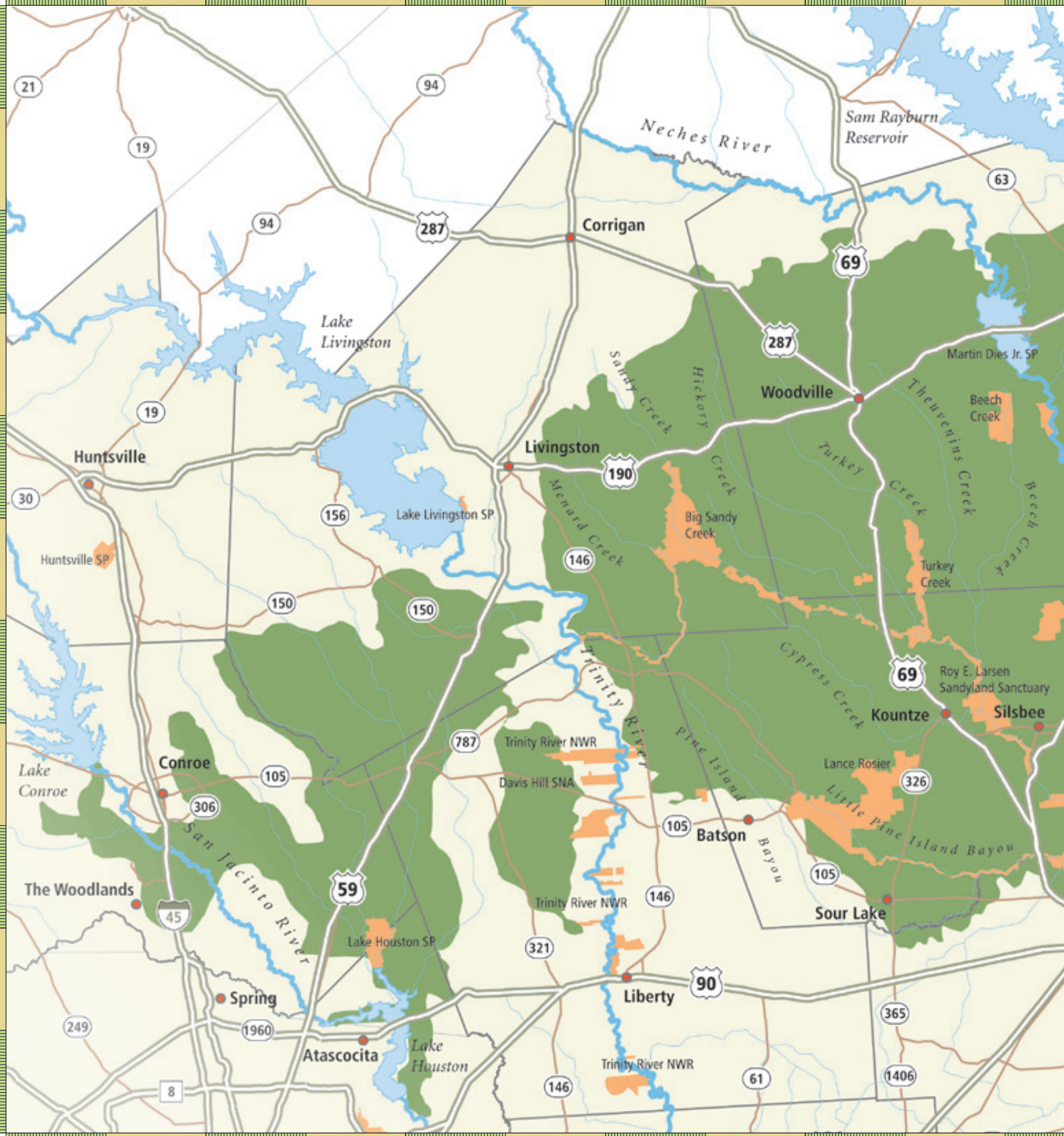
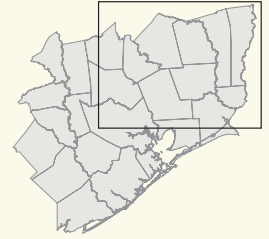


Big Thicket

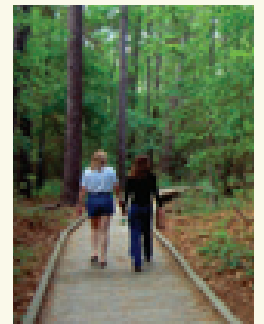




THE EASTERN PORTION of the Houston Wilderness features a great forest commonly known as the Big Thicket. Most of us have heard of the Big Thicket, but few have a firm handle on exactly where it is, and indeed opinions on the matter range widely.

