

Appendix R

Small Acreage Management Techniques

(Abridged)



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The goal of this publication is to present wildlife habitat improvement projects to landowners with the least amount of narration as possible. The workbook describes the three necessary ingredients for wildlife habitat. Habitat is where wildlife lives, and they require food, water, and cover. The abundance and diversity of these three elements are directly proportional to the number of plant and animal species one can expect to attract.

Projects described in this workbook are intended to be as useful to an urban backyard wildlife enthusiast or a manager of a large ranch. The booklet will be most attractive to owners of small properties that want to attract wildlife and develop habitats for it. Incorporating the FOOD, WATER, and COVER projects laid out in this booklet will ensure good wildlife habitat. Managing properties for wildlife should be a holistic (big picture) practice; therefore much overlapping and duplication of

the sections will occur.

FOOD

Providing food is an obvious and simple wildlife enhancement concept. There are many ways of supplying food to wildlife ranging from simple bird feeders to fenced food plots. It is a common misconception that an area knee-high in grass or a mature, closed-canopy forest is good wildlife habitat. There is little diversity in these situations and consequently these type habitats produce poor food sources for wildlife. Diversity is the key to quality wildlife habitat. This booklet will show how to create more edge effect to enhance wildlife habitat. The edge effect is the result of two adjoining plant communities coming together. The



Food section describes how to put “food on the table” for wildlife. Supplemental feeding is not a replacement for good habitat. Corn, milo, etc. are good attractants and can help hold wildlife in a given area; however, they are low in protein and do not meet the nutritional requirements for most wildlife. Periodic moving of feeders is necessary to

prevent disease transmission among wildlife species. In addition, washing with a 10% bleach solution is a safe way to keep structures germ-free.

WATER

Water is a necessity for most wildlife. If the property in question has an existing stream, creek, or pond, most of a wildlife manager's problems are solved. This booklet will show how to improve these riparian habitats for wildlife and how to more evenly distribute wildlife by creating new watering situations and improving existing structures. The more diverse the watering situations are, the greater the number of species that will benefit. The ideal situation is to have many watering type areas ranging from fast moving water to pools. A small dam on a creek is a good way to change and diversify an existing water system. Wet marshy areas, excluded from livestock, will benefit many wildlife species. These water projects also produce many unseen creatures that provide food for other animals along the food chain.



COVER

Cover can be broken down into three categories: nesting, escape, and feeding, with some overlapping of the three. Nesting boxes for birds are some of the most visible and enjoyable COVER projects. Cavity nesters such as bluebirds, and wrens are delightful to watch and easy to attract. Leaving snags, dead or dying trees may seem unattractive, but many birds depend upon them for their "natural" shelters.



Snags can be created by girdling a live tree. This entails ringing a tree's bark below the cambium level with a chain saw or axe. On small properties or around a house, a less drastic approach such as building a structure from limber products should be considered. Basic designs and dimensions for such structures have been included in the Nesting Cover portion of this workbook.

Escape cover can include brush piles, half-cut trees, and shrub plantings. These happen to be among some of the most popular wildlife enhancement projects. Most wildlife species are edge dwellers, and escape cover is necessary to provide protection from predators. Wildlife is not comfortable out in the wide open, and foods that they search out are not



always readily available in dense wooded situations. The line where these two areas meet compose the edge.

Feeding Cover is necessary for wildlife to forage over a large area. Brush clearing strategies are important to consider when trying to improve habitat in a small area. The more edge created, the more wildlife will benefit. Another method creating edge for wildlife is leaving fallow strips in agricultural plantings. This allows for year around feeding. Patterns and food sources will be described in the Cover Project section.

The amount of edge created can be greatly limited by thick matted amounts of grass if livestock is totally excluded. Many properties are too small to support livestock grazing. Continuous grazing of livestock is not recommended for small acreage. Continuous grazing of livestock, even if not “overstocked”, could lead to less biodiversity. A single cow will select towards the most choice forage. This leads to over utilization of these preferred foods and allows secondary, invader type species, to flourish. This ultimately leads to less desirable type foods.

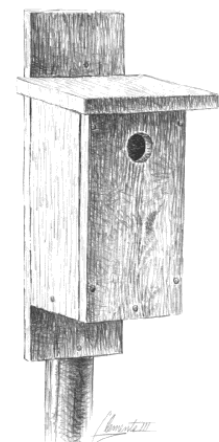
A good scenario for wildlife is a high intensity low frequency grazing system. By moving a large number of grazers into a pasture, a “mowing” effect can be achieved. Removal of old grass growth during late summer and winter can greatly benefit wildlife. The timing of grazing is important to prevent damage to vulnerable wildlife and plant



species. Young trees and plants can be damaged, and nesting birds disturbed, during springtime grazing. Livestock should be rotated in and out of an area once the desired mowing effect has been achieved. For small property owners this poses a problem. A good solution is to incorporate the small property into a grazing system of a neighbor with a herd. Both parties can benefit if approximately 50% of grass is removed. Care should be taken that critical areas, such as food

plots, structures and fragile riparian areas are restricted from the herd. Cattle are the best choice for grazing excess grass and the soil disturbance created by their “hoof action” will stimulate forb growth. Sheep, goats, and exotic species of deer will compete directly with native species for desirable food, water and space. Cattle are primarily grass foragers and do not pose a threat to native species for food if moderately stocked. “Moderation” is the key to deciding how many cows, goats, sheep, etc. are to be stocked. Remember that too many deer can over-utilize the vegetation in an area as drastically as sheep and goats.

