May - August 2023 Volume 15

the NATURALIST newsletter

Louisiana Master Naturalists, Greater New Orleans

Message from the President

Hi Everyone,

There is a lot happening with LMNGNO so far this year. We've officially started the continuing education program (study groups, seminars, outings). Several of us met for an open house on study groups where we organized meetings and discussed ways to move forward. These groups will be supported by LMNGNO but are mostly autonomous.

We can provide a meeting space, reference materials, and recommend experts, but groups will be organizing and planning their own meeting times and study materials. So far, we have 17 focus areas that you can access and join from our website here. You will need the member's password to join from the website, or send an email to the secretary at LaMasterNatGNO@gmail.com or me at lmngno.president@gmail.com and we will set you up.

"Point" is our new event tracking software for volunteer and continuing education hours. Alanna Frick and her team of volunteers searched and researched before we settled on this program and decided to get the professional version. All of our events can be found on Point, including our board meetings, general meetings, workshops, study group meetings, and tabling events. If you have an event you want posted, please contact Alanna Frick and submit a request to her. If you are looking for ways to get more involved, sign up for Point and check it out! https://dash.pointapp.org/

The STEM meeting space is working out great so far. We have the start of a great reference library, donated by Dr. Bob Thomas, a few computers, a dissecting scope, and one very comfortable lounge chair.

LMNGNO is a non-profit organization fueled by a huge volunteer effort. Thanks to everyone for your ongoing work! Please free to contact me. *-Julia Lightner*

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Photo by Bill Van der Meer

Great Blue Heron (and chick)
Ardea herodias

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LMNGNO Fall 2023 Class Schedule

Welcome, Fall Class of 2023!

August 24	Orientation - Part 1
•	Social Hour at STEM Library Lab
August 25	Orientation - Part 2
•	Audubon Nature Center
September 15	Jean Lafitte National Park
September 29-30	Grand and Elmer's Isles
October 13	CERF
October 27	Turtle Cove
November 10	North Lake Nature Center
November 17	Bayou Sauvage
December 1	Urban Ecology (City Park)
December 15	Bayou Dupont
December 20	Closing Session

Class of Spring 2023

Grand Isle, Louisiana is always such a great venue. That's probably why most everyone is all smiles in spite of the rain and cold.

Meetings Calendar:

Board of Directors Meetings (5:30 pm)

Also open to all members in good standing

LMNGNO Resource Room
STEM Library
3011 N I-10 Service Rd.
Metairie, LA 70002

July 20th
October 19th
December (TBD)

General Membership Meetings

Social Hour begins at 5:30pm
Business meeting and seminar begins at 6:30pm

Loyola University
Miller Hall, Room 114

August 3rd, 2023
October (TBD)

The Louisiana Master Naturalists of Greater New Orleans is a community of citizens interested in engaging with the natural environment through education, stewardship and volunteering.

Visit us on the web

Louisiana Master Naturalist Association (LMNA) Rendezvous 2023

This year's annual Rendezvous event of the LMNA took place in Hackberry LA from April 21 - 23. Our hosts from the Southwest chapter did an excellent job of keeping us well fed, hydrated and organizing visits to sites along the Creole Coastal Nature Trail including Peveto Woods and the Sabine Wetland Walkway. This was followed by a Sunday morning tour of Robby and Danielle Maxwell's "Soggy Prairie" native plant garden. We saw lots of birds, fish, shells, furs, and friends. Oh my! What a great weekend to meet naturalists from around the state.

LMNGNO members Larry and Belinda Janeski did a great job as co chairs of the Silent Auction. Proceeds from auctions and raffles are used to fund Rendezvous events. Special thanks to Anita White for assembling a-much-sought-after gift basket of outdoor supplies. Three members of our GNO chapter were recognized for their nature photography skills. Congratulations to photo contest winners, Angelle Arata, Donna Bertucci and Janna Wisniewski for their winning entries. Please consider attending Rendezvous 2024 in Monroe LA, April 12-14, 2024. *- Janell Simpson*

Photo by Bill Van der Meer

Participants admire a handsome corn snake at one of several demonstration kiosks.