For many, the Big Thicket is chiefly in the seven counties that today contain the Big Thicket National Preserve: Hardin, Tyler, Jasper, Polk, Liberty, Orange and Jefferson counties. Based on vegetation or soil characteristics, others contend that the Big Thicket also includes portions of several neighboring counties, ranging from Newton County on the Louisiana border to as far away as Montgomery or even Grimes counties. Using a culturally derived definition rather than biological or geological criteria, a number of local residents are adamant that the Big Thicket takes in only Hardin and southern Polk counties—the locations of the famous bear hunts of the early twentieth century.

Regardless of how it is defined, the Big Thicket is an ecological jewel. The Big Thicket National Preserve, covering almost 100,000 acres of the 3-million-acre area often described as the historic Big Thicket, was designated in 1981 as an International Biosphere Reserve and in 2001 as a Globally Important Bird Area. Village Creek and

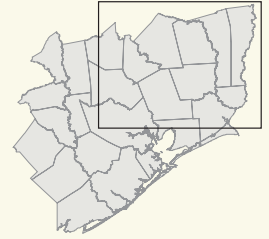


Hiking opportunities abound in the Big Thicket ecoregion less than two hours from the urban metropolis of Houston.



Top Left: Things to see in the Big Thicket include, from left to right: bobcat, *Felis rufus*; “False Turkey Tail” fungi, *Stereum ostrea*; and white-tailed deer, *Odocoileus virginianus*.

Bottom Left: There are hundreds of beautiful scenes just like this one in the Big Thicket that will engage and captivate the visitor.



Martin Dies Jr. State Park conserve additional portions of the Big Thicket and provide a wide range of camping and recreational opportunities. The 5,654-acre Roy E. Larsen Sandylands Sanctuary, managed by the Nature Conservancy, includes important longleaf pine habitat and endangered species. Whether one is a scientist, naturalist, hiker, birder, kayaker, canoeist, camper, hunter or angler, the Big Thicket has much to offer.

People often want to know what is so special about the Big Thicket and how it came about. Books describing the area and its cultural heritage include James Corzine’s *Saving the Big Thicket: From Exploration to Preservation, 1685–2003*, Francis Abernethy’s *Tales of the Big Thicket*, Campbell and Lynn Loughmiller’s *Big Thicket Legacy*, and Pete Gunter’s *The Big Thicket: An Ecological Reevaluation* (see Further Reading). The best way to answer what makes it special is to experience it, especially with someone who can interpret its more subtle features. But you don’t need a guide to enjoy most aspects of the place.

It takes little specialized knowledge to absorb the sunshine on a brilliant blue afternoon, lazily drifting down Village Creek in a kayak, hearing only birds, frogs and the ripple of water as you lift your paddle from the creek. Thanks to land acquisitions by the Big Thicket National Preserve along Village Creek in 2005 (with the assistance of the Conservation Fund), this wonderful, relaxing experience, which includes large stretches of backcountry scenery, will be protected for generations to come. Further acquisitions are planned on the creek.

It takes even less preparation to enjoy hiking on the region’s numerous and varied trails. Imagine setting out on the fifteen-mile Turkey Creek Trail of the Big Thicket National Preserve on a cool spring morning. You start off by gradually descending into the bottoms of Village Creek. Proceeding along a boardwalk that keeps hikers

out of the mud, you enjoy a cool breeze and the sweet smell of the surrounding magnolia, beech and loblolly pine trees. The spring migration is intensifying: if you start early enough, you may spy numerous bird species, ranging from the bright red of a scarlet or summer tanager to the brilliant blue of an indigo bunting.

Woodpeckers are hammering away in the distance as you pass near numerous baygalls and cypress sloughs. Baygalls are depressions that hold water for portions of the year, and they generally feature distinct vegetation, such as gallberry holly, sweetbay, red bay, titi and blackgum. Some cypress sloughs have towering ancient cypress trees surrounded by “knees” emerging from the water and reaching six feet or more in height.

