

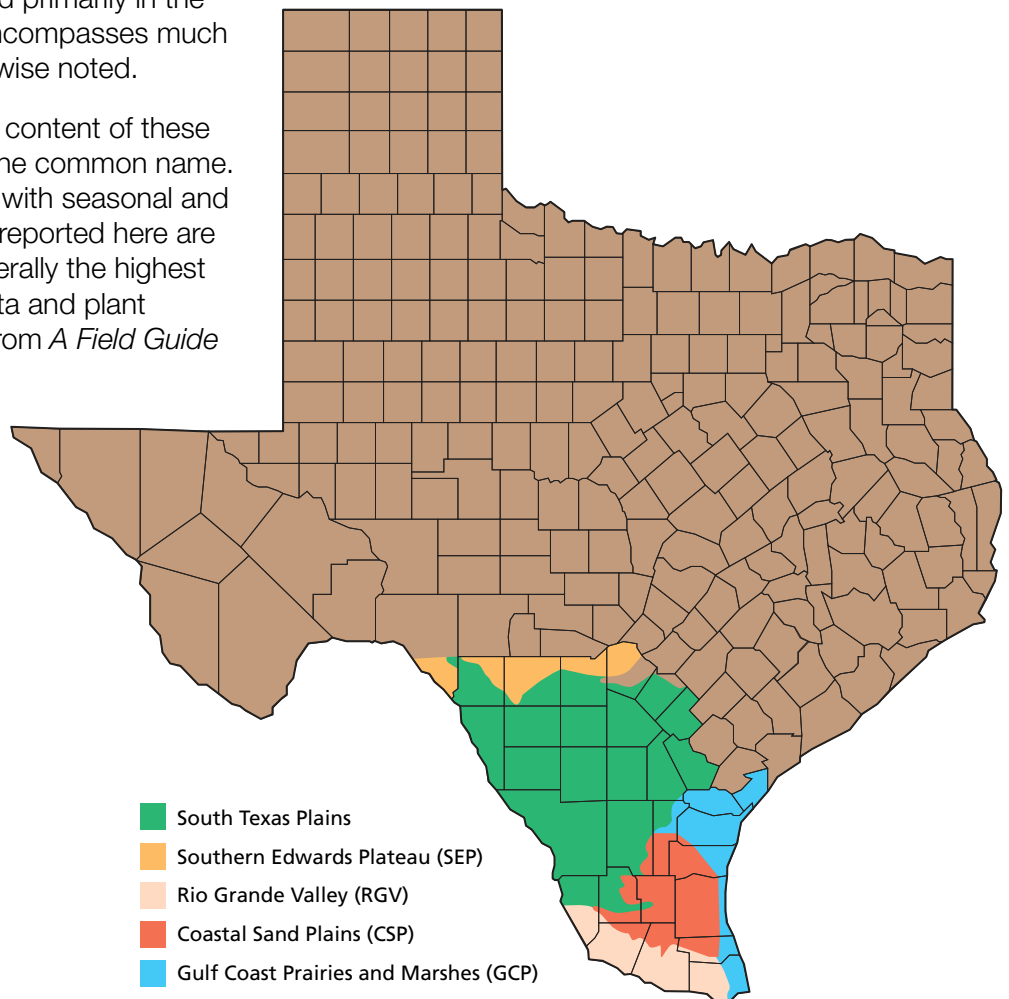
Common Woody Browse Plants Utilized by White-Tailed Deer in South Texas