Auction co chairs Larry and Belinda Janeski

LMNGNO Nature Photography Winners

Luna Moth by Donna Bertucci

Sentries by Janna Wisnewski

(See Angelle Arata's Golden Silk Spider photo on Page 7)

Natural Histories: The Winding Wisner Tract

By: Catherine Leftwich

Photo by Bill Van der Meer

The Wisner Tract at City Park, New Orleans has seen many iterations. It was a home site, a plantation and golf course before its current status as a beloved albeit unofficial urban wildlife area. Currently used by bikers, birders, and budding naturalists as a biking, walking, and disc-golf site, the City Park Conservancy has plans to develop the area into the "Wisner Tract Stormwater Park and Habitat Restoration."

First home to the Chapitoulas Native People, the land now known as City Park attracted French settlers before being deeded to Cabildo builder Francisco Hery (Duplanty). Hery's descendants later sold the land to Jean Louis Allard, whose financial problems and tax evasion led to the seizure of the land by city authorities. Sold at auction to John McDonough the land was willed to the city upon McDonough's death in 1850. The City of New Orleans formally transformed the plantation into a park for public use in 1870. Over the course of 50 years, the park gradually increased in size, to the over 1,300 acres of green space. This makes New Orleans City Park nearly 50% larger than New York's Central Park!

In 1933, federal funds were used to develop the area, then called the "East Course." This was the second of three golf courses built in the city of New Orleans. Designed by Joe Bartholomew and William Wiedorn, over a dozen golf tournaments took place on the East Course since its opening in 1935. Several shelters were built across the course, as well as 2.75 miles worth of golf cart paths.

After Hurricane Katrina left City Park flooded for several weeks, the Tract was heavily damaged. Considered the last "unprogrammed" area of City Park, the Tract has been largely left alone since the storm, allowing nature to overtake the once carefully manicured golf course. Besides occasional pruning to keep the paths somewhat accessible, nothing has been done to the site.

The shelters are periodically used as canvases by local graffiti artists, as well as unofficial museums of local art. In its current form, the Wisner Tract is a haven for birders, who have noted over 199 observed species on eBird. In 2017, the City rezoned the area for "passive recreation," which would allow for non-structured casual activities with minimal habitat impact. With this in mind, City Park officials held several meetings over the past five years seeking community input.

Despite calls by officials to develop revenue sources on the Tract—an urban ecology educational center, camping facilities, and kayak rental spaces–the vast majority of community members wish to keep the Tract as an undeveloped wilderness area in the city. Design Workshop, a Colorado-based planning firm, published a redevelopment plan funded by the Park in 2021.

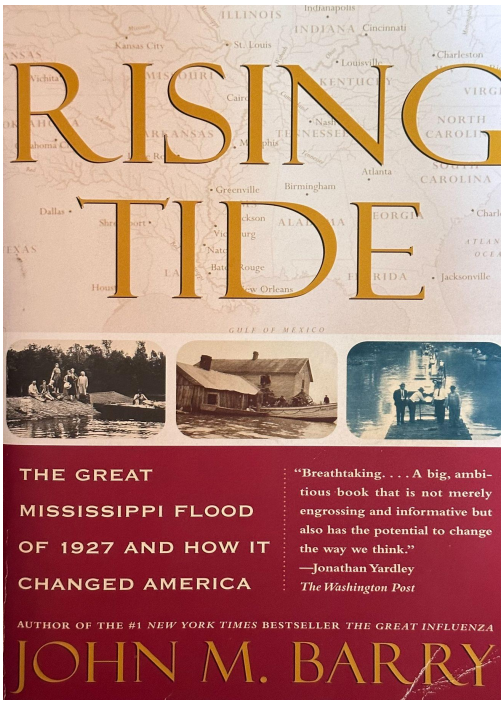
Described as a stormwater management and greenspace project, the plan proposes an interconnected system of lagoons, marsh, live oak forests, and prairies. According to the plans, this would increase the capacity of the Tract to hold stormwater and decrease flooding in the adjacent neighborhoods. The trail system would be improved to include updated concrete and wooden paths.

As of this writing (April 2023), the last update regarding the possible redevelopment of the Wisner Tract was found in the minutes of a meeting of the Board of Commissioners of the New Orleans City Park Improvement Association from March 2021. In these minutes, the Board voted to take another look at the Master Plan for the Tract before moving on with the next stage of the plan (called the "Schematic Design").