After crossing over the lush bank of Village Creek you begin an ascent up to one of the area’s large sandhills. In dramatic contrast to the wetter environment of the bottoms, the sandhill is breezy and dry. Longleaf pines cast their thinner shade over cacti and yucca. Roadrunners may dart across the trail. If you were to walk the entire trail, the variety would continue, including upland longleaf pine forests and a savannah filled with flowers and carnivorous pitcher plants, one of four kinds of carnivorous plants found here.

To appreciate the Big Thicket fully, it helps to understand something of its natural and cultural history. It appears to be a product of a major contraction of the Gulf of Mexico, when the waters receded to approximately the modern shoreline. Left behind was an immense region that had been submerged for long ages. Over the subsequent thousands of years the terrain was altered by the erosion and deposition work of the great rivers of the region—the Trinity, Neches and Sabine—seeking their way to the Gulf.

What was created was a mosaic of subtle topography featuring an immense range of soils and

Top Left: Texas trumpets, *Sarracenia alata*, one of the four species of insectivorous plants found in the Big Thicket.

Top Right: A colony of Texas trumpet pitcher plants, *Sarracenia alata*, in the forest.



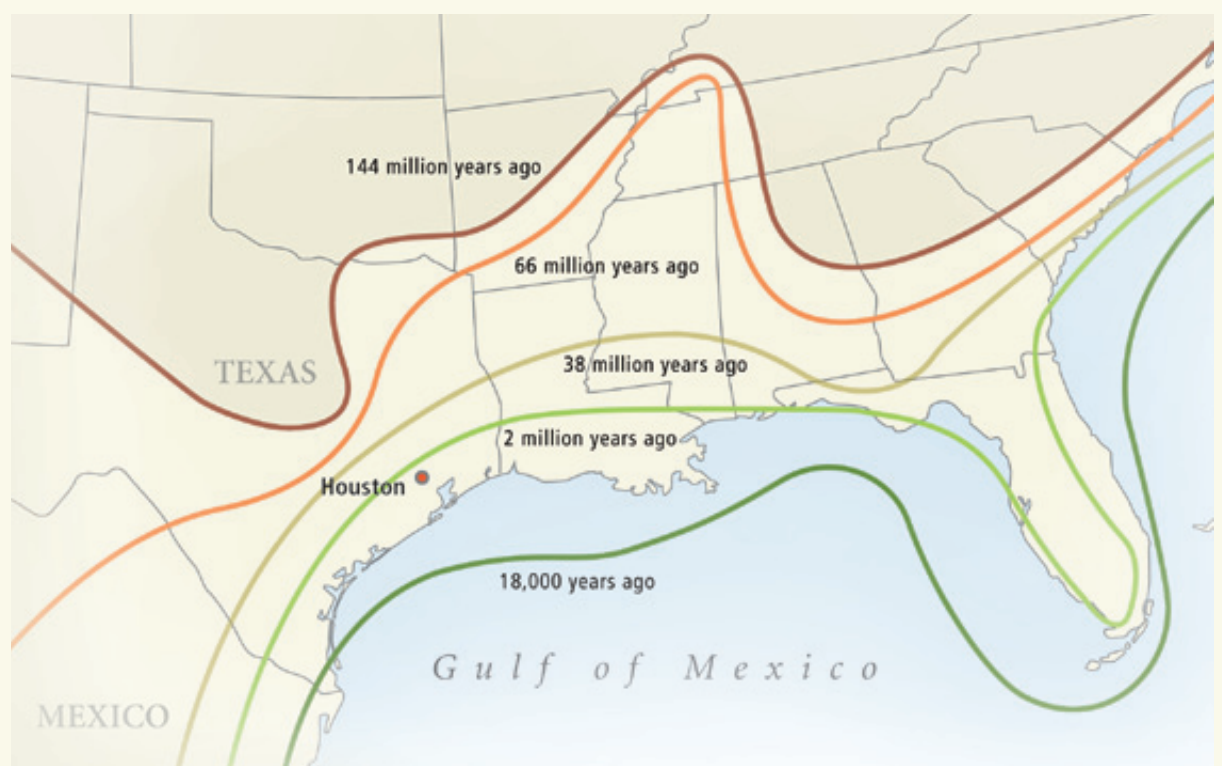
vegetation. The Big Thicket has greater variety of soil types than any area of comparable size in the nation. As a result, plants typical of regions as far away as Appalachia and the Ohio Valley are present—patches of the great aboriginal eastern forest of North America are within picnicking distance of Houston. And this is where east meets west: plants of drier western lands reach their easterly limits in the sandier parts of the Big Thicket, where abundant rainfall is rapidly wicked away and dry-country plants are the ones that do best. A forested patchwork with a bewildering diversity of plants emerged. Naturally occurring fires likely resulted in open, parklike uplands, with the network of rivers, creeks, bayous and sloughs offering densely forested conditions in the bottomlands.

