



United States Department of Agriculture  
Natural Resources Conservation Service

*Helping People Help The Land*

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# The Reverchon Naturalist

*Recognizing the work of French botanist Julien Reverchon, who began collecting throughout the North Central Texas area in 1876, and all the botanists/naturalists who have followed ...*

## Blackland Prairie Harvest

*Story by Znobias Wootan  
Native American Seed Company*

Native Prairies once covered 40 percent of the United States extending from Canada to the Gulf of Mexico. Now, 99 percent of the 142-million acres of native habitat is gone. Because the rich soils are ideally suited for agriculture, the vast North American Tallgrass Prairie has been either cultivated or paved over to accommodate human expansion. Only 1 percent remains within isolated, small remnants, and of this remaining 1 percent only .004 percent is in Texas.

The rarest of all the prairie ecosystems is the Blackland Prairie. There are only 3,000 acres preserved of the historic 12-million acres of Blackland Prairie that once existed. As a result, two plant communities that are represented in the Blackland Prairie Ecosystem, including the Little Bluestem - Indiangrass community, along with the Eastern Gamagrass - Switchgrass community are globally imperiled. Prairie ecosystems generally contain 200 - 300 different species, the majority of which are not available for sale anywhere. While rangelands may have the same appearance as a prairie, upon closer inspection you can see that only a few species dominate because generations of continual grazing have left only the non-edible species in abundance.

Moreover, there are a few generations of ranch stewards who have been able to protect their grassland resources. We are grateful for their dedication to the land. Fortunately, this fall one such land steward was found and a harvest from a pristine Blackland Prairie was able to occur. With an awesome excitement and a sense of urgency a harvest of this incredibly rare seed from one of the most endangered of the prairie ecosys-

tems has occurred. Harvesting is just the first step, and once we get the precious seed back to the farm the cleaning process begins. With the use of old peanut trailers, we managed to shift the large quantity of seed from barn to barn until it was able to go through the seed cleaning process. Cleaning the seed is a tricky process, the object is to remove as much of the leaves and stems as possible without losing the lightest and smallest of the seeds. The seeds are sifted through different sized screens until the quality product is obtained.

After the cleaning process is finished, samples are taken and sent to independent laboratories to confirm what our farm crew already knew. We found this harvest of Blackland Prairie Mix has a unique diverse blend of native seeds found nowhere else in the world. A finished product with 51 native species is the final result of this intensive harvest. So re-establish a little bit of the Blackland Prairie in your area, whether big or small in size, and do your part to preserve the Blackland Prairie heritage of Texas.



*Now is the time to plant many of the grasses and perennial wildflowers that are part of the "rainforest" in our area of the world - the plains and prairies of Texas.*

# See You Down the Road

By Ricky Linex  
NRCS Wildlife Biologist  
Weatherford, Texas

## Keeping Texas Native

Spring is definitely upon us, but with a late Easter this year will we be exposed to a later than expected frost? Hopefully a late-freeze won't compound our dryer than normal moisture conditions. Native plants are acclimated to the soils and climate of an area, for this ensures we will have plants that continue to grow and reproduce during yearly climatic fluctuations. This also shows the value of having both perennial and annual plants, because the perennials will green up in a dry year while the annuals must have moisture along with proper soil temperatures to germinate and make their showing.

However, in many locations the influence of man, livestock and farming has altered the specie composition of plants. While we must have food and fiber to exist, we appreciate those pristine natural areas that exist much as when the first explorers walked across Texas. This issue features several native forb and woody species of interest, along with restoration efforts to collect and harvest native plants. Good things are being done out there, be a part of the efforts to keep Texas native.