Hunting, where permitted, is an important tool to keep many wildlife populations in check. Again, “moderation” is the key; care should be taken not to over-utilize any given species. Stay within the limits and recommendations provided by TPWD biologists for a given area.

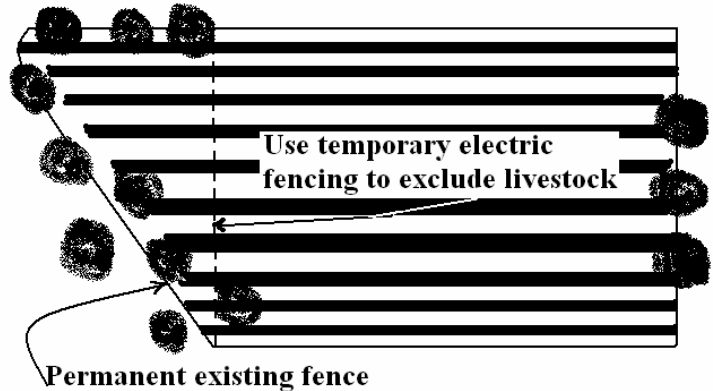


Modifying Existing Agricultural Stands

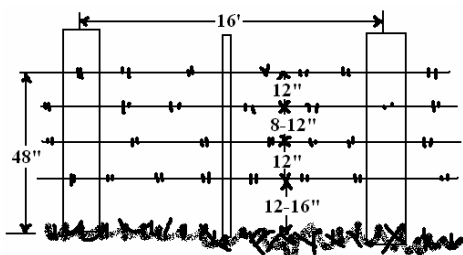
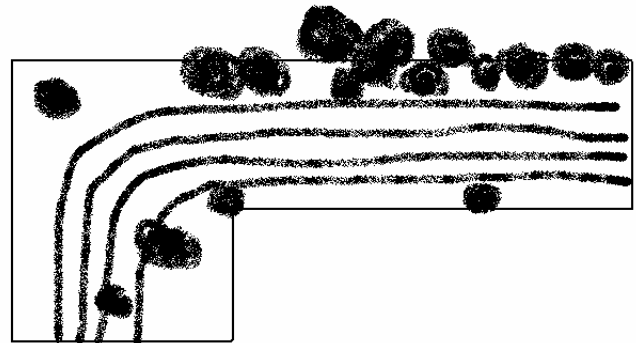
Allow irregular areas in cultivation, such as this triangular plot, to go fallow for winter food—especially adjacent to brushy cover.

Food Plot. In Conservation Reserve Program (CRP) or old field.

- Useful in areas where row cropping and necessary foods are scarce
- Plant row type crops specifically for wildlife
- Maximum edge can be created by long narrow plots (1/8 – 2 acres)
- Position between two cover types (ex. Between mature tree stand and open area).
- These areas can serve as wildlife corridors.



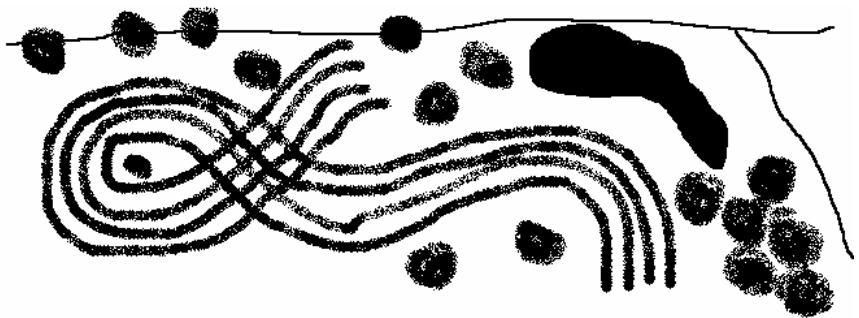
Fencing. Food plots specifically for wildlife, should be excluded from livestock with electric or barbed wire fence.

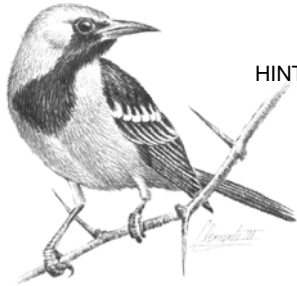


Barbed-wire Hints. Bottom wire should be a minimum of 12-16" from ground and smooth. Top wire should be no more than 48" (preferably lower), and 12" between it and next wire down. Fence stays should be used between posts to create a more rigid fence; this allows deer a better chance of struggling free should they become entangled.

Random Discing.