With this, her first article in "the Naturalist", LMNGNO member, Catherine Leftwich, has also agreed to join our volunteer staff as Associate Editor. Welcome aboard, Catherine!

Book Review: by Tres Fisher

Rising Tide, The Great Mississippi Flood of 1927, John M. Barry



John Barry's *Rising Tide : The Great Mississippi Flood of 1927 and How it Changed America* is a fearless analysis of nature and culture, dealing with Mississippi River hydrology and engineering, racial relations in the Old South during the Jim Crow era and the surrounding power brokers trying to reinvent the U.S. economy without slavery. With all the context and details that could easily take a lifetime to decipher, Barry cogently expounds some of the most complex intricacies of the Mississippi Delta in *Rising Tide*, from its molding as a river delta system to the culture that meshes itself to it. *Rising Tide* is a great achievement that anyone interested in the American experience should give careful consideration. Barry summarizes the story in *Rising Tide*'s prologue succinctly, stating:

"Their struggle... began as one of man against nature. It became one of man against man. For the flood brought with it also a human storm. Honor and money collided. White and black collided. Regional and national power structures collided. The collisions shook America."

The focus of *Rising Tide* is, as the title suggests, the flood of 1927 that broke through the levees around Greenville, Mississippi and flooded 17 million acres with up to 30 feet of water as several more levees gave way along the Mississippi and Louisiana levee structures. It was a flood that is still considered the worst in U.S. history. Barry untangles several narratives surrounding the Mississippi River to put the flood in context with what it reveals about many currents that flow through American history. The author's discussion begins with the engineers who fought to control the Mississippi river as it flowed and flooded throughout the nineteenth century.

Andrew Humphreys, a Civil War General appointed by President Grant to lead the newly re-minted Corps of Engineers, and Joseph Eads, a self-taught civil engineer who personally walked the bed of Mississippi river salvaging wrecks as a young man, battled for the attention of the nation's power brokers in figuring out how the Mississippi could be stopped from flooding communities along its route and how siltation at its mouth could cease from preventing the flow of commerce. Bitter rivals to the end, the only thing these engineers agreed on was that "levees-only" would be a mistake. The U.S. Congress created the Mississippi River Commission (MRC) in 1879, in an effort to resolve issues that came forth between Eads and Humphreys about how best to "control" the river in terms of flood structures and dynamics of the river, but firmly ignored both engineers' adamant statement that levees alone could NOT do the job. Instead, the MRC developed the levees-only policy and as Barry states:

> **"For thousands of centuries the river had roamed over its alluvial valley, its vast natural floodplain. The MRC, certain of its theories, constrained the river within levees, believing that the levees alone, without any other means to release the tension of the river, could hold within narrow banks this force immense enough to have spread its waters over tens of thousands of square miles, where millions of people would settle."**

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(Book Review continued from previous page)

The federal government was fully at the helm of the Mississippi River policy instead of the states, and its policies were detached from the science of the day. With this narrative Barry shows how the federal government now decided Mississippi River policy. From its inception into this new role it was a policy that reflected pecuniary interests rather than scientific interests.

Another narrative that runs through the story Barry provides , is one of chattel slavery of Africans in the South as America's economic engine looked for an alternative to slaves as capital or property. This is developed in the context of LeRoy Percy and his family's foothold in Greenville, Mississippi through their massive cotton plantings along the Mississippi River. Percy and his sons were responsible for establishing "sharecropping" to encourage recently emancipated African American slaves to stay in the South.

Percy persuaded many Africans to stay and work his plantation by promising them a share of the profits reaped from the harvest in "share" or exchange for the work provided. While Percy, and the landed gentry of the New South, were attempting to embrace African Americans as freed, any notion of respecting those freedoms would fade in the face of economic loss brought on by the flood.

Barry is also able to get to the main question at the heart of anyone who contemplates the Mississippi river and that is "for whom is it for?" It seems throughout most of the stories the point is obvious. Commercial interests have always been the point; the questions of efficient control and movement of commercial interest were primary.