### Bobcat and Quail – Scat is Where It's At Story by Susan Cooper, Ph.D. Texas AgriLife Research Uvalde, Texas

In 2002, Mike Tewes and colleagues from the Caesar Kleberg Wildlife Research Institute reviewed fifty-four scientific articles about bobcat food habits to determine the occurrence of quail and other birds. Quail (various species) were reported in nine studies and constituted more than 3 percent of the bobcat's diet in only two of fifty-four studies. In 2003, Ivy Godbois and co-authors quantified bobcat diet by scat analysis on an area managed for bobwhites in Georgia. Most scats (91 percent) contained rodent, 14 percent contained bird, 9 percent contained deer, 6 percent contained rabbit, and 12 percent contained other items. Quail remains were detected in only two of 135 bobcat scats examined, so they also concluded that bobcats were not a serious predator of quail.



Photo courtesy S. Cooper

### Botanical Glossary Six Pack

#### Pubescence:

#### Types of Hairs Covering Plant Surfaces

**Tomentose:** Covered with short, soft, curly, densely matted or entangled hairs. (*Evax*, *Common mullen*, *Scotch thistle*)

**Pilose:** With long, soft more/less straight hairs, softer than hirsute, not flexuous or curved as in villous. (*Plains yellow daisy* or *four-nerve daisy*)

**Villous, Villose:** With long, soft, spreading or ascending, unmated hairs, shaggy. (*Milk vetch*, *Heller plantain*)

**Hirsute:** With straight moderately stiff hairs. (*Bush sunflower*)

**Hispid:** Resembling hirsute but the hairs stiffer, more/less bristly, feeling rough to the touch. (*Orange Zexmenia*, *Englemann's daisy*, *Yellow Texas-star*)

**Stellate:** Star-shaped or star-like; when used in reference to hairs it means those branched hairs with a central stalk, and branch hairs arising at the top of the stalk like points of light coming out of a star.

(*Englemann's bladderpod*, *Wolly croton*, *Indian mallow*) **Source:** *Shinners and Mahler's Flora of North Central Texas*, **Web site:** <http://www.brit.org>

## 'Aztec' Maximilian Sunflower (*Helianthus maximiliani*)

Story by *Brandon Carr, NRCS Soil Conservationist*  
*USDA-NRCS James E. "Bud" Smith Plant Materials Center*  
*Knox City, Texas*

**M**aximilian sunflower (*Helianthus maximiliani*) is a native, perennial forb that grows in most soil types in areas that receive 18 inches of rainfall or more each year. The plants have one to several stems that range in height from 3 to 9-feet tall. The leaves measure 6 to 11 inches in length and are alternate, lanceolate, and acuminate. Maximilian sunflower produces large, yellow flowers that begin blooming in the summer and continue into the fall of the year. When applied in a pure stand, the pure live seed rate is 3 pounds per acre.

'Aztec' Maximilian sunflower is a composite plant release from the James E. "Bud" Smith Plant Materials Center (PMC) in Knox City, Texas, and the five collections came from Throckmorton, Mitchell, Hamilton, Blanco, and Bandera counties.

Maximilian sunflower has many benefits as a conservation plant. The numerous flowers attract a wide variety of pollinators, such as bees, wasps, flies, butterflies, and pollen-eating beetles. The plant also serves as a larval host plant for silvery checkerspot and border patch butterflies. At the James E. "Bud" Smith PMC, monarch butterflies are commonly found when Maximilian sunflower is blooming.

Another recent benefit is that Maximilian sunflower has the potential to be used in biofuel production, for this is contributed to its wide adaptability and high biomass yields.

Maximilian sunflower also provides food for deer, game birds, songbirds, and many other wildlife species. The foliage is highly palatable and eaten by all classes of livestock, and the dense foliage provides excellent cover for wildlife as well. (*Photos courtesy of USDA-NRCS*)



Maximilian Sunflower



Maximilian Sunflower Field



Plant Bug on Maximilian Sunflower

The **2011 QuailMasters** class is now seeking recruits. QuailMasters is a series of four, three-day sessions which build upon each other, so students must attend all four sessions. Session dates and locations are: April 30-May 2 (Roby), June 4-6 (Wichita Falls), August 20-22 (Location -TBA), and October 15-17 (Kingsville). Students have the opportunity to tour some of the best-managed quail properties in Texas, and they also build plant and seed collections for their own properties and learn how to evaluate management practices. Tuition is \$400 which covers the course materials, refreshments and most meals. Three hours of graduate credit are also available for an additional fee. References and more information are available upon request. For more information, please visit <http://agrilife.org/teamquail> to register for these sessions.