- Pull a disc or chisel plow behind tractor in early spring to stimulate native forbs for wildlife production.
- Slightly disc soil in non-highly erodable areas with good soil moisture.
- Try sparsely broadcasting wildlife food producing seeds. Follow up by dragging a log or chain to create a simple food plot.





Wildlife Plantings



- HINTS: --Need 25 inches of annual precipitation to be beneficial.
 --Irrigation is an expensive alternative.
 --Supplemental feeding is cheaper and more reliable.
 --Use seed sources from within 200 miles north and south, and 100 miles east and west.
 --Exclude from livestock.

Seed Species

Annual Sunflower

Rate (lbs/acre)	Depth (inches)	Planting Time	Time to Maturity (days)	Drought Tolerance	Species Benefited*
3-5	.25-.5	Mar.-May	100	High	MD,Q

Good drought insurance; will reseed yearly with spring discing.

Fox-tail Millet

15-20	1-1.5	Apr-June	60-80	Good	MD,Q,T,WF
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Similar to native bristle grass; can be planted 0 days before frost.

Proso Millet

20-50	1-1.5	Apr-June	50-70	Good	MD,Q,T
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Best adapted for North Texas (Rolling Plains)

Japanese Millet

15-20	1-1.5	Apr-June	60-80	Poor	WF
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Good in playa lakes in High Plains for waterfowl

Sorghum Alum

6-Mar	2-Jan	Apr-June	100-120	Fair	MD,Q,T,D,WF
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Do not plant too thick, to allow free movement throughout food plot

Corn

10-Jul	2-Jan	Apr-June	170-190	Poor	MD,Q,T,D,WF
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Should not be planted in areas less than 30 inches precipitation (unless irrigated). Shred in strips to allow free movement of wildlife.

Sesbania

20-30	.5-1	June-July	120	Poor	MD,Q,T,D
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Might require irrigation in arid areas

Partridge Pea

2	1	Feb-March	120	Fair	ALL
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Use local strains for best production

Annual Pespedeza (Korean)

20-25	.25-.50	Post Frost	120	Poor-Fair	D,Q,T
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Need 30+ inches of precipitation or irrigation

Sesame (Benne)

1	.25-.50	Post Frost	120	Fair	D,Q
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Use shattering variety for doves and quail

Austrian Winter Peas

20-30	1-2	Fall			D,T
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Illinois Bundle Flower

3	0.5	Spring-Fall		Good	MD,Q,T
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Mix into areas when reestablishing grasses and other perennials.

Clover

8-10	1-2	Fall		Poor	D,T
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Engleman Daisy

3	1/8	Spring		Good	D,T
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Four-wing Saltbush

8-10	0.5	Spring		Good	D,T
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Oats

40-50	1-2	Fall-Spring		Fair	D,T,WF
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Not as freeze resistant as wheat

Reseeding Cow Peas

50-100	1-2	Spring		Fair	ALL
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Maximillian Sunflower

3	1/8	Fall-Winter		Good	D,Q,T
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<u>Vetch</u>	20-30	1-2	Fall	Fair	Q,D,T,MD
<u>Egyptian Wheat</u>	3-6	1-2	Spring	Fair	Q,MD,T
<u>Winter Wheat</u>	30-50	1-2	Fall-Spring	Fair	ALL