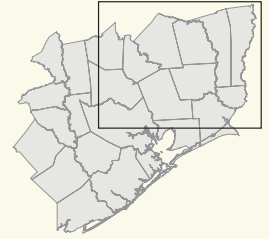
For generations people have seen the Big Thicket as bountiful and have come to harvest its resources. Few Native Americans made it their permanent home, although numerous hunting camps and

other sites of temporary use have been documented. Spanish and French expeditions entering East Texas in the sixteenth and seventeenth centuries encountered a great forest or monte grande, impenetrable in places and reaching up river valleys far to the north. The Spanish pattern of mission building and farming settlement reflected the challenging quality of the forest, as most activities occurred to the north, avoiding settlement in the heart of the Big Thicket. Not until the lumber boom of the nineteenth century would the forest begin to see permanent human occupation.

Today the Big Thicket has been dramatically transformed. Large portions of it have been converted to pine plantations, pastures, or residential, commercial or transportation uses. But remnants of its wildness persist, creating vignettes of what Native Americans and early explorers saw, and revealing even now an extraordinary variety of plant communities. Botanists may disagree over the number of

The shoreline of the Gulf coast has changed tremendously several times over the course of geological history. The 18,000-year line shows the shoreline when the sea level was much lower than it is today because of the water that was tied up in glacial ice sheets.





distinct plant associations in the Big Thicket, but all of us can appreciate the extraordinary variety and richness of its upland forests, slope forests, floodplain forests, flatland forests, prairies and baygalls.

Upland Forests

Pine Sandhill—The driest of the forests in southeast Texas is the pine sandhill woodlands, occurring on deep sandy terrace deposits along creeks and rivers. The best examples in Big Thicket are at the Nature Conservancy’s Roy E. Larsen Sandylands Sanctuary and in the southeast portion of the Turkey Creek unit of the national preserve. These are low, open woodlands (short forest) with a relatively sparse herbaceous layer and much exposed sand. There is a scattered overstory of longleaf, loblolly and shortleaf pines; the understory is a layer of oaks, mainly bluejack and post oaks interlaced with the occasional prickly pear and yucca.

Pine Forest—This kind of forest is widely distributed throughout the Big Thicket and is found on well-drained uplands (see the Pineywoods chapter for more about this forest type). Examples of this association can be found in the northern area of the Big Sandy Creek unit of the national preserve and in Martin Dies Jr. State Park.

Pine Savannah Wetland—Savannahs occur in areas of poor drainage. Usually widely scattered longleaf pines are the only trees present, although stunted individual blackgum and sweetgum may be present. Midstory shrubs are sweetbay, wax myrtle, titi and gallberry holly. The herbaceous layer is diverse, including insectivorous species such as pitcher plants and sundews, and orchids are usually common. Sedges are also common, as is standing water.

Famed Big Thicket botanist Geraldine Watson has noted of this community, “Nowhere else in our region has the intricate relationship of plants to one another and to their environment achieved

such an advanced and delicate balance.”

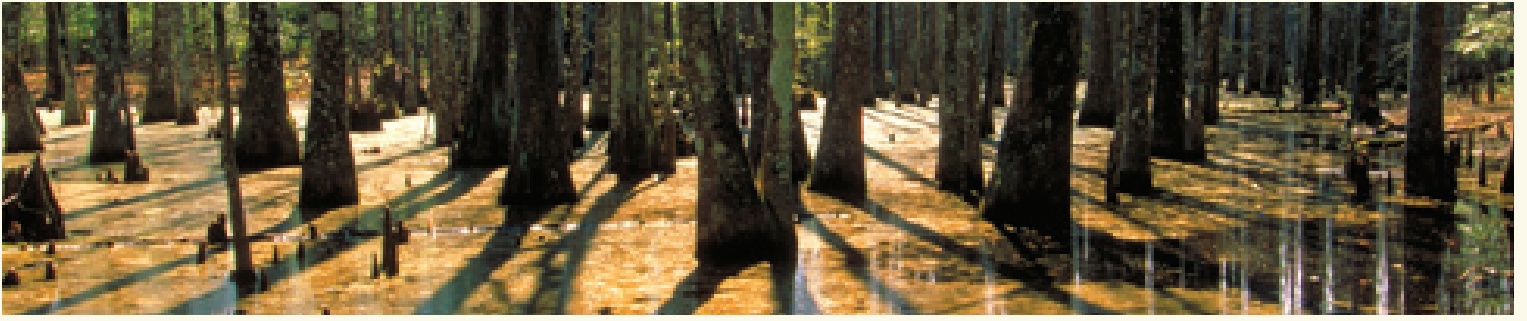
The Sundew Trail in the Hickory Creek Savannah unit of the national preserve offers the best example of pine savannah wetland in the region. Since this plant community is now extremely rare throughout its original range, the national preserve is seeking to restore additional areas of pine savannah wetland in the newly acquired Village Creek Savannahs area of the Village Creek Corridor.