# Good Bug, Bad Bug—What Should I Do?

*Story and Photos by Don Johnson, Member  
Coastal Prairie Chapter of the Texas Master Naturalists and  
Fort Bend County Master Gardener's Entomology Group*

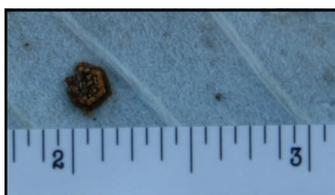
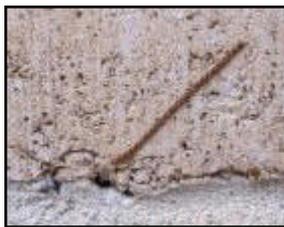
It's quite common while gardening to come upon an insect that is making its home in your yard. Is this a good bug or a bad bug? Two common insects that you may find in your yard are the leaf-footed bug and the assassin bug. **The leaf-footed bug is a pest while the assassin bug is generally a good bug.** They may be difficult to distinguish. However, with careful observation you will be able to see the difference. *So, the good bug is the assassin bug, and the bad bug is the Leaf-footed bug.*

If you grow fruits and vegetables you probably will attract leaf-footed bugs. They are the ones that enjoy your tomatoes. They are difficult to kill, but if you can catch them early you can save your crop. The **egg case** for leaf-footed bugs is about 2 to 3 inches long and very narrow. When the **young emerge** they generally stay in a group. At that time they are the same orange and black color as the assassin bug. As they grow larger they discard their exoskeleton, grow a new one, and finally change to a black, brown or gray color. After another molt or two they are an **adult** and are able to fly. They can be identified by the enlarged leaf shaped area on their hind legs. They may still be in a group. Leaf-footed bugs will stick their beak into a plant, inject an enzyme, and withdraw the dissolved plant material as its food.

The assassin bug is a loner and will eat other insects and even other assassin bugs. We call them beneficial, although they also eat other beneficial bugs. Their **egg case**, which is often placed on leaves, is about the size of a pea. When assassin bugs **emerge** from the egg case they are black and orange. They generally do not stay around the egg case very long. As they molt they keep the same color even as an adult. The adult, which can fly, is identified with a black wing pattern on its back. Assassin bugs are in the same insect order as the leaf-footed bug, but they will stick their beak into another insect, inject an enzyme, and withdraw the dissolved material as its food, killing the victim. The assassin bug has a very narrow neck and a small head and its body is shaped somewhat like a banana.

**You don't want to destroy the assassin bug.** However, that is not the case with the leaf-footed bug. A general insect spray will kill all insects, including the good ones. Suggestions for eliminating the leaf-footed bug generally begin by telling you to reduce the leaf litter in your garden where the eggs are often placed. Next, while wearing gloves you can hand-pick the insect. From that point on you will have to research to see what your comfort level is regarding the use of a pesticide. There are websites that give different suggestions, and they all caution you to read the label before you use the product.

**Egg Casing**



**Juvenile**



**Adult**



## Rough-leaved Dogwood (*Cornus drummondii*)

*Story by Troy Mullens*

*Photos by Troy and Martha Mullens*

*Members of the Cross Timbers Chapter of Master Naturalists,  
Native Plant Society, and National Audubon Society*

**R**ough-leaf dogwood is a clumping shrub or small tree to 20 feet in height, and also known as Drummond's dogwood. It is the prominent Dogwood throughout North-Central Texas and the Cross Timbers Region. Its better know relative is the Flowering Dogwood of East Texas with its large showy flowers.