Best all round winter forage

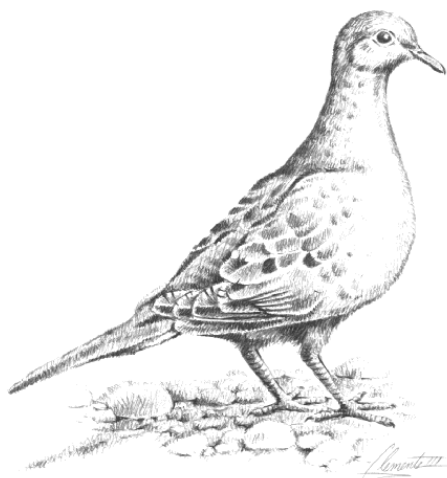
***MD=mourning dove**

Q=Quail

T=turkey

WF=waterfowl

D=deer



RECOMMENDED SPECIES FOR CENTRAL TEXAS

Botanical Name	Common Name	Site Preference
WILDFLOWERS		
Annuals		
<i>Amblyolepis setigera</i>	Huisache daisy	Dry, well-drained soil; sun
<i>Cassia fasciculata</i>	Partridge pea	Open, sandy fields; sun
<i>Castilleja indivisa</i>	Indian paintbrush	Sandy loam; sun
<i>Centaurea americana</i>	Basket flower	Dry, well-drained soil; sun
<i>Coreopsis tinctoria</i>	Coreopsis Clasping-leaf coneflower	Moist, sandy soil; sun Moist areas, ditches; sun
<i>Dracopis amplexicaulis</i>	Eryngo	Plains, prairies; sun
<i>Eryngium leavenworthii</i>	Texas bluebell	Moist areas in prairies; sun
<i>Eustoma grandiflorum</i>	Indian blanket	Variety of soils, disturbed areas; sun
<i>Gaillardia pulchella</i>	Blue flax	Sandy or rocky soils; sun
<i>Linum lewsii</i>	Bluebonnet	Well-drained, alkaline soil; sun
<i>Lupinus texensis</i>	Tahoka daisy	Rocky or sandy soils; sun
<i>Machaeranthera tanacetifolia</i>	Horsemint	Well-drained, sandy loam-rocky soil
<i>Monarda citriodora</i>	Palafoxia	Limestone soil; sun
<i>Palafoxia callosa</i>	Blue curls	Moist, well-drained soils; sun-shade
<i>Phacelia congesta</i>	Drummond's phlox	Prefers sandy soil; sun-part sun
<i>Phlox drummondii</i>	Black-eyed Susan	Varies widely; sun-part sun
<i>Rudbeckia hirta</i>	Greenthread	Calcareous soils; sun
<i>Thelesperma filifolium</i>		
Perennials		
<i>Aquilegia canadensis</i>	Columbine	Rocky, well-drained sites; part shade
<i>Asclepias tuberosa</i>	Butterfly weed	Moist areas in prairies, roadsides; sun
<i>Callirhoe digitata</i>	Winecup	Open woods, plains; sun
<i>C. involucreta</i>	Winecup	Open woods, rocky hills; sun
<i>Calvlophus drummondianus</i>	Square-bud primrose	Sandy or rocky soils; sun
<i>Cooperia drummondii</i>	Rain lily	Open fields, prairies, lawns; sun
<i>C. pedunculata</i>	Rain lily	Open fields, prairies, lawns; sun
<i>Coreopsis lanceolata</i>	Lanceleaf coreopsis	Variety of soils; sun
<i>Delphinium carolinianum</i>	Prairie larkspur	Dry, open woods and fields; sun
<i>Echinacea angustifolia</i>	Purple coneflower	Dry, rocky prairies and hillsides; sun
<i>E. purpurea</i>	Purple coneflower	Rocky, open woods; sun-part sun
<i>Engelmannia pinnatifida</i>	Engelmann daisy	Open, calcareous sites; sun
<i>Eryngium leavenworthii</i>	Eryngo	Plains and prairies; sun Moist, sandy wooded area; sun-part sun
<i>Eupatorium coelestinum</i>	Mistflower	
<i>Helianthus maximiliani</i>	Maxillilian sunflower	Moist, clay-like soil; sun
<i>Hymenoxys scaposa</i>	four-nerve daisy	Dry, well-drained sites; sun

<i>Ipomopsis rubra</i> (biennial)	Standing cypress	Dry, sandy or rocky soil; sun
<i>Liatris mucronata</i>	Gayfeather	Well-drained soils; sun
<i>L. pycnostachya</i>	Gayfeather	Well-drained, calcareous soil; sun
<i>Lobelia cardinalis</i>	Cardinal flower	Wet to moist soil; sun-part shade
<i>Melampodium leucanthum</i>	Blackfoot daisy	Calcareous soil; sun
<i>Monarda fistulosa</i>	Beebalm	Dry, open woods, wet meadow
<i>Oenothera macrocarpa</i>	Missouri primrose	Limestone hills and prairies; sun
<i>O. speciosa</i>	Showy primrose	Open areas in a variety of soils; sun
<i>Penstemon baccharifolius</i>	Rock penstemon	Limestone crevices; sun-part shade
<i>P. cobaea</i>	Wild foxglove	Loamy soil, prairies; sun
	Hill Country	
<i>P. triflorus</i>	penstemon	Limestone soil; sun-part shade
<i>Physostegia pulchella</i>	Obedient plant	Wet soils of bottomlands; part shade
<i>Ratibida columnifera</i>	Mexican hat	Variety of soil; sun-part sun
<i>Salvia coccinea</i>	Scarlet Sage	Thickets and open woods; part shade
<i>S. engelmannii</i>	Englemann sage	Limestone soils; sun
<i>S. farinacea</i>	Mealy blue sage	Wide variety of soils; sun-part sun
<i>S. roemeriana</i>	Cedar sage	Woody, rocky areas; part shade
<i>Solidago</i> spp.	Goldenrod	Sandy to clay soil; sun
<i>Tradescantia</i> spp.	Spiderwort	Prairies, plains, moist areas; part sun
<i>Verbena bepennatifida</i>	Dakota vervain	Fields; sun
<i>V. elegans</i> var. <i>asperata</i>	Mountain vervain	Limestone & sandstone outcrops; sun
<i>Vernonia baldwinii</i>	Ironweed	Dry, well-drained sites; sun
<i>V. lindheimeri</i>	Wooly ironweed	Limestone soil; sun
<i>Wedelia hispida</i>	<i>Wedelia</i>	Dry, well-drained sites; sun

SHRUBS

Blackland Prairie (east of the Balcones fault line)