This culminates in *Rising Tide* when the author details the days and hours of the rising Mississippi waters in 1927 as the bankers in New York and New Orleans scrambled to protect their interests in New Orleans as the only major mover of commerce besides the newly operating railroads. After back and forth among the South's power brokers, including the Percy enterprise, the consensus among the elite at the time was to dynamite the levees south of New Orleans to lower the river levels and ensure that New Orleans would not be flooded.

As Barry describes in heart wrenching detail, despite having no clear legal authority to do so, the President of the United States and Governor of Louisiana appeased the wealthy of the "New South" in allowing this plan to move forward where the breach and resulting flood destroyed some 10,000 peoples' homes and livelihoods in St. Bernard and Plaquemines parishes who were never compensated despite promises from New Orleans power brokers.

Rising Tide represents a beautifully written tale of how nature dynamically shapes everything through multiple relations of power. The interplay of these relationships developed by Barry includes: the engineering controls of the river, federal institutional control of the river, and the commercial interests that influence federal institutions.

Not only does *Rising Tide* show how the Mississippi River exposed the flaws and limits of earlier policy but it gives the modern reader context to understand it in the present. This work is a must read for any American who inhabits its banks and dares enter the debate.

A Naturalist's Guide to Spiders

By: Aimée *K. Thomas Ph.D.*

A good naturalist is someone who has a deep understanding and appreciation for the natural world and who possesses a set of skills and characteristics that allow them to observe, analyze, and interpret the natural world. Spiders included!

So, this article will take you on a journey through some basic natural history of these incredible critters and some hints on how to develop a search image to optimize your spider hunting experience. By the end I hope you have a better understanding and appreciation for the eight-legged silk spinners. Let's start with placing spiders among their animal relatives, also known as taxonomy.

Domain Eukarya
Kingdom Animalia
Phylum Arthropoda
Class Arachnida
Order Araneae

The taxonomic groupings to which spiders belong help us learn shared characteristics. For example, since spiders are grouped in **Domain Eukarya**, we know they are made of eukaryotic cells (which have a nucleus), but so are fungi and plants. As members of **Kingdom Animalia**, add the characteristic multicellular as a diagnostic feature. Since you probably already knew those, let's figure out the rest. An **arthropod** (Gr. arthro=jointed, pod=foot) has jointed appendages (explains why they move in the manner they do), segmented bodies, specialized appendages (more on this later), and an exoskeleton (a chitinous outer support covering to which muscles are attached).

Class Arachnida includes the arthropods with four pairs of legs and two body segments (cephalothorax and abdomen). And finally, **Order Araneae** (L. aranea=a spider), the spiders, includes the arachnids with chelicerate mouthparts with fangs, spinnerets (for spinning silk), and pedipalps (sensory organs - think, antennae) that are also used in sexual reproduction by males (specialized appendages).

There are more than 45,000 known species of spiders found around the world and most arachnology literature suggests about 10% (around 4,000) are in the USA. No one has compiled a list of spiders of Louisiana yet, so my recommendation is to peruse the **iNaturalist** app for citizen science generated species identification and their distributions.

Photo by Angelle Arata

Golden Silk Orbweaver

Ichonephila clavipes

(Rendezvous 2023 nature photography winner)

There are 132 families of spiders (World Spider Catalog 2023) and all but one family use venom to capture prey and for defense. In its most common use, spiders bite their prey and inject venom, which immobilizes the prey and (using enzymes) starts the process of digestion. Of the small family of spiders (Uloboridae) that lacks venom, one species is common along the Jean Lafitte National Park's Coquille Trail under the handrails and easily seen in the evenings.

The feather legged orbweaver spider (*Uloborus glomosus*) lacks venom and simply overpower their prey by trapping them in non-sticky silk before wrapping and feeding on them.

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(***Spiders*** *continued from previous page*)

Speaking of spiders and venom, when people ask "Is this spider venomous?", what they are probably really asking is "Is this spider dangerous to humans"? If you are in the New Orleans area it is much easier to learn the three species (black widow, brown widow, and brown recluse), with potential danger to humans than the thousands that are not.

The spider's life cycle consists of three developmental stages: egg, spiderling, adult. Many of our spiders experience an annual life cycle, meaning that they hatch from eggs in winter as spiderlings, develop to adults through the warmer months, reproduce and lay eggs in summer or fall, then die. In some, the eggs hatch out in the late fall and overwinter in the egg case, then leave and disperse in the spring.

