



Naturalist Notes

Sheldon Prairie Restoration Update

A prescribed burn was conducted in December 2020 across a section of Prairie Wetlands. The area burned responded dramatically and I would like to share a few photos taken this June.

There is literally an ocean of coneflower extending through parts of the section. Photo was taken from UTV.

There was also a dramatic display of groups of Hibiscus across the wet areas. Here is a photo of 1 group but additional groups can also be seen. Sheldon has seen these plants in the past but not to the numbers seen today in the burned area.

John Egan



Water of the Month – The Smell of Water

Can you smell the picture at right? Not literally, of course, but if you've been to a beach, you know the fishy, briney, slightly sulphury smell I'm talking about. When an abundance of seaweed washes up, the smell can become a stench of decay.

Pure water does not have a smell. The living, and dying, flora and fauna along with bacteria and sometimes minerals produce the characteristic smell of each body of water. Three of the chemicals contributing to the smell are dimethyl sulfide, dictyopterenes, and bromophenols. They are produced by bacteria breaking down microscopic phytoplankton, seaweed eggs to attract seaweed sperm, and bottom-dwelling organisms that fish and crabs eat.



The smell of bodies of water can be used to find water in otherwise dry landscapes.

Sources: Popular Science

<https://www.popsci.com/seasmells/>; sensorymaps.com



UN Decade of Ecosystem Restoration

The United Nations declared 2021 – 2030 as the UN Decade of Ecosystem Restoration. Below is a short excerpt from the report found at

<https://wedocs.unep.org/bitstream/handle/20.500.11822/31813/ERDStrat.pdf?sequence=1&isAllowed=y>

“The overarching vision for the UN Decade is a world where – for the health and wellbeing of all life on Earth and that of future generations – the relationship between humans and nature has been restored, where the area of healthy ecosystems is increasing, and where ecosystem loss, fragmentation and degradation has been ended. Underpinning this vision are three main goals: · enhancing global, regional, national and local commitments and actions to prevent, halt and reverse the degradation of ecosystems; · increasing our understanding of the multiple benefits of successful ecosystem restoration; · applying this knowledge in our education systems and within all public and private sector decision-making.”

 **Organism of the Month**
Southern Swamp Lily (*Crinum Americanum*)

Southern Swamp Lily (*Crinum americanum*) is native to the Coastal United States, including Texas. Swamp lilies are erect plants that grow in small clumps in wetlands, ponds and marshes. The leaves grow directly from the bulb and are 2-4 feet long and 2-3 inches wide. The flower stem is about 1 inch in diameter, 2-3 feet tall, with 2-6 flowers forming at the top, June through November. The fragrant flowers are white, sometimes marked with pink. The sepals are 3-4 inches long and 1/2 inch wide. They are joined at the base, forming a long tube, but curve backward at the end to form a ball-shaped blossom. The upper half of the stamen is purple, with purple anthers extending out from the blossom as the sepals curve backward.



Some authorities place this flower in the amaryllis family instead of the lily family. It differs from many lilies in that its floral parts are attached above the ovary rather than below. This specimen was spotted in Hines Lake in Memorial Park.

Text and photo credit Janice Barlow

Source: wildflowers.org



World Snake Day July 16th

Snakes are an integral part of many ecosystems in Texas. And, just as other organisms, snakes suffer from habitat degradation and loss. Snakes also have one more major strike against them – negative human attitudes. Advocates for Snake Preservation (ASP) was founded in 2014 to perform and publish research, provide education and advocate for snakes (<https://www.snakes.ngo/>).

Especially interesting are the stories and videos posted on the website related to rattlesnakes. Did you know that not only Mom but also other females take care of the babies? Or that some squirrels develop immunity to rattlesnake poison and prey on snakes?



iNaturalist observation by pilbo,
May 28th, 2021.

Insects: In our lives and in our economy

Mention the word insect, even to master naturalists, and a reaction could be to cringe and to conjure up recollections of the numerous critters that have stung, caused welts or itches, destroyed a prized vegetable garden, caused a trip to a doctor, or created a need to call in the pesticide service. The counterpoint is that these animals are also so important to us that our health and our economy would suffer greatly without them. For example, which arthropod disposes of and effectively recycles much of the fallen tree limbs and dead root debris in the forest, as well as its dried grass, fallen leaves, humus-rich soil and dried animal dung? It is in fact the same termite that could also make a meal of the framing of your home. While clearly at times a pest, the termite is also beneficial in its critical role in recycling the nutrients that are locked within dead plant matter.

In the next several months I will explore several insect species under the theme “Insects have both beneficial and harmful effects on humans, depending on their environment.”