by Daniel J. Kunz, Eric P. Garza and Michael W. Wallace

White-tailed deer eat the leaves, stems, seeds and fruit of a wide variety of plant species. They choose vegetation based on palatability, seasonal availability, vegetative abundance, precipitation and overall quality of the habitat. Deer diets may consist primarily of forbs when abundant, but forbs are dependent on adequate rainfall and are not always available. In semi-arid South Texas, rainfall is extremely variable, and woody plants are the most stable and consistent portion of the deer's diet. When deer browse, they tend to select the youngest and most tender growth first, which is usually the new leaves and stem tips. By observing which browse plants deer are eating on your property, it is possible to get a better feel for the health of the deer herd and their habitat. This brochure is intended to help landowners identify the most common browse species preferred by white-tailed deer. The following plants are grouped by preference of the leaves and twigs, but many less preferred plants are also important seasonally in the diet. Many less preferred species are also important for thermal regulation and screening cover. It is much more important to manage for a diversity of species than simply for the first choice plants listed here. For additional information, see *A Field Guide to Common South Texas Shrubs*, by Taylor, Rutledge and Herrera, Texas Parks and Wildlife Press, 1997.

All plants listed here are found primarily in the South Texas Plains, which encompasses much of South Texas, unless otherwise noted.

If reported, the crude protein content of these browse plants is listed after the common name. Crude protein content varies with seasonal and habitat conditions; all values reported here are spring values, which are generally the highest of the year. Crude protein data and plant descriptions were obtained from *A Field Guide to Common South Texas Shrubs*, by Taylor, Rutledge and Herrera, Texas Parks & Wildlife Press, 1997; *Trees, Shrubs & Cacti of South Texas*, by James H. Everitt, D. Lynn Drawe, and Robert Lonard, Texas Tech University Press, 2002; and USDA Plant Database Website at <http://plants.usda.gov/java/>



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FIRST CHOICE — Browse plants most utilized by deer whenever present, also called “ice cream” plants.



Beauty Berry - GCP

Callicarpa americana

Shrub; may grow to 9 feet; Leaves large, simple, with toothed margins, leaves and stems covered with dense minute pubescence, thornless; fruit red, lavender or bluish berries occurring at the nodes.



Cedar Elm (Olmo)

Ulmus crassifolia

Tree; leaves with serrated edges and prominent veins below; brown slender twigs, bark sometimes with flattened ridges; winged seeds; found mainly near drainages.



Manzanita (Barbados Cherry) - RGV

Malpighia glabra

Shrub; usually found in the understory, thornless; small pink flowers appear periodically and are followed by bright red fruit. Frequently planted as an ornamental.



Prickly Pear (Nopal) 2-13%

Opuntia engelmannii

Cactus; erect or spreading and thick-padded; may have a cylindrical trunk; flowers may be yellow, orange or red from April to June; red to dark purple fruit called tunas ripen July-September; Although low in protein, this plant is high in energy, digestibility and water content and is a staple during dry periods.



Coma 13-20%

Sideroxylon celastrinum

Shrub or small tree; semi-evergreen; spiny with clustered, dark green teardrop-shaped leaves and oblong black berries April-June.



Four-wing Saltbush (Chamiso) 12%

Atriplex canescens

Shrub; with numerous, alternate leaves, thornless; small spikelets of yellow flowers during summer and four-winged shaped fruit August-October; Prefers saline soils in the western portion of South Texas.



Southwest Bernardia (Oreja de Raton) 15-20%

Bernardia myricifolia

Shrub; thornless and densely branched; alternate leaves dark green on top and light green to gray and densely hairy on the underside with wavy margins; fruit rounded and three-seeded with three lobed capsule occurring at stem tips.



Sugar Hackberry (Palo Blanco) 19-28%

Celtis laevigata

Tree; bark is gray with conspicuous warty bumps; leaves pale green and asymmetrical at base; late-summer orange to brown/red or black berry; found mainly near drainages.



Granjeno (Spiny Hackberry) 15-28%

Celtis pallida

Shrub; evergreen with zig-zagged, smooth, gray branches and stout, paired spines; alternate leaves and orange berries resembling a tiny pumpkin.



Guayacan (Ironwood) 14-26%

Guaiaacum angustifolium

Shrub; evergreen with short, stout, thornless, knotty branches; thick, dark green leaves crowded on nodes; purple flowers; red seeds enclosed in a brown capsule.