**Flowers:** The Rough-leaf Dogwood has flat-topped terminal clusters of perfect, yellow-tinged white, 1/4 inch wide flowers. The four-petal flower clusters appear from April to early June.

**Leaves:** Simple, opposite, deciduous and blades up to four inches long, ovate with an abruptly drawn-out tip. It has smooth margins, and prominent veins bending toward the tip. The upper surface is sometimes slightly rough to the touch because of the hairs covering it. The lower is softly pubescent and slightly velvety. Fall color is purplish-red.

**Fruit:** Ripens August to October, drupe globular, white, style persistent, flesh thin, one to two seeded.

The genus *cornus* is Latin from *cornu*, "a horn", in reference to its hard wood. It has been known in cultivation since 1836, and was often used in shelter-belt planting in the prairie-plains.

A similar appearing tree in the Cross Timbers Region is the Rusty Blackhaw, which has clusters of five-petaled flowers and dark fruit. The blackhaw can also be recognized by its finely-toothed leaf margins.

This dogwood is easily recognized by the rough, upper leaf surfaces and hard white fruit on reddish-brown branches. It spreads from root sprouts and provides cover for wildlife, and various small birds nest in the thickets.



The Rough-leaved Dogwood (*Cornus drummondii*), above, is prominent throughout North-Central Texas and the Cross Timbers Region. The shrub or small tree has yellow-tinged white flowers, above inset, and the fruit ripens, right, during August through October.



*(Continued on page 7)*

**Filling the Native Seed Source Gap for  
Central and North-Central Texas**  
*Story by Mia A. McGraw, Research Associate  
Central Texas Native Seed Collection  
Stephenville, Texas*

The collection and increase of ecotypic native seeds are some of essential steps in the process of providing plant materials for restoration of disturbed and degraded lands. Through support from the Texas Department of Transportation and other contributors, a new project called the *Texas Native Seeds* will focus on the development of ecotypic seed sources of 45 different native plant species for future release to aid in public and private restoration efforts (see species list below).

*Texas Native Seeds* is a collaborative project of the Caesar Kleberg Wildlife Research Institute's *South Texas Natives Project*, Tarleton State University and Texas AgriLife Research's North Texas Ecotype Project, and Borderlands Research Institute's Trans-Pecos Plant Materials Initiative. This endeavor will only be accomplished with the cooperation and support of private landowners and government agencies. Outreach to these groups has begun, and will continue, in order to locate populations of the desired species so that seed collection can begin this summer.

Today, there are only a few commercially available seed ecotypes of native plants for Central and West Texas. The *Texas Native Seeds Project* will conduct research on important native species, increase knowledge about the use if these plants for restoration, and provide commercial growers with well-tested seed ecotypes that are best suited for the various conditions found in these regions.

Moreover, project seed collectors are seeking the help of private landowners and natural resource managers to locate, and gain access to native populations of the plants of interest for collection. Once granted access, workers will collect small amounts of seed by hand and record pertinent information such as the general location, county, and soil series. Our goal is to obtain two or more collections of each species, depending on distribution, from each county being served by the project. This collection process will insure that a broad population (geographically and genetically) will be available for evaluation and selection, and that the resulting seed releases will be suited for widespread use. The timeline for seed collection for the species of interest starts in late spring and can stretch through fall depending on climactic conditions. The end goal of *Texas Native Seeds* is to provide commercial sources of ecotypic native seed that can be obtained and used by private landowners and agencies to restore native habitat.

However, none of this can happen if *Texas Native Seeds* does not have the support of private landowners. As seen in the *South Texas Natives Project*, which has successfully released 14 ecotypic seed sources for South Texas, 75 percent of all seed collections have been obtained on privately owned land. Obviously, private landowner collaboration and support is paramount to the success of this project. If you would like to assist with this important native seed effort, please contact me by email at [mia.mccraw@tamuk.edu](mailto:mia.mccraw@tamuk.edu).