Slope Forests

Upper Slope Pine-Oak—Among the associations known as slope forests (those growing on land sloping down toward rivers, streams and bayous), the upper slope pine-oak community is the driest. The dominant overstory species are shortleaf pine and red, post, or blackjack oaks, and loblolly pine is almost always present. Dominant shrubs are yaupon, flowering dogwood and beautyberry. The herbaceous layer is restricted because of the well-developed canopy. A good example of upper slope pine-oak forest is found at the start of the Kirby Nature Trail in the Turkey Creek unit of the national preserve.

Mid-Slope Oak-Pine—These woodlands feature a taller, more closed canopy and have a greater proportion of hardwoods in the overstory than in their upper slope counterparts. Overstory dominant species are red oak, white oak and loblolly pine. Dominant shrubs are flowering dogwood, American holly, and yaupon. A good example is found along the Kirby Nature Trail in the Turkey Creek unit of the national preserve as one approaches Village Creek.

Lower Slope Hardwood-Pine—Found on the gentle to steep slopes near creeks and creek branches, this association has a dense closed canopy and is dominated by beech, magnolia and loblolly pine. Sweetgum, blackgum and oaks are common in the understory along with other dominant species



Top Left: Bald Cypress trees, *Taxodium distichum*, are common in the Cypress-Tupelo swamps of the Big Thicket. Top Right: Other species found in the Big Thicket include: Rimless Honey mushroom, *Armillaria tabescens* and the Flowering Dogwood Tree, *Cornus florida*.

of American holly, red maple, American hornbeam, horse sugar and yaupon. This association is encountered alongside Village Creek on the Kirby Nature Trail of the national preserve and in Village Creek State Park near Lumberton, Texas.

Floodplain Forests

Stream Floodplain—In the bottoms along major creeks or streams on low, flat terrain that regularly floods grows the community called stream floodplain forest. Beech and loblolly pine are dominant; water oak, basket oak, willow oak and laurel oak are typical; and magnolia is present. The understory is normally open with some small trees or ironwood and American holly. The sparse herbaceous layer is dominated by grasses, sedges and cane. Leaf litter is largely absent due to winter flooding.

River Floodplain—On the broad flats of the Neches River floodplain and tributaries of Beech Creek and Pine Island Bayou is river floodplain forest. Tree growth is rapid, and many trees reach great size, which is accentuated by the open understory. Shellbark hickory, and a variety of oaks—basket, cherrybark, overcup, willow and laurel—dominate the overstory. Vines are more important here than in other woodland types and the ground surface is usually devoid of leaf litter.

Cypress-Tupelo Swamp—The deeper backwaters, sloughs, oxbows and depressions are where cypress and tupelo trees flourish. Both may reach immense proportions and form large buttresses. Edge species may be buttonbush, Carolina ash, water elm and water hickory. The Pine Island Bayou Corridor and the Jack Gore Baygall and Neches Bottomlands units of the national preserve offer excellent opportunities to see this plant association.

Flatland Forests

Flatland Hardwood-Pine—This type of woodland is restricted to the geological formation known as

the Beaumont surface and, in the Big Thicket, is restricted to the Lance Rosier unit of the national preserve and some adjacent areas. The key to recognition is the absence of beech. Dominant tree species are white oak, southern red oak, magnolia, water oak and loblolly pine. The understory is dense with yaupon, American holly, horse sugar, and red bay. The herb layer is sparse.