Texas Kidneywood (Vara Dulce) 17-26%

Eysenhardtia texana

Shrub; stems multiple, thornless, slender, gray, and irregularly shaped; leaves are compound and alternate with small leaflets that emit a strong odor when crushed; small white flowers form elongated clusters at stem tips which become small dotted legumes.



Vine Ephedra (Popotillo) 12-18%

Ephedra antisiphilitica

Shrub; small, usually 1 to 4 feet tall, low-spreading, with leafless-appearing stiff, green, multi-noded stems; leaves tiny, scale like, and cone like; fruit smooth, succulent, and red, occurring at the nodes.

SECOND CHOICE — Browse plants that are less preferred, but are abundant in the habitat and important in deer diets.



Anacahuita (Wild Olive) - RGV, CSP
Cordia boissieri
Tree; subtropical evergreen with thick, gray, ridged bark; thick, large leaves (3 to 5 inches); white trumpet-shaped flowers and sweet, whiteish fruit. Frequently planted as an ornamental.



Baby Bonnets - RGV, CSP
Coursetia axillaris
Shrub; densely-branched, thornless, with an irregular shape, and small sweet pea shaped white, yellow, or pink flowers February to March; fruit small, reddish, twisted pod that ripens early and may appear simultaneously with flowers.



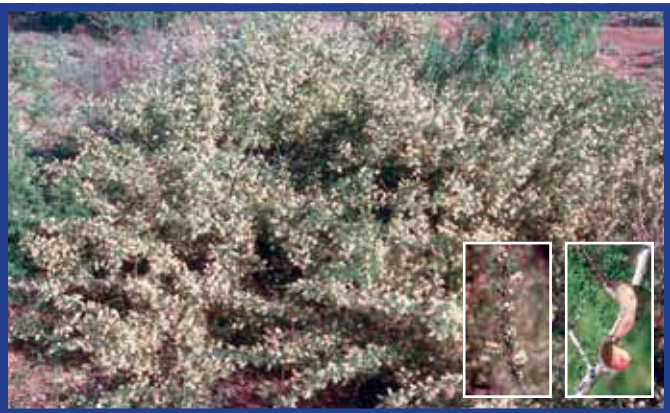
Brasil 13-24%
Condalia hookeri
Shrub or small tree; evergreen with spiny branches; shiny, light, lime-green leaves are alternate; small greenish flowers followed by red to black fruit in summer.



Anacua
Ehretia anacua
Tree; semi-evergreen with thick, grooved gray to reddish brown bark; simple, alternate leaves that feel like sandpaper; clusters of fragrant white flowers; yellow-orange clustered berries; found mainly in drainages. Frequently planted as an ornamental.



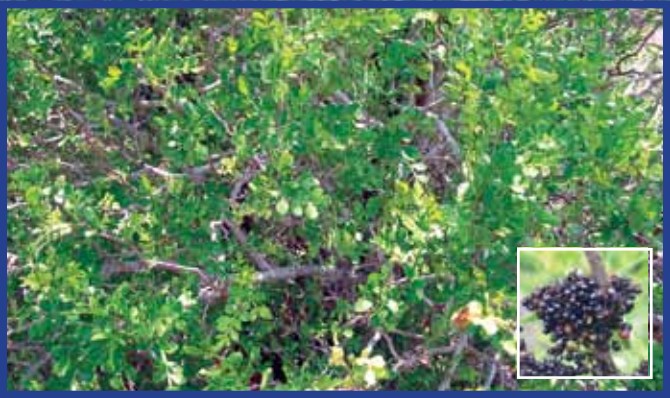
Blackbrush (Chaparro Prieto) 14-20%
Acacia rigidula
Shrub; may form thickets; leaves twice compound with ribbed leaflets; yellowish flowers clustered in spikelets; long flattened legume.