The Praying Mantis is another good example. While it is an aggressive predator that can snare animals as large as a favorite hummingbird at your feeder, if it is provided an environment in your yard or garden in which you manage to avoid the use of pesticides to the maximum extent possible, then the mantis will have an excellent chance to be your ally as its typical diet consists of aphids, moths, grasshoppers and flies that are usually considered to be pests. A word of caution, the predatorial mantid does not distinguish between pest and beneficial arthropod, it just simply eats anything it finds in its path.

Greg Brazaitis



July 17 – 25th. Check www.nationalmothweek.org for information or to list your event.

Prevent the Bite!

Day & Night



BBQs, gardening, swimming pools and hikes...and mosquitoes!

Enjoy the outdoors, but remember to protect yourself, your family, and your pets from mosquito-borne diseases. Your best defense against being bitten is simply to be prepared. Help "Prevent the Bite."



1.

When outdoors, prevent mosquito bites by using an EPA-registered insect repellent that contains one of the following: DEET, picaridin, IR3535, oil of lemon eucalyptus/PMD, or 2-undecanone. Follow product instructions.



2.

When weather permits, wear long sleeves, long pants, and socks. For infants, place mosquito netting over infant carriers, cribs, and strollers.



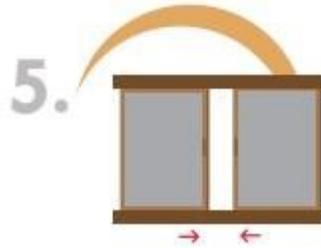
3.

Don't feed the storm drain. Sweep lawn clippings, leaves and tree limbs from sidewalks and driveways.



4.

Once a week, empty, turn over, cover, or throw out items that hold water, such as tires, buckets, planters, toys, pools, birdbaths, flowerpots, or trash containers. Check inside and outside your home.



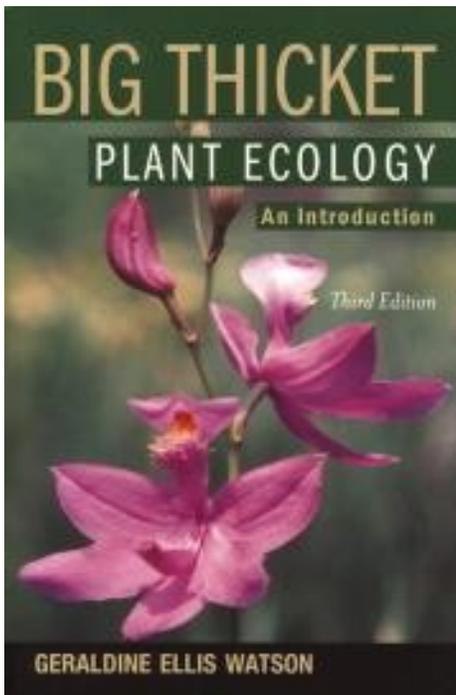
5.

Install or repair screens on windows and doors to keep mosquitoes outside. Use your air conditioning, if possible.



6.

Household pets can be exposed to West Nile virus (WNV). Contact your veterinarian for more information.



Big Thicket Plant Ecology - An Introduction: An Introduction by [Geraldine Ellis Watson](#), Third Edition, 2006, University of North Texas Press, 136 pp.