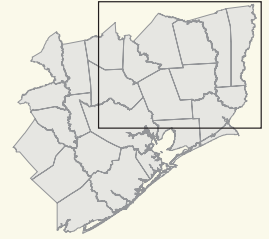
Flatland Hardwood—In the same area is the flatland hardwood community found in low ground along creek drainages. Laurel oak and blackgum are the principal species. Basket oak, sweetgum, water oak, cherrybark oak and willow oak are common. Shrubs include palmetto and arrowwood. The preponderance of dense stands of large palmettos is a remarkable feature of this association, and may be unique to the Big Thicket.

Prairies

Mixed-Grass Prairie—These nearly level, slowly drained plains are vegetated mostly with grassland but have a scattering of shrubs and trees throughout. Found today on uplands between the Trinity River and Pine Island Bayou, these prairies likely stem from soil types that resist root penetration and the downward percolation of water. Though little mixed-grass prairie was included within the boundaries of the national preserve, the pristine twelve-acre Marysee prairie, north of State Highway 105 just outside Batson, has been saved by the Big Thicket Association, which owns and manages it.

Baygalls

These may occur within most of the major plants associations described. Baygalls may form wherever water accumulates and stands for most of the year. Principal species are titi, gallberry holly, sweetbay, red bay and blackgum. Among the ferns common in baygalls are Christmas, cinnamon and royal ferns. Sphagnum, other mosses and liverworts are found as well.



The Future of the Big Thicket

The Big Thicket has been a survivor. You can witness beautiful, serene sunrises on the Neches River as the fog slowly lifts. You can take a peaceful hike through quiet forests where the only sounds come from birds, insects and an occasional breeze rustling the leaves. Despite decades of timber harvests, conversion of native forest to plantations, oil and gas extraction, and increasing suburban and commercial development, the Big Thicket remains a place of wonder. Areas have been set aside to ensure that future generations can know its distinctive plant associations and enjoy their beauty.

The National Preserve is unusual though, as it is not a contiguous, cohesive area, but an accumulation of individual, smaller preserves. Fortunately, besides the Big Thicket National Preserve, Village Creek and Martin Dies Jr. state parks, and the Nature Conservancy's Roy E. Larsen Sandylands Sanctuary, a series of smaller preserves and parks managed by timber companies, land trusts, counties and cities all work together to save special places in the region. Even taken together, though, these parcels' total area is quite small relative to the overall Big Thicket, and their dispersed geography leaves them threatened as their surroundings change.

Until recently the preserves and parks were mostly surrounded by managed timberlands. With the decline of that industry in the area leading to the sale of over a million acres of land, the area is now far more subdivided and increasingly destined for subdivisions and commercial development rather than timber farming. Conserved areas find themselves next door to developed areas rather than managed timberlands. This development, unless unusually sensitively done, reduces and fragments wildlife habitat, allows exotic species to replace native plants and impairs water quality as a result of fertilizer and pesticide use and runoff from hardened surfaces. Natural viewsheds and soundscapes

are replaced with the sights and sounds of suburbs and commerce. Preservation of our Big Thicket heritage in this changed environment will require purchasing more of the surrounding land, or facilitating conservation easements and other private land management plans to maintain a buffer zone.

New reservoirs perennially being discussed for the region's rivers also loom as a major threat to the Big Thicket. They would divert essential water from the floodplain forests and eliminate the periodic floods crucial to maintaining wet soil conditions and nutrient levels. Along with the elimination or reduction of floods to the floodplain forests, the timing of flows and even the quantity of water in the basin could change if water is shipped out to distant cities, as is currently proposed in some projects. Such projects could have significant effects on estuaries downstream as well as on the floodplain forests.

Fortunately, dealing responsibly with these threats is well within our power as our region increasingly appreciates the extraordinary resources and opportunities that the place represents. For example, black bears seem to be poised for a slow return. The Louisiana subspecies (*Ursus americanus luteolus*) that historically occurred in the area is federally listed as a threatened species. Restoration work in Louisiana, Arkansas and Oklahoma has already resulted in solitary males wandering into East Texas. According to the Big Thicket Association, the Texas Parks and Wildlife Department has documented forty-seven reliable bear sightings in East Texas since 1977, about two-thirds of those between 1991 and 2004.

The return of black bears to the Big Thicket is testament that responsible land use in conjunction with conservation efforts can foster development while maintaining healthy ecosystems. Because of the amount of land still undeveloped in the region, there remains a real window of opportunity to create a sustainable Big Thicket and to preserve its magic.