#10 INVASIVES

Invasive plant and animal species cause billions of dollars in

environmental and economic damage in the U.S. every year and represent a top threat to biodiversity and native habitats. They decrease property values and agricultural productivity, and crowd out native plants which birds, insects, and animals need for food and shelter. Notice the vine here



with a reddish tinge on the stems and elongated oval leaves that grow opposite each other on the vine. This is Japanese honeysuckle, the most common invasive plant species in the U.S. As it twines upward, Japanese honeysuckle can girdle and kill young saplings, and a dense canopy of the vine overhead, once it's established, will shade out and prevent other species from growing. The Preservation Society for Spring Creek volunteers actively remove aggressive non-native shrubs and other plants to protect the many beneficial plant species found in the park.

#11 SUCCESSION

This open area in the forest was once home to large trees. A disruption in the form of fire, flood, disease, or aging did away



with them. In a natural process called succession, plants which specialize in disrupted areas moved in. Sun loving grasses, shrubs, and small immature trees, including Cedar Elm, now inhabit the site. This little prairie type zone is sometimes called a "pocket prairie." As the little trees grow larger and shade the ground, the smaller sun-loving plants will be replaced by shade loving plants.

#12 ENVIRONMENTAL IMPACT OF CREEK CORRIDORS

Streams, like Spring Creek, play a vital role for the animals and plant life that depend on them. These passageways - "corridors" become increasingly important, both as wildlife "superhighways" and as a refuge as new homes and businesses encroach on natural areas. Look around and you will see trash and litter throughout the creek.



The principal environmental challenges associated with urban creeks are trash and toxic runoff and their impact on surface water, groundwater and soil. Ultimately, this translates into human health risks, ecosystem disturbance and aesthetic impact to water resources. Some of the contaminants that create the greatest impact to surface waters arising from runoff are the non-visible pollutants, such as petroleum substances, herbicides and fertilizers. You can help. Dispose of trash and chemicals properly.

#13 LIMESTONE CLIFFS

Spring Creek flows over a bed of solid limestone containing

fossils that are 87 million years old, the evidence of a shallow ocean that once covered most of Texas. This rock formation, named the Austin Chalk, lies beneath the Dallas Metro Area and runs from the Red River across Texas into Austin and the Hill country. Spring Creek has slowly eroded the limestone through the millennia to expose these beautiful cliffs we see today.

PRESERVATION SOCIETY FOR





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NORTH TEXAS CHAPTER

Acknowledgements

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Join the North Texas Chapter of the Texas Master Naturalists program in education, outreach, and service. http://public.ntmn.org/about-the-master-naturalist-program

> Spring Creek Park Preserve 1787 Holford Rd, Garland, 75044 www.springcreekforest.org

Spring Creek Forest Preserve Self-Guided Nature Trail



#1 <u>WELCOME!</u> Spring Creek Park Preserve Interpretive Walking Trail at 1787 Holford Road, Garland, Texas

Welcome to Spring Creek Forest Preserve and our self-guided nature trail.

The thirteen markers along the looping trail identify some of the primary ecological features at Spring Creek Park Preserve (1787 Holford Road, Garland, Texas). By following the markers, you will arrive back at the start of the trail with a better understanding of the ecology of this outstanding example of prairie and forest.

The markers are keyed to areas of ecological importance such as the blackland prairie, the forest edge, Spring Creek itself, the importance of leaving downed trees in place, and the strata of fossil layers that make up the limestone walls of the creek.

There are two ways to see the trail information:

- 1. Before leaving home, download and print the trifold flyer pdf file and carry it with you while you enjoy your walk.
- While at the Preserve, use your smart phone or other device to access this web site with the trail information, <u>www.springcreekforest.org</u>.

(Note that cell reception may vary throughout the walk.) The information was created by students from the 2016 class of the North Texas Master Naturalists (<u>www.ntmn.org</u>) with support from the Preservation Society for Spring Creek Forest and the City of Garland Parks and Recreation Department.

Enjoy your walk!