<i>Amorpha fruticosa</i> var. <i>angustifolia</i>	False indigo	Moist woods, stream banks; calcareous soil
<i>Anisacanthus wrighii</i>	Flame acanthus	Dry, well-drained soil
<i>Berberis swasevi</i>	Texs barberry	Dry, well-drained soil
<i>B. trifoliolata</i>	Agarito	Dry, well-drained soil
<i>Callicarpa americana</i>	American beauty bush	Rich woods, thickets
<i>Dalea frutescens</i>	Black dalea	Dry soil in full sun
<i>Erythrina herbacea</i>	Coral bean	Sandy or loamy soils; sun-part shade
<i>Eupatoruim havenense</i>	Mistflower	Well-drained soil; rocky ravines
<i>E. odoratum</i>	Blue mistflower	Well-drained soil; full sun
<i>Eysenhardtia texana</i>	Kidneywood	Dry hills and canyons
<i>Hesperaloe parviflora</i>	Red yucca	Dry, well-drained soil; full sun
<i>Lantana horrida</i>	Trailing lantana	Dry, well-drained soil; sun-part-sun
<i>Leucophyllum frutescens</i>	Cenizo, Texas sage	Dry, well-drained soil; sun
<i>Malvavixcus drummondii</i>	Turk's cap	Moist, shaded areas
<i>Mimosa borealis</i>	Fragrant mimosa	Well-drained soil; sun

<i>Nolina texana</i>	Bear grass	Well-drained sites; full sun
<i>Pavona lasiopetala</i>	Rose pavonia	Dry, rocky woods or stream banks
<i>Rhus aromatica</i>	Fragrant sumac	Wooded areas; rocky soil
<i>R. virens</i>	Evergreen sumac	Rocky hillsides
<i>Ruellia brittoniana</i>	Narrow-leaf petunia	Well-drained sites; full sun
<i>Salvia greggii</i>	Autumn sage	Dry, well-drained soils; full sun
<i>Viburnum rufidulum</i>	Rusty blackhaw	Wood borders, stream edges, thickets

Edwards Plateau (west of the Balcones fault line)

<i>Amorpha fruticosa</i>	False indigo	Moist woods, streambanks; calcareous soil
<i>Anisacanthus wrightii</i>	Flame acanthus	Dry, well-drained soil
<i>Bauhinia congesta</i>	Orchid tree	Dry, well-drained soil; S. side of bdg.
<i>Berberis swasevi</i>	Texas barberry	Dry, well-drained soil
<i>B. trifoliolata</i>	Agarito	Dry, well-drained soil
<i>Callicarpa americana</i>	American beauty bush	Rich woods and thickets
<i>Capsicum frutescens</i>	Chile piquin	Well-drained sites
<i>Chrysactinia mexicana</i>	Damianita	Dry, rocky well-drained sites; sun
<i>Colubrina texensis</i>	Texas snakewood	Dry, well-drained sites
<i>Dalea frutescens</i>	Black dalea	Dry soil in full sun
<i>Dasyilirion texanum</i>	Texas sotol	Dry, well-drained sites; full sun
<i>Erythrina herbacea</i>	Coral bean	Sandy or loamy soils; sun-part shade
<i>Eupatorium havanense</i>	Mistflower	Well-drained soil, rocky ravines
<i>E. odoratum</i>	Blue mistflower	Well-drained soil, full sun
<i>Hesperaloe parviflora</i>	Red yucca	Dry, well-drained soil; full sun
<i>Hibiscus cardiophyllus</i>	Heart-leaf hibiscus	Well-drained soil; sun-part-sun
<i>Lantana horrida</i>	Trailing lantana	Dry, well-drained soil; sun-part-sun
<i>Leucophyllum frutescens</i>	Cenizo, Texas sage	Dry, well-drained soil; sun
<i>Lonicera albiflora</i>	White honeysuckle	Rocky or sandy soils; cedar brakes
<i>Malvavixcus drummondii</i>	Turk's cap	Moist, shaded areas
<i>Mimosa borealis</i>	Fragrant mimosa	Well-drained soil; sun
<i>Nolina texana</i>	Bear grass	Well-drained sites; full sun
<i>Pavona lasiopetala</i>	Rose pavonia	Dry, rocky woods or stream banks
<i>Pistacia texana</i>	Pistache	Rocky, limestone stream banks, cliffs
<i>Rhus aromatica</i>	Fragrant sumac	Wooded areas; rocky soil
<i>R. lanceolata</i>	Flame-leaf sumac	Rocky hillsides; sun or shade
<i>R. virens</i>	Evergreen sumac	Rocky hillsides
<i>Ruellia brittoniana</i>	Narrow-leaf petunia	Well-drained sites; full sun
<i>Salvia greggii</i>	Autumn sage	Dry, well-drained soils; full sun
<i>S. regia</i>	Royal sage	Rocky, wooded slopes
<i>Viburnum rufidulum</i>	Rusty blackhaw	Wood borders, stream edges, thickets
<i>Yucca rupicola</i>	Twist-leaf yucca	Dry, rocky soil; full sun

TREES

Blackland Prairie (east of the Balcones fault line)