**Texas Native Seeds Project (Samples Needed)—Common Name (Scientific Name)**

Three flower melic (*Melica nitens*)  
Texas bluegrass (*Poa arachnifera*)  
Reverchon's bristlegrass (*Setaria reverchonii*)  
Texas cupgrass (*Eriochloa sericea*)  
Milkweeds (*Asclepias spp.*)  
Scarlet pea (*Indigofera miniata*)  
Trailing wild bean (*Strophostyles helvula*)

## Rusty Blackhaw (*Viburnum rufidulum*)

Story by Martha Mullens

Photos by Troy and Martha Mullens

Members of the Cross Timbers Chapter of Master Naturalists,  
Native Plant Society, and National Audubon Society

**R**usty blackhaw is a handsome plant with shiny dark green foliage, abundant fragrant, white flowers, pretty fall colors, and curious bark. It is generally an understory tree found along streams, fence-rows, or in moist open woods, predominantly from the Red and Sabine Rivers westward through North-Central Texas across the Edwards Plateau and Hill Country, and even a small population in the Horse Spring Canyon of the Davis Mountains. It is found in all regions except the Rolling Plains, High Plains, and Rio Grande Plains.

The plant is a spreading, irregularly-branched, shrub or tree with a rounded crown. Rusty blackhaw can grow in almost any soil, as long as it is well drained. In rockier or limestone soils, such as at the Fort Worth Nature Center, it is a shrub 4 to 12-feet tall. In richer alluvial soils, it can grow to a 25-foot tree, sometimes forming a thicket by root suckers. In shaded, moist areas of the Pineywoods, Post Oak Savannah, and Blackland Prairie, Rusty blackhaw usually occurs singly, although there may be two or three in an area. In areas with less rainfall, such as the Cross Timbers and Prairies and the Lampas Cut Plains, it occurs on exposed calcareous hillsides in drifts and groves of sometimes up to 100 plants. In almost every case, plants on thin soils in a 30-inch rainfall belt will form tree-like shrubs of 10 to 12



An Eastern Tiger Swallowtail (*Papilio glaucus*) lands on a Rusty Blackhaw (*Viburnum rufidulum*) blossom.

feet. In the hills and deep canyons of the Edwards Plateau, and in the Central Mineral Region, it is usually a small understory tree up to 15-feet tall.

It can be deciduous in the northern areas to half-evergreen in the more southern climes. The leaves are 1 ½ to 4 inches long, simple, elliptic to oval, opposite (in pairs), waxy, leathery, finely serrated, unlobed, and shiny on the top surface. The paler underside exhibits the characteristic, which gives it the common name for there are found the rusty-red hairs covering the primary vein (midrib) and the leafstalk. The leaves turn a variety of warm hues of lavender, pink, red, and orange in the autumn.

(Continued on page 8)

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(Continued from page 5—Rough-leaved Dogwood)

This is a very adaptable plant and is found in nature in a variety of wet to dry situations. However, it grows best in moist soils which may be Alkaline, Limestone-based, Sandy, Sandy Loam, Medium Loam, Clay Loam, Clay, Acid-based, or Calcareous. The large showy clusters of tiny flowers provide nectar for many butterfly species, as well as other native pollinators such as bees and flies. Up to 60 known species of birds and many small animals eat the white fruit clusters. Habitat is usually stream banks, hillsides, woodlands, and thickets. The species name of this plant is named for Thomas Drummond, (ca. 1790-1835), naturalist, born in Scotland, around 1790. In 1830, he made a trip to America to collect specimens from the western and southern United States. In March 1833, he arrived at Velasco, Texas, to begin his collecting work in that area. He spent twenty-one months working the area between Galveston Island and the Edwards Plateau, especially along the Brazos, Colorado, and Guadalupe rivers. His collections were the first made in Texas that had been extensively distributed among the museums and scientific institutions of the world. He collected 750 species of plants and 150 specimens of birds. Drummond had hoped to make a complete botanical survey of Texas, but he died in Havana, Cuba, in 1835, while making a collecting tour of that island.