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GRILIFE

#2 WILDSCAPE

This garden is an example of landscaping with native plants. Plants natural to this area have developed here over thousands of years and are heat and drought tolerant, requiring almost no watering! Their long root systems minimize water run-off. Their seeds, berries, and nectar are vital food sources for butterflies, birds, bats, and other pollinators. Native plants on your property save time, water, and give you a wildlife show!

#3 EDGE HABITAT

Any spot where 2 ecoregions come together is called an "edge" area, or ecotone. In this example, prairie and forest meet. Any edge contains a rich diversity of plants which are food and protection for animals. In the shelter of brush and trees, songbirds find





LIMESTONE PRAIRIE



From here you can view a very small section of the Blackland Prairies of North Central and Central Texas, which once stretched over 12 million acres. Here, limestone lays only inches under the rich soil. You may note white chalk limestone outcrops

throughout the prairie. These grasses, trees and shrubs you see are well adapted to flourish in these soil conditions. Changes in the seasons bring changes to the plants, trees and wildlife calling the preserve home.

See the boxes on poles? Eastern Bluebirds, once common, became almost extinct. House Sparrows and European Starlings, both introduced to North America from Europe, were aggressive

and competitive with the bluebirds. All 3 prefer to make cavity type nests. The boxes on poles that you see are monitored havens for the bluebirds.



You are now entering the bottomland forest. Early settlers, who logged most of the timber around streambeds a century ago, left Spring Creek Forest untouched. Upon his first walk in these woods in 1980, Bobby Scott knew that this forest was

unique. Two years later when he showed it to city officials they



#6 **RIPARIAN FOREST**



strengthen the creek banks. Spring Creek experiences periodic flooding, and without this transitional area, the banks and soil would wash away. An ecosystem of specialized plants and grasses has developed which actually survive and even benefit from flooding. Spring Creek's riparian world is important to the creek in many ways, and care must be taken that any nearby development will always leave these streamside woodlands in place.

#7 HEALTHY DIVERSITY

The strength of a forest (or any other ecosystem) is measured by its biodiversity. Forests are biologically diverse systems, representing some of the richest biological areas on Earth. They offer a variety of habitats for plants, animals and micro-organisms. lust

agreed. With the help of Dallas County and the State of Texas, Garland began its efforts to protect this relic forest of Chinguapin, Bur, and Shumard oaks. Many of these trees, some as old as 500 years, soar to heights of 100 feet! Enter, explore, and enjoy!

> "Riparian forest" defines the woodland that borders creeks and rivers. It is an important part of the creek's ecology, acting as a filter for sediment and pollutants in surface runoff. Its trees provide shade for aquatic plants and animals, and

the variety of huge, old growth trees and the layers and multitude of plant life that makes up the understory. Here are just a few you may spot: rusty blackhaw viburnum, wild grapevine, Carolina buckthorn and coralberry, all of which play a role in providing shelter and food for a variety of wildlife. Imagine how many micro-organisms are living around you and beneath your feet on the forest floor. Biodiversity boosts ecosystem productivity because each species, no matter how

take a look around you at the perfect example of this. Notice

small, plays an important role in sustaining the life of the ecosystem. The richness of diversity is such that, for example in this forest, if one species or even a generation of trees is reduced - even wiped out - many other species can fill in the gap to support all forms of life in the forest



Here you can see a snag, a standing dead or dying tree. You may think that it is unpleasant to view. It may seem out of place among all the beautiful features of the forest, but it plays a vital part in maintaining the biodiversity (variety of life) of the Spring Creek Forest. Snags serve as a food source for insect borers, are the means of communication between drilling and drumming species like the



Downy or Red-Bellied Woodpeckers, and finally, when they've decomposed, they return to the forest floor as rich soil.

#9 POISON IVY

Don't touch the poison ivy! Unlike humans, many creatures of the forest benefit from poison ivy. Herbivores (animals that eat plants) such as deer and raccoons eat the leaves and stems. Cardinals and other birds eat the berries, and little creatures like toads find poison ivy a useful shelter from predators.



Poison ivy grows in many forms. Here, it's a climbing vine.

Poison ivy has deep roots. Early settlers knew this and actually planted poison ivy along some creeks to control erosion. Remember. "Leaves of three -let them be" and "berries white, take flight".



