of PHP (West) is a Live Oak woodland of varying density and supplemental understory of Ashe Juniper and Texas Persimmon. In many areas the tree canopy is so dense that there is very little understory vegetation, and the grasses are replaced with a grass look-alike. Cedarsedge (*Carex planostachys*) looks like a very low-growing grass with waxy, very bright green leaves. Throughout the park in the less dense areas, the natural understory grass is Texas Wintergrass (*Nassella leucotricha*), commonly called "speargrass" by the layman, since in late spring its long-awned, sharp-pointed seeds are often thrown by children as "spears," which can stick in clothing. The remainder of the year, this grass, which stays green year-round, is recognized by dense, narrow leaves which are rough to the touch.

Also occurring randomly throughout this area are other short to mid-height grasses, Texas Tridens (*Tridens texanus*), Hall's Panicum (*Panicum hallii*), Southwestern Bristlegrass (*Setaria scheelei*), and Purple Threeawn (*Aristida purpurea*). Along trails in PHP (West) is the ubiquitous, invasive grass King Ranch or KR Bluestem (*Bothriochloa ischaemum*), which is recognized by its straw-colored, slender stems topped by 5-7 finger-like branches of the fuzzy seed head.

Whereas the western section of the park is more of a somewhat drier upland, the eastern section of the park along Blanco Road is a little more moist bottomland of Live Oak, Cedar Elm and Texas Persimmon. The common understory here is again mostly Texas Wintergrass with a smattering of Canada Wildrye and Southwestern Bristlegrass. The more open areas support a mixture of short to mid-height grasses including Hall's Panicum, Texas Tridens, Purple Threeawn and Silver Bluestem.

There is an invasion of the low meadows or swales in the east side of the park by another Old World bluestem, in this case, Australian Bluestem (*Bothriochloa bladhii*), a large relative of KR Bluestem. Both of these bluestems were introduced into south Texas in the 1940s-50s for livestock grazing and erosion control and are now widely invasive. Another invasive grass found along ditches, but of a much earlier history, is the widespread Johnsongrass (*Sorghum halepense*). Johnsongrass is mid-height to tall in stature, showing dark green leaves with a distinctive whitish midvein. The seed heads are open and multi-branched with moderately large grains with bent awns.

**Taking time from walking or jogging in the parks to observe all the variations in the grasses can be a very rewarding experience in getting "closer" to nature as this picture of the savanna of Phil Hardberger Park shows.**



**TWO ADDITIONAL MID-HEIGHT GRASSES FOUND IN THE PARK:**  
**SILVER BLUESTEM** (*Bothriochloa laguroides* var. *torreyana*) (left)  
**TEXAS CUPGRASS** (*Eriochloa sericea*) (right)



**THREE MORE EXAMPLES OF SHORT TO MID-HEIGHT GRASSES FOUND RANDOMLY THROUGHOUT THE PARK (photos left to right):**

**SOUTHWESTERN BRISTLEGRASS** (*Setaria scheelei*)  
**HALL'S PANICUM** (*Panicum hallii*),  
**PURPLETOP** (*Tridens flavus*)