(Continued from page 7—Rusty Blackhaw)

Numerous tiny creamy-white flowers only ¼ to ½ inch long form a large inflorescence terminally up to 4 inches wide which appear from March to May.

The bark is smooth and gray at first, becoming almost black and rough with narrow and rounded ridges composed of rectangular plates that form the distinctive checkerboard pattern. The yellow wood is fine-grained, hard, heavy, strong and gives off a mildly unpleasant odor when sawed

The ½ inch-long fruit is a football-shaped, bluish-back drupe that grows in drooping clusters. Although the fleshy fruit is edible and prized by birds, it has a waxy coating. This did not deter the pioneers who used it in jellies, sauces, and stews. The seeds are solitary (one per fruit), flattened, oval, stone-like, and ridged toward one end. The fruit is said to be sweet and taste like raisins. Vernacular names are rusty nanny-berry, Southern nanny-berry, blackhaw, Southern blackhaw, bluehaw, and downy Viburnum.

Rusty blackhaw makes an attractive addition to any yard, but it is difficult to propagate. However, once the plant is established, it requires little water, isn't particular about soil type if well drained, usually pest free, and will grow in the shade. Rusty blackhaw is generally an understory tree, but is most attractive in the open full sun. Being cold tolerant and drought resistant, plus the beautiful flowers and foliage and interesting bark, makes it appealing to plant on your property, and worth the trouble. The flowers attract bees and butterflies. The fruit is eaten by songbirds, quail, and foxes.

Rusty blackhaw can be confused with other members of the genus *Viburnum*, such as possum haw and arrowwood. Fortunately, most of its close relatives are found further east and south with little overlapping of range. An unrelated plant whose flowers and leaves are very similar is the Rough-leaf dogwood, for both display large white clusters of flowers. The Rusty blackhaw has five petals per flower, and the Rough-leaf dogwood has four petals per flower. The Rusty blackhaw has serrated leaves while the dogwood has smooth. The leaves of Rough-leaf dogwood have curving veins which are prominently exposed on the underside. The rusty blackhaw has the rusty hairs on the underside of the leaf midrib. The fruit of the blackhaw first turns pinkish then dark blue, sometimes with a whitish dusting. The fruit of the Rough-leaf dogwood starts out green then turns white with varying amounts of small pink splotches.

**The early pioneers living in Texas used the fruit from the Rusty blackhaw (*Viburnum rifidulum*), right, to make jellies, sauces and stews. The ½ inch-long fruit is a football-shaped, bluish-back drupe that grows in drooping clusters. The fruit is said to be sweet and taste like raisins.**



© 2010 Troy & Martha Mullens

## **If You Appreciate Bluebonnets, Give Thanks for Pollinators!** *Story and photos by Ricky Linex, NRCS Wildlife Biologist*

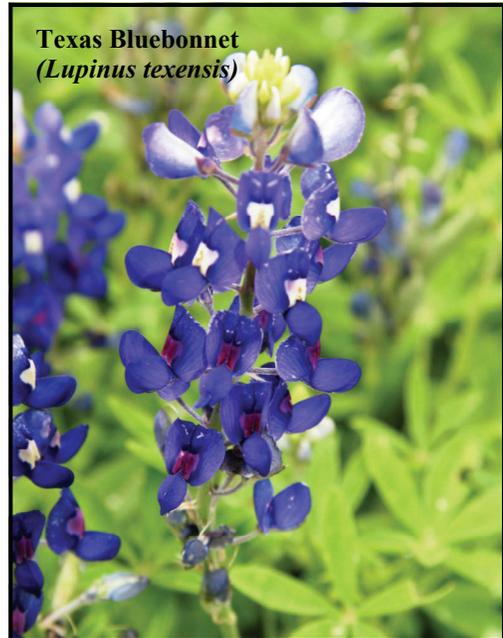
**F**ields of Texas bluebonnets (*Lupinus texensis*) are a joy to behold, but have you given much thought to how these annual wildflowers appear each spring? Native and introduced bees carry the burden of pollinating these flowers, so therein lies an interesting story of how the plants interact with pollinators to ensure fertile pollen is distributed from one plant to many others.