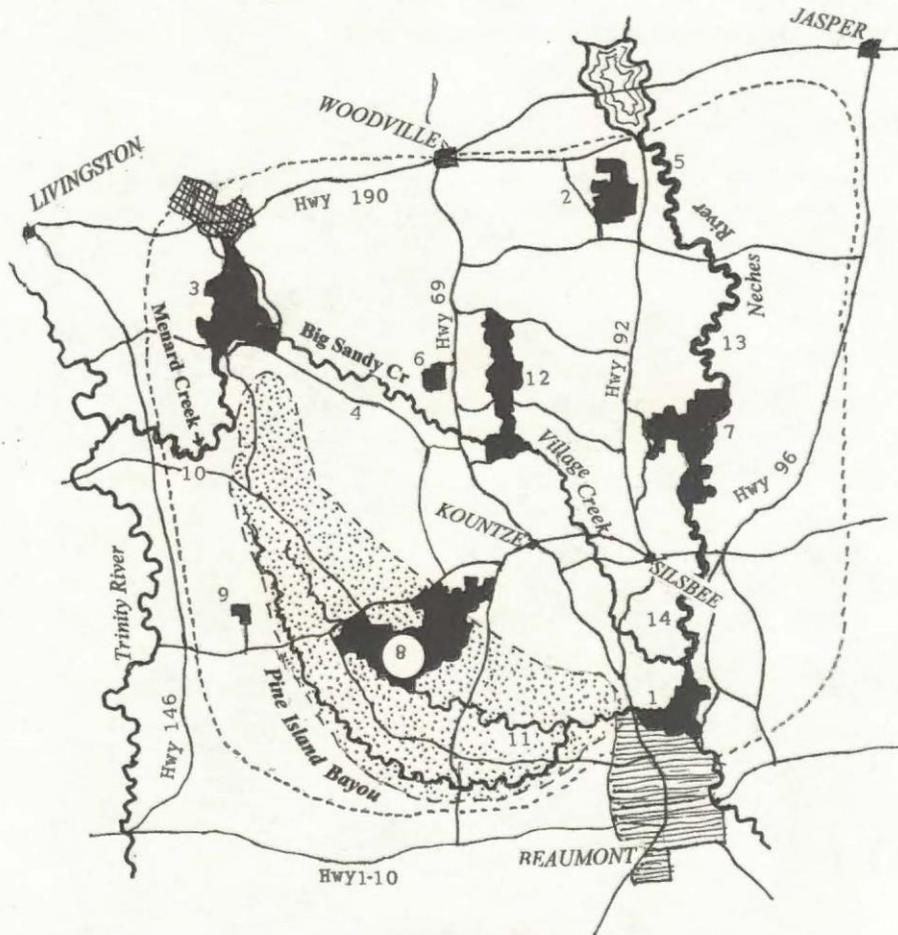
Probably one of the first things that comes to mind when we read or hear the phrase “Big Thicket” is diversity, as in diversity of habitat and therefore of plant life. This slender volume gives a clear understanding of the geology that underpins this diversity of plant life and then goes on to illustrate the great diversity of plants plant community by plant community. Everything is always mentioned in context so that one comes away with information in context as opposed to a myriad of unrelated facts.

This diversity was documented in great part by the author who, as an undergraduate student at Lamar University, “...organized a herbarium and began to systematically botanize, preserve, and catalogue the vegetation of the Big Thicket.” (p. ix) She became a board member of the Big Thicket Association when it was formed in 1964 and was instrumental in the creation of the Big Thicket National Preserve in 1974.

To explain and put into perspective the information on the diversity of plants, the author proposes three concepts: the Ecological Big Thicket (a topographical basin between the Trinity and Sabine rivers), The Traditional Big Thicket (the Pine Island Bayou watershed that has historically been referred to as the Big Thicket) and The Big Thicket National Preserve (an area set aside by the federal government for preservation). These three are clearly shown in the following annotated map from page 6 of the book:

MAP 1

General Map of Big Thicket Region



LEGEND

Traditional Big Thicket 

Ecological Basin 

Big Thicket National Preserve 

- | | |
|---|-------------------------------------|
| 1. Beaumont Unit | 8. Lance Rosier Unit |
| 2. Beech Creek Unit | 9. Loblolly Unit |
| 3. Big Sandy Creek Unit | 10. Menard Creek Corridor Unit |
| 4. Sandy / Village Creek Corridor | 11. Pine Island Bayou Corridor Unit |
| 5. Canyonlands | 12. Turkey Creek Unit |
| 6. Hickory Creek Savannah Unit | 13. Upper Neches Corridor Unit |
| 7. Jack Gore Bayou / Neches Bottom Unit | 14. Lower Neches Corridor Unit |

Chapter 2, one of the two key chapters of the book begins: “The Ecological Big Thicket occupies a tilted topographical basin....” (p. 11) The geological formations in this sloping basin are from north (oldest) to south (youngest): the Fleming, Willis, Bentley, Montgomery, Beaumont and Deweyville formations spanning geologic time from the Myocene (~30 million years before the present) to the Holocene (7,000 to 10,000 years before the present). The interplay of the character of the soils on these various formations and the key influences of elevation and drainage are what form the basis of the tremendous diversity of plants in the Ecological Big Thicket. There are detailed discussions of the following plant communities together with figures illustrating their topographical arrangement: longleaf pine uplands, pine savannah wetlands, Beech-Magnolia-Loblolly pine associations, stream floodplains, upper stream terraces and lower stream terraces. There are many good photos, which are unfortunately not well reproduced.

Chapter 3 characterizes each of the 14 units of the Big Thicket National Preserve in enough detail to be a resource for what to look for plant community wise when visiting any of them. There are maps of a number of the units, showing again how jig sawed and piecemeal the Preserve is.

What stands out from the discussion of the units of the Preserve is 1) how the boundaries of some units could have been much better drawn with true consideration of the ecological boundaries, 2) the need for more funding and willingness on the part of the National Park Service to maintain the ecology of these diverse units and 3) a sense of the staggering loss of so much of what was once the 3.5 million acres of the sloping basin that is the unique biological crossroads called the (Ecological) Big Thicket by someone who lived through the last decades of it.

Bob Romero