Catclaw Acacia (Uña de Gato) 16-30%
Acacia greggii
Shrub; may form colonies; thorny, with numerous slender branches and recurved thorns; creamy yellow flowers and flat, twisted legumes.



Cenizo (Texas or Purple Sage) 12-16%
Leucophyllum frutescens
Shrub; rounded, thornless, evergreen shrub with gray, fuzzy leaves; flowers violet to purple produced soon after rains; small fruits have two sides. Frequently planted as an ornamental.



Colima (Lime Prickly Ash) 6-23%
Zanthoxylum fagara
Shrub; aromatic and intricately-branched with curved thorns similar to catclaw acacia; leaves are compound with oblong and bright green leaflets on a broad winged rachis; flowers are small and greenish yellow; fruit is small and shiny, reddish-brown to black, round, and single-seeded.



Guajillo 17-28%
Acacia berlandieri
small-to-medium shrub with multiple stems; small, slightly recurved to straight thorns; twice compound leaves are narrow, delicate and fernlike; white to yellowish fragrant flowers; legumes have broad seeds.



Chomonque
Gochnatia hypoleuca
Shrub; thornless, usually 3 to 6 feet tall; prefers rocky or shallow caliche soils; leaves are simple, alternate, dark green on top and grayish with dense pubescence on the bottom, margins are smooth and often roll towards the bottom; flowers white to yellow, clustered at the end of the stem, fruit is an achene; found mainly in the southern portion of the South Texas Plains and western portions of the Rio Grande Valley.



False-Mesquite Calliandra
Calliandra conferta
Shrub; thornless, very low growing, usually 6 to 10 inches; when found usually abundant; leaves small, bipinnately compound with one pair of pinnae; flowers red to purple, fruit a small gray to black flat legume; prefers caliche and limestone soils.



Hogplum 15-24%
Colubrina texensis
Shrub; usually 3 to 6 feet tall often forming thickets, thornless, rounded deciduous shrub with stiff, light gray, zig-zagged branches; simple, grayish-green leaves with three prominent veins; star-shaped greenish flowers and dark fruit shaped like a plum.



Huisache 23%

Acacia farnesiana

Tree; small to large in size, paired spines and twice compound leaves; fragrant yellow spring flowers prized for nectar; seeds in solitary compartments in short thick seed pod; sprouts readily in disturbed sites.



Live Oak (Encino) 9-13% - SEP, CSP, GCP

Quercus virginiana

Tree; medium to large in size; evergreen; readily hybridizes with other oak species; leaves usually oblong-shaped, simple, and alternate; acorns usually in clusters of three to five.



Palo Verde 24%

Parkinsonia texana

Shrub; very thorny with smooth, green bark; light green twice-compound leaves fall off during droughts; yellow, five-petaled flower and dark brown, flattened legume; similar to retama, but leaves are rounded and not on a long rachis.



Little Leaf Sumac (Correosa) 16%

Rhus microphylla

Shrub; branches dense, crooked, and stiff; leaves small, dull-green, hairy, and odd-compounded with winged rachis similar to colima, but lacking thorns; whitish flowers appear before leaves; fruit round and clustered.



Lotebush (Clepe) 12-24%

Ziziphus obtusifolia

Shrub; deciduous, spiny, and multi-branched with grayish-green, spine tipped branches; leaves shiny, green, alternate, and occurring on the spines; flowers tiny, green, and five-petaled.



Retama 20%

Parkinsonia aculeata

Shrub or small tree; deciduous, green-barked, and thorny with feathery foliage; leaves twice compound on long, flat rachis; yellow, five-petaled flowers and reddish legume.



Snake Eyes (Putia) - RGV

Phaulothamnus spinescens

Shrub; deciduous with dense, spiny branches and small 1/2 to 1 inch, grayish-green leaves which may be smooth or hairy; dioecious flowers precede the creamy, translucent, fleshy fruit holding a single black seed which gives the impression of a snake's eye.