Conifers

<i>Juniperus virginiana</i>	Eastern red cedar	Fields, grasslands
<i>Taxodium distichum</i>	Bald cypress	Along stream banks

Shade Trees

<i>Carya illinoensis</i>	Pecan	Rich, river-bottom soil
<i>Catalpa speciosa</i>	Catlapa	Deep, rich, moist soil
<i>Fraxinus texensis</i>	Texas ash	Prefers limestone hills
<i>Juglans nigra</i>	Eastern black walnut	Well-drained, loamy soil
<i>Plantanus occidentalis</i>	Sycamore	Rich bottomland soils along streams
<i>Quercus glaucooides</i>	Lacy oak	Limestone soils
<i>O. macrocarpa</i>	Bur oak	Moist forests along streams
<i>O. muhlenbergii</i>	Chinkapin oak	Calcareous uplands
<i>O. pungens var. vaseyana</i>	Vasey oak	Dry, rocky slopes
<i>O. shumardii</i>	Shumard red oak	Moist hills, bottomlands, clay soils
<i>O. texana</i>	Texas red oak	Dry uplands
<i>O. fusiformis</i>	Escarpment live oak	Sandy loam soils, also clay soils
<i>Sapindus drummondii</i>	Western soapberry	Moist soils along streams
<i>Ulmus crassifolia</i>	Cedar elm	Prefers limestone soils

Small Trees

<i>Cercis canadensis var. mexicana</i>	Mexican redbud	Rich, moist sandy loam
<i>C. canadensis var. texensis</i>	Redbud	Rich, moist sandy loam
<i>Chilopsis linearis</i>	Desert willow	Dry, well-drained areas
<i>Cotinus obovatus</i>	Smoketree	Rocky banks and hillsides
<i>Diospyros texana</i>	Texas persimmon	Dry, well-drained sites
<i>Eysenhardtia texana</i>	Texas kidneywood	Dry, well-drained sites
<i>Ilex decidua</i>	Possom-haw holly	Rich, moist soils
<i>I. vomitoria</i>	Yaupon	Low, moist woods
<i>Parkinsonia aculeata</i>	Retama	Moist, sandy soils
<i>Pistacia texana</i>	Texas pistachio	Rocky limestone soil
<i>Prosopis glandulosa</i>	Mesquite	Variety of soils, well-drained site
<i>Prunus mexicana</i>	Mexican plum	Well-drained, but moist sites
<i>Rhamnus caroliniana</i>	Carolina buckthorn	Low areas, moist site
<i>Rhus glabra</i>	Scarlet sumac	Moist, rich soil
<i>Sophora affinis</i>	Eye's necklace	Limestone soils on hills and banks
<i>S. secundiflora</i>	Mountain laurel	Limestone soils
<i>Ungnadia speciosa</i>	Mexican buckeye	Limestone soils and moist areas

TREES

Edwards Plateau (west of the Balcones fault line)

Conifers

<i>Juniperus virginiana</i>	Eastern red cedar	Fields, grasslands
<i>Taxodium distichum</i>	Bald cypress	Along stream banks

Shade Trees

<i>Arbutus xalapensis</i>	Texas madrone	Limestone or igneous hills
<i>Carya illinoensis</i>	Pecan	Rich, river-bottom soil
<i>Fraxinus texensis</i>	Texas ash	Prefers limestone hills
<i>Juglans microcarpa</i>	Texas black walnut	Valleys and rocky stream beds
<i>J. nigra</i>	Eastern black walnut	Well-drained, loamy soil
<i>Plantanus occidentalis</i> var. <i>glabrata</i>	Texas plane tree	Limestone soils
<i>Quercus glaucooides</i>	Lacy oak	Limestone soils
<i>O. buckleyi</i>	Buckley oak	Limestone soils
<i>O. macrocarpa</i>	Bur oak	Moist forests along streams
<i>O. muhlenbergii</i>	Chinkapin oak	Calcareous uplands
<i>O. pungens</i> var. <i>vaseyana</i>	Vasey oak	Dry, rocky slopes
<i>O. fusiformis</i>	Escarpment live oak	Sandy loam soils, also clay soils
<i>Sapindus drummondii</i>	Western soapberry	Moist soils along streams
<i>Ulmus crassifolia</i>	Cedar elm	Prefers limestone soils