The golden silk orbweaver spider is a good example of a species that overwinters in the egg sac. In the fall, the female places its egg sac in a coiled leaf and covers it with a lot of webbing, which by the way, is the strongest spider silk known to humans (stronger than steel and kevlar!).

Photo by Steve Wulff

Yellow Garden Spider

Argiope aurantia

Note distinctive zig zag webbing

But how does all of this happen? Once the male completes his penultimate (second to last) molt, he begins his search for a female. He molts one more time (ultimate molt) wherein he develops emboli. This is a physical sign of sexual maturity, and it won't be long before you see this male making its sperm web to prepare for mating. An embolus functions like the needle of a syringe. The spider sticks the "needle" into a drop of sperm to draw it up. Then, the embolus is the part that actually goes into the female's epigynum (gonad opening). B

The male has to be careful during this process lest he becomes a meal instead, so, males have evolved certain reproductive strategies for success. One great example is the nursery web spider (*Pisaura mirabilis*) who provides a silk-wrapped nuptial gift (a wrapped-up insect) to the female so that she is occupied and/or full and not interested in eating him. Another example is the bridal veil silk bondage seen in another nursery web spider, (*Pisaurina mira*), where the male wraps the females' legs with silk prior to sperm transfer ensuring she can't eat him.

To be a good naturalist doesn't mean you have to know all of the species in an area, especially a sparsely studied group like the spiders. The best way to optimize your spider hunting experience is to learn "How to look at spiders" and to develop a search image. First question: are you looking during the day (diurnal) or at night (nocturnal)? Is the spider a web builder or a ground hunter?

Let's discuss the web building spiders because many spider groups are named by the type of web they construct - think orbweb weavers (Araneidae), sheetweb weavers (Linyphiidae), funnel weavers (Agelenidae), etc. All spiders make silk, but not all use silk to build webs. Some use silk to line their homes (trapdoor spiders), while others use silk to wrap their egg sacs (tarantulas and wolf spiders), and others use silk as a dragline (jumping spiders) to ensure a return if the mark is missed. Not only can you often identify a spider to family based on its web shape, there are other patterns to notice like angle of the web, habitat, etc.

(***Spiders*** *continued from previous page)*

Photo by Steve Wulff

Spinybacked Orbweaver

Gasteracantha cancriformis

Female spinyback orbweaver with egg sac on car window

Another interesting spider is the bowl and doily spider (*Frontinella pyramitela*), a sheetweb weaver that creates a complex web consisting of an inverted dome – "bowl", suspended above a horizontal sheet web – "doily". The ground hunters do not live in webs and either actively forage - wanderers or are sit-and-wait predators – ambushers. The most common are wolf spiders - on the ground and fishing spiders - on or near water (although some species are most often found on vertical tree trunks). Fishing spiders basically stand on water, not breaking surface tension, and use their rear legs to grasp vegetation while the forelegs are at the ready to grab any potential food that surfaces or that falls from vegetation above.

To easily find the nocturnal wolf spiders, put on a headlamp and search along the trail or even in your own backyard. You will notice eye shine – the many little blue twinkling lights you see in the reflection of your flashlight are the eyes of the abundant wandering spiders, especially wolf spiders. Doing this will give you a sense of how abundant they are along trails. And, it's just fun!

Finally, spiders are ecologically important. They are predators and most are generalist consumers, meaning they prey on a variety of invertebrates, including other spiders. Some studies estimated that one spider can eat as many as 2,000 insects in a year, thus serving an important role in their communities by regulating insect densities, including many agricultural pests like aphids, grasshoppers, and caterpillars that feed on fruits, leaves, seeds, etc. of crops important to humans as food.

Lagniappe – Be on the lookout for the kleptoparasites – dewdrop spiders (*Argyrodes* sp.) that live in golden silk orbweaver spider webs. Since they are very tiny, when a golden silk leaves prey wrapped in silk, dewdrops stealthily move in, and quietly attach their silk lines to it, clip it free from the web, then feed on it. Pretty brilliant if you ask me!

Photo by Dr. **Aimée** K. Thomas

Wolf Spider

Lycosidae

Female wolf spider and her spiderlings

Dr. Aimée *K. Thomas is assistant professor of Biology at Loyola University*