Tenaza - RGV

Pithecellobium pallens

Shrub or small tree; may grow to 18 feet tall with light green, fernlike foliage and a pair of short spines at the base of each leaf; yellowish to white flowers in rounded inflorescence; flattened seed pods 2 to 5 inches.



Twisted Acacia (Huisachillo) 16-22%

Acacia schaffneri

Shrub or small tree; leaves twice compound; brown to reddish bark; legumes narrow, twisted, and brown, but turn black at maturity. Very similar to Huisache but usually grows as a shrub, and species can be identified by the legumes.



Tasajillo (Turkey pear, Christmas cactus) 8%

Opuntia leptocaulis

Cactus; slender, cylindrical, or pencil-stemmed cactus that usually grows upright and can form thickets; small greenish-yellow flowers form on the stem in summer, followed by red or orange fruits.



Texas Ebony (Ebano) 20-23% - RGV

Pithecellobium ebano

Shrub or tree; densely foliated, thorny, and evergreen; dark green, alternate, twice compound leaves; creamy, fragrant flower clusters; woody, large, dark brown to black legumes with many reddish-brown seeds.



Woolly Bucket Bumelia (Chittimwood) - SEP, GCP

Sideroxylon lanuginosum

Shrub or medium tree; usually found in mottes; leaves alternate or clustered on short spurs with pubescence beneath and shiny on top; black berries.



Wright's Acacia
Acacia greggii A. Gray var. *wrightii* (Benth.) Isely
 Shrub or small tree; recurved thorns; leaves twice compound; flowers cream to light yellow; light brown to brown legume is broad and flat. Similar to catclaw acacia but usually with the growth form of a small tree, leaflets are rounder and larger, and legumes are broader.



Yaupon - SEP, GCP
Ilex vomitoria
 Shrub or small tree; thornless evergreen with stout, rigid twigs; leaves simple, alternate, with toothed margins; flowers white, with clustered red fruits.



Creosote Bush (Gobernadora) 13%
Larrea tridentata
 Shrub; short, odor similar to creosote, evergreen with multi-stemmed base; leaves compound with two leaflets, strong scent, and sticky resin; small yellow flowers from April to August followed by small whitish, hairy fruit. A common desert shrub in hot, dry areas with poor soil in western south Texas.



Desert Yaupon (Capul) 10-18%
Schaefferia cuneifolia
 Shrub; densely branched, thornless evergreen with smooth gray bark and multiple stems; pale green, alternate, and clustered tear drop shaped leaves; greenish flowers are small and inconspicuous, orange-red fruit grows close to stem.

THIRD CHOICE — Browse plants rarely browsed by deer, but may be important seasonally. Some may be toxic or injurious. Fruits and beans may be highly preferred seasonally.



Agarito (Agarita) 13-20%
Mahonia trifoliata
 Shrub; evergreen, usually 3 to 6 feet tall; leaves with three stiff, spiny leaflets resembling holly; small, clustered yellow flowers give rise to bright red berries that are eaten by deer and a wide variety of other wildlife.



Allthorn (Junco)
Koeberlinia spinosa
 Shrub; thorny and multi-branched; leafless except after rains; tiny greenish to white flowers and small, black berries.



Elbowbush (Narrowleaf Forestiera, Panalero) 6-21%
Forestiera angustifolia
 Shrub; stiff, intricately branched at 90-degree angles, and thornless; simple, linear, light green leaves clustered similar to wolfberry; dark purple to black drupe with one seed.



Honey Mesquite 16-32%
Prosopis glandulosa
 Shrub or tree; branches with long thorns up to 2"; yellow summer blooms; seeds in long, skinny bean pods; mast eaten by deer and a wide variety of wildlife, very important to white-tailed deer during a drought.