Small Trees

<i>Acacia wrightii</i>	Wright acacia	Dry, rocky soils
<i>Acer grandidentatum</i>	Bigtooth maple	Valleys & canyons (protected areas)
<i>Aesculus arguta</i>	White buckeye	Limestone and granite soils
<i>A. pavia</i>	Red buckeye	Limestone canyons and rocky hills
<i>Cercis canadensis</i> var. <i>mexicana</i>	Mexican redbud	Rich, moist sandy loam
<i>C. canadensis</i> var. <i>texensis</i>	Redbud	Rich, moist sandy loam
<i>Chilopsis linearis</i>	Desert willow	Dry, well-drained areas
<i>Cotinus obovatus</i>	Smoketree	Rocky banks and hillsides
<i>Diospyros texana</i>	Texas persimmon	Dry, well-drained sites
<i>Eysenhardtia texana</i>	Texas kidneywood	Dry, well-drained sites
<i>Ilex decidua</i>	Possom-haw holly	Rich, moist soils
<i>I. vomitoria</i>	Yaupon	Low, moist woods
<i>Parkinsonia aculeata</i>	Retama	Moist, sandy soils
<i>Pistacia texana</i>	Texas pistachio	Rocky limestone soil
<i>Prosopis glandulosa</i>	Mesquite	Variety of soils, well-drained site
<i>Prunus mexicana</i>	Mexican plum	Well-drained, but moist sites
<i>Rhamnus caroliniana</i>	Carolina buckthorn	Low areas, moist site
<i>Rhus glabra</i>	Scarlet sumac	Moist, rich soil
<i>Sophora affinis</i>	Eye's necklace	Limestone soils on hills and banks
<i>S. secundiflora</i>	Mountain laurel	Limestone soils

<i>Ungradia speciosa</i>	Mexican buckeye	Limestone soils and moist areas
<i>Yucca thompsonia</i>	Thompson yucca	Dry, rocky sites

VINES

<i>Campsis radicans</i>	Trumpet vine	Sun to part sun
<i>Clematis pitcheri</i>	Purple leatherflower	Sun to part sun
<i>C. texensis</i>	Scarlet leatherflower	Limestone cliffs, rocky areas, sun to part sun
<i>Lonicera sempervirens</i>	Coral honeysuckle	Sun
<i>Parthenocissus quinquefolia</i>	Virginia creeper	Sun to part sun
<i>Passiflora incarnata</i>	Passion flower	Sun to shade, part sun

GRASSES

<i>Andropogon gerardi</i>	Big bluestem	Prairies, open woods, sandy-loamy soil
<i>A. glomeratus</i>	Bushy bluestem	Prairies, open woods, sandy-loamy soil
<i>Bouteloua curtipendula</i>	Sideoats grama	Prairies, open woods, sandy-loamy soil
<i>B. hirsuta</i>	Hairy grama	Low, moist sites
<i>B. pectinata</i>	Tall grama	Loose, alkaline soils
<i>Buchloe dactyloides</i>	Buffalograss	Variety of soils
<i>Hilaria belangeri</i>	Curly mesquite	Limestone outcrops and hilltops
<i>Melica nitens</i>	Threeflower melic	Full sun; prefers clay soils
<i>Muhlenbergia hindheimeri</i>	Lindheimer muhly	Rocky slopes, hillsides, grassy plains
<i>M. reverchonii</i>	Seep muhly	Calcareous moist sites
<i>Panicum virgatum</i>	Switchgrass	Moist lowlands
<i>Schizachyruim scoparium</i>	Indiangrass	Open woods and prairies
<i>Sporobolus asper</i>	Tall dropseed	Borders of woods and prairies
<i>Tripsacum dactyloides</i>	Eastern gramagrass	Low, moist grasslands

Deer Resistant Plants That Are Well-adapted to Central Texas

Loss of habitat and other environmental stress can result in almost any plant being eaten by deer. Moreover, deer tastes vary widely. This list ranks each plant for deer resistance through the number in parentheses at the end of the listing.

- 1 = Safe; Deer don't eat**
- 2 = Deer eat flowers only**
- 3 = Deer sometimes eat**
- 4 = Deer eat plants and flowers, but it's not a first choice**

Annuals

Bluebonnet, LUPINUS (1)
Marigold, TAGETES spp. (3)
Periwinkle, VINCA rosea (3)
ZINNA (3)

Bulbs

CALADIUM (3)
Daffodil (1)
IRIS (1)
Snowdrop (1)
Tulip (1)

Grasses

Bamboos, BAMUSA (3)
Beargrass, NOLINA spp. (1)
Fescues, FESCUEA spp. (3)
Little bluestem (1)
Muhly Grass, MUHLENBERGIA lindeim (1)
Pampas grass, CORTADERIA spp. (1)
Purple Fountain Grass (1)
Seep Muhly (1)

Herbs

ALOE (1)
ARTEMISIA (3)
English Lavender (3)
Mexican Marigold Mint (3)
Mexican Oregano (1)
Rosemary (1)
Sage (1)
Yarrow (3)

Perennials

AGAVE (1)
AJUGA reptans (3)
Artichoke (3)
ASTER frikartii (3)
Bee Balm, MONARDA (3)
Black-eyed Susan, RUDECKIA hirta (3)
Blackfoot Daisy, MELAMPODIUM leucanthum (3)
Butterfly Weed, ASCLEPIAS tuberosa (3)
Cactus (1)
Columbine, AQUILEGIA canadensis (3)
Coneflower, ECHINACEA spp. (3)
COREOPSIS hyb. And spp. (2)
Dusty Miller, CENTAUREA cineraria (3)