A bluebonnet flower has five petals each of which serve in different capacities in the pollen transfer and reproductive process. When newly opened the upper or banner petal has a white spot that attracts bees to land and feast upon fresh pollen. Bees selectively look for white marked flowers when out foraging for pollen. The two lower wing petals come together forming a keel, shaped much like a V-bottom boat. The two wing petals serve as protection for the lower keel petals. Located inside the boat-shaped lower wing petals are the two keel petals, which cover the staminal column where pollen is produced and stored. When a bee lands on the keel petals these petals deflect downward slightly allowing the orange-tipped staminal column to spring upwards depositing pollen upon the bee. You can simulate this by pushing downward on the keel petals with a finger nail which reveals the golden-orange pollen grains. As the bee flies to other bluebonnet flowers pollen is transferred from plant to plant ensuring gene flow for healthy seed production.

What then causes the banner spot to change from white to red on these banner flowers? Some may think it is the plant signaling the flower has already been pollinated, but this is not correct. Remember that bees select for white flowers, so this color change is actually the plants way of signaling that the pollen in that single flower is no longer fertile. Pollen decreases in viability daily and by the sixth day very little germination occurs. So, the age of the flower is the determining factor of the banner spot changing from white to red. By the fifth day the banner spot will change color regardless of whether pollen transfer has happened. To a bee's way of thinking it may be a signal not to waste time visiting where other bees have already been and the pollen is gone. I guess bees are a lot like birds with the early bee getting the pollen. *Source: The Texas Bluebonnet by Jean Andrews, University of Texas Press, 1986*



*In the photo above, a small stick is used to deflect the wing petals downward exposing the orange pollen & black-tipped keel petals.*



**Texas Bluebonnet**  
*(Lupinus texensis)*

## Harrison Germplasm Florida Paspalum (*Paspalum floridanum*)

*Story by Alan Shadow, Manager*

*USDA-NRCS East Texas Plant Materials Center*

*Nacogdoches, Texas*

Florida paspalum (*Paspalum floridanum*) is a native, warm season, perennial bunch grass. It ranges from dark green to chalky blue in color, and can obtain 6 feet in height. Plants have leaves up to 20 inches long with dense hair tufts adjacent to the ligule, and spread via rhizomes and seed. It produces the largest seed of any of the native paspalums. Seeds heads have between two and five branches, and mature in late-summer. Harrison Germplasm/Florida paspalum was collected from a native stand in Harrison County, Texas, by NRCS employees Paul Leggett and Ross Brown, and released by the East Texas Plant Materials Center (ETPMC) in 2004. When applied in a pure stand, the pure live seed rate is 8 pounds per acre.

Florida paspalum is an important conservation plant for the ETPMC's service area, with a wide range of adaptation. Moist soils are typically favored, but the plant is capable of establishment on sandy, drier sites. The plant's uses include mine reclamation, conservation cover and soil protection on disturbed areas, prairie restoration, and as a component in seed mixes for conservation plantings.

Being a bunch grass, Florida paspalum provides important cover for game birds, such as quail, dove, and turkey. Adults and chicks are able to forage and move between plant clumps, feed upon the large seed the plant produces, and receive cover from aerial predators such as hawks. It also produces palatable forage in its leafy stage, but becomes less palatable to livestock as it matures. (*Photos Courtesy of USDA-NRCS*)



**Seed Head**



**Seedlings**



**Production fields of Florida paspalum at the East Texas Plant Materials Center**

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