Amargosa (Goatbush, Bitterbush) 10-12%
Castela erecta
 Shrub; usually 3 to 6 feet tall with spine-tipped branches; leaves silver beneath; tiny, four-petaled reddish flowers and red fruit; mast sometimes eaten by deer.



Coyotillo
Karwinskia humboldtiana
 Shrub; thornless evergreen with large, dark green and strongly veined leaves; small greenish flowers and black fruit in late summer and fall; toxic to some wildlife species.



Knife-Leaf Condalia (Costilla)
Condalia spathulata
 Shrub; very spiny with grayish-green branches, can form a low, wide impenetrable area; small, narrow alternate leaves (1/4 to 1/2 inch); inconspicuous green flowers and a round, black, edible fruit; usually forms very thick clumps.



Leatherstem (Sangre de Drago)
Jatropha dioica
 Colony forming, small, thornless, usually 1 to 3 feet high; stems succulent and flexible, leaves simple, often whorled with entire margins; flowers white, fruit a two or three seeded capsule; often found in sandy loam soils; toxic to some livestock.



Mountain Laurel
Sophora secundiflora

Shrub or small tree; thornless and evergreen, can grow to 12 feet tall with velvety twigs; leaves are dark green, glossy, and leathery, with prominent veins; dense racemes of showy, fragrant, violet flowers March-April followed by thick, woody, hard seed pod with red seeds in September.



Spanish Dagger
Yucca treculeana

Shrub; evergreen with long, sharp pointed leaves on a simple trunk; white, fragrant, waxy flowers in large clusters at the top of the stalk in spring and summer of alternate years; fruit is a 4 inch capsule packed with black, flat seeds.



Texas Persimmon (Chapote)
Diospyros texana

Shrub or small tree; thornless semi-evergreen with smooth, gray and flaking bark; leaves are alternate, dark green above, grayish green below, and covered with pubescence; flowers small and greenish white; fruit large, dark purple to black, and relished by wildlife.



Shubby Blue Sage (Mejorana)
Salvia ballotiflora

Shrub; abundantly branched, thornless, and aromatic shrub with pale dark gray square stems; leaves simple, opposite, hairy, and green to grayish green with serrated edges; flowers are blueish to purple, three-lobed, and triangular; fruit tiny and inconspicuous.



Spiny Aster (Devil Weed, Wolf Weed)
Chloracantha spinosa

Shrub; occasional spines with slender, erect branches, and a woody base forming dense colonies in low, wet areas; leaves often absent and inconspicuous when present; ray flowers yellow and disk flowers white; fruit is an achene.



Tickle Tongue - SEP, RGV, CSP
Zanthoxylum hirsutum

Shrub or small tree; may grow to 15 feet tall; bark light gray or reddish-tan, smooth, thin, with sharp spines that look similar to those of a rose; leaves pinnately compound, often with a few spines on the rachis with elliptical or ovate leaflets; flowers small and greenish-white in branching clusters; fruit numerous, maturing in early summer; seeds shiny-black.



Vara Dulce (Sweet Stem)
Aloysia macrostachya

Shrub; aromatic, thornless, and grows erect to 6 feet tall; leaves simple and opposite, pubescent with slightly toothed margins; flowers pink to lavender, fruit a small drupe with two nutlets.



Wolfberry (Tomatillo) 17% (mast)
Lycium berlandieri

Shrub; slender and spiny with whitish-gray-to-reddish branches; leaves are dropped in the summer as apposed to the winter, and are linear, alternate, clustered in groups of two to five near thorns, and about 1" long; flowers blue, lavender, or white; fruit is a small red berry.



Whitebrush (Chaparro Blanco) 19-23%
Aloysia gratissima

Shrub; usually 4 to 8 feet tall, deciduous, thornless, and slender with stiff, squarish, brittle branches and yellow wood; small, clustered spikelets of white flowers are vanilla-scented; often forms thickets along drainages.



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