Ferns: Wood fern, DRYOPTERIS spp. (1)
Foxglove, DIGITALIS (2)
Gayfeather, LIATRIS (2)
Hummingbird Bush, ANISACANTHUS (1)
IRIS (1)
Lamb's Ear, STACHYS byzantina (1)
LANTANA (horrida, no nibbling) (3)
Lavender Cotton, SANTOLINA (1)
Lily of the Nile, AGAPANTHUS (1)
Mexican Marigold Mint, TAGETES lucida (3)
Mexican Petunia, RUELLIA spp. (1)
OXALIS (3)

Oxeye Daisy, CHRYS leucanthurn (1)
PENSTEMON (3)
Red Yucca, HESPERALOE parvifolia
(2)
Rock Rose, PAVONIA (3)
Roses (Lady Banks Rose, no nibbling)
(4)
Rosemary, ROSMARINUS officinalis (1)
Russian Sage, PAERVOSDIA (1)
SALVIA coccinea (3)
SALVIA greggii (Cherry sage, less

nibbling) (3)
SALVIA leucantha (1)
Silver Artemisia, ARTEMISIA
ludoviciana (2)
Sotol, DASYLIRION spp. (1)
Spiderwort, TRADESCANTIA spp. (3)
Turks Cap, MALVAVISCUS arboreus
(3)
Yarrow, ACHILLEA spp. (3)
YUCCA (2)
Zexmenia, WEDELIA hispida (1)

Shrubs

ABELIA spp. (3)
Agarito, BERBERIS trifoliata (1)
AGAVE
Barberry, BERBERIS (pygmy not
resistant) (1)
Bear Grass, NOLINA spp. (1)
Beautyberry, CALLICARPA americana
(1)
Buckeye, AESCULUS pavia (3)
Butterfly Bush, BUDDLEIA (3)
CASSIA spp. (3)
Cast Iron Plant, ASIDISTRA (3)
Cacuts (1)
Cenizo, LEUCOPHYLLUM frutescens
(1)
Cherry Sage (3)
COTONEASTER (3)
Dwf. Chinese Holly, ILEX (1)
Dwf. Yaupon, ILEX (stokes variety) (1)
ELEAGNUS (3)
Evergreen Sumac, RHUS virens (1)
Germander, TEUCRIUM fruticans (3)
HYPERICUM (3)
Junipers (most varieties) (1)
Kidneywood, EYSENHARDTIA texana
(3)
Mistflower, EUPATORIUM (1)
Mexican Oregano, POLIOMINTHA
longiflora (1)

Mountain Laurel, SOPHORA
secundiflora
NANDINA nana and domestica (3)
Oleander, NERIUM (1)
Pampas Grass, CORTADERIA selloana
(1)
Prickly Pear Cactus (1)
Privet (3)
PYRACANTHA spp. (1)
Red Yucca, HESPERALOE parviflora
(3)
Rosemary, ROSMARINUS officinalis (1)
SALVIA greggii (red) (3)
SALVIA leucantha (1)
SANTOLINA (1)
Sotol, DASYLIRION (2)
SPIREA (3)
Sumac, RHUS spp. (1)
Texas Persimmon, DIOSPYROS texana
(1)
Texas Sage, LEUCOPHYLLUM
frutescens (1)
VIBURNUM (1)
Wax Myrtle, MYRICA cerifera (1)
Yaupon, ILEX (Use Stokes, not Strahn)
(1)
Yew Pine, PODOCARPUS
macrophyllus (1)
YUCCA

Anacacho Orchid (1)

Trees

Ash, FRAXINUS spp. (1)

Bald Cypress, TAXODIUM distichum (1)
Bois d'arc (1)
Cedar Elm (1)
Chaste Tree, VITEX spp. (1)
Cherry Laurel, PRUNUS caroliniana (1)
Crepe Myrtle (old varieties) (1)
Deodora Cedar (1)
Elm (all varieties) (1)
Fig, FICUS spp. (1)
Juniper (1)
Maple, ACER grandidentatum (1)
Mesquite, PROSOPIS (beans eaten) (1)
Mexican Persimmon, DIOSPYROS
texana (1)

Mexican Plum, PRUNUS mexicana (1)
Mountain Laurel (1)
Oaks, QUERCUS spp. (1)
Palm (all varieties) (1)
Pecan (1)
Pine (3)
Possum Haw, ILEX decidua (1)
Redbud (Eastern & Mexican nibbled) (3)
Retama (3)
Smoke Tree, COTINUS obovatus (1)
Sumac, RHUS spp. (1)
Walnut (1)
Yaupon, ILEX vomitoria (1)

Vines & Groundcovers

AJUGA (3)
Asiatic Jasmine (1)
Carolina Jessamine (3)
CLEMATIS (3)
Confederate Jasmine (3)
Cross Vine (1)
English & Algerian Ivy (1)
Ferns (3)
Fig Ivy (3)

Honeysuckle (Coral & Purple nibbled
less) (3)
Liriope (4)
Monkey Grass (3)
Muhly Grass (3)
SANTOLINA (1)
VERBENA (3)
Virginia Creeper (3)
WISTERIA (3)
Yarrow (3)

