

the NATURALIST newsletter

Louisiana Master Naturalists, Greater New Orleans

Message from the President

Greetings and we trust you had a wonderful summer! The fall is always a blessing for getting outside and enjoying nature, especially the fall wildflowers! We will celebrate our 10th anniversary this year – although we actually have been active almost 11 years (Covid delayed our celebration). Our November 16th membership meeting will be fun, have a great program, a great meal, and some time to reminisce. Lots of fun and reflection. Julia Lightner is chairing a committee planning the event.

Our chapter is taking a major step forward. The board approved a one year lease of office space from a fellow not-for-profit, STEM Library Lab, with whom we share many values. This new *LMNGNO Resource Center* will be located at 3011 North I-10 Service Road East in Metairie. When we get settled, we'll have a social there for you to see our operation and meet our STEM colleagues.

We consider this a big step because for the first time all our equipment, records, new acquisitions, small workshops, collections, and more will be in one place. Since STEM Library Lab has a host of science teaching aids that teachers can check out, hosts teacher workshops, and fulfills many other teacher needs, we will pitch in by hosting teacher workshops in natural history. These will be taught by Certified Master Naturalists, and they will gain volunteer credit for these activities.

One of the priorities for this year is that we want all members to promptly report their volunteer and continuing ed hours to Track it Forward. We need to be able to show our impact on the natural history knowledge of our region.

Continued on next page

In This Issue

- Message from the President
- Save the Date
- Fall 2022 Class Schedule
- D. Muir Bradburn Awards
- From the Membership Committee
- Waders, Gliders and a Tasmanian Tiger



Black Throated Trogon
Trogon rufus

Parque Nacional Corcovado
Osa Peninsula
Costa Rica
(Photo by Bill Van der Meer)

Editor: Bill Van der Meer
bvanderml@gmail.com

Message from the President, continued

The Fall 2022 workshop series has just started and has a wonderful assortment of participants. We anticipate a lot of fun with new members of the LMNGNO family.

By the way, we purchased 25 sets of nice binoculars to be checked out to participants in our workshops. This will add value to their observing nature. Soon we will acknowledge the funders of this acquisition.

Enjoy nature!!!! Bob Thomas

SAVE THE DATE!

The LMNGNO chapter is celebrating its 10th year anniversary and the theme is Gratitude! Please join us for a Thanksgiving-like potluck meal and an evening of celebration.

Date: November 16, 2022

Time: 5:30 - 8:00 pm

Location: Loyola University, Miller, Rm. 114

LMNGNO Fall 2022 Class Schedule

Fall is fast approaching and there's a new group of budding master naturalist candidates ready to hit the nature trails and waterfronts. In fact the first of ten classes will already have been held by the time this issue hits the newsstands. So here's the schedule:

August 26, 2022	Orientation
September 9, 2022	Jean Lafitte Barataria Preserve
September 23, 2022	Bayou Sauvage
October 7, 2022	CERF
October 21, 2022	Turtle Cove
November 4, 2022	Northlake Nature Center
November 18-19, 2022	Grand Isle, Elmer's Island
December 2, 2022	City Park
December 9, 2022	Bayou Dupont
December 14, 2022	Closing

Calendar:

Visit the Events Calendar in "Track It Forward" for upcoming events, meetings and volunteer opportunities,

also announced via email as they become available

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](#)

Donald Muir Bradburn Outstanding Louisiana Master Naturalist Awards

The late Dr. Donald Muir Bradburn (1924-2012) was a pathologist and life-long naturalist, most noted for his photography. LMNGNO wishes to honor the outstanding graduates of Spring and Fall 2021 and Spring 2022 classes whose enthusiasm, attitudes, dedication to learning, collegiality with classmates, and expansion of knowledge have been chosen solely by their respective classmates to deserve the honor of being named the Donald Muir Bradburn Louisiana Master Naturalist Award winner. The honorees are:

Karen Marshall - Spring 22
Tom Rogers - Fall 21
Jacqueline Taylor - Spring 21



Karen Marshall accepts her class of Spring 2022 Donald Muir Bradburn award from past president Janell Simpson at the August 2022 LGMNO Members Meeting.

(Photos by: Jim Grice)



Recently certified members Fall 19- Spring 22
Front row- Elaine Broussard, Kathleen Schrenk, Rebecca Grieser, Karen Marshall, Kiersten Rankel
Back Row - Bob Thomas, President & Carol Rice

Others certified but not in attendance are :
Meghan Garhan, Nancy Burtchaell, Lori Passmore, Catherine Leftwich and Elizabeth Sigler

From the Membership Committee:

If you are not yet certified and meet all the criteria for certification except volunteer and continuing education hours, it is never too late. Here is the list of requirements:

- Attend 7 field workshops (Orientation and Closing not included)
- Complete final assessment (either test or reflections)
- File 20 volunteer hours and 8 continuing education hours within one calendar year.

Note: Those who work in a field related to natural history may file for exemption from continuing education [HERE](#).

You must have an account on Track it Forward to file hours. Here is the [link](#).

Questions? Email Carol Rice
nolabrewster@outlook.com
or Nicole Greene npgreene21@gmail.com

Waders, Gliders and a Tasmanian Tiger

On Convergent and Divergent Evolution

By: Bill Van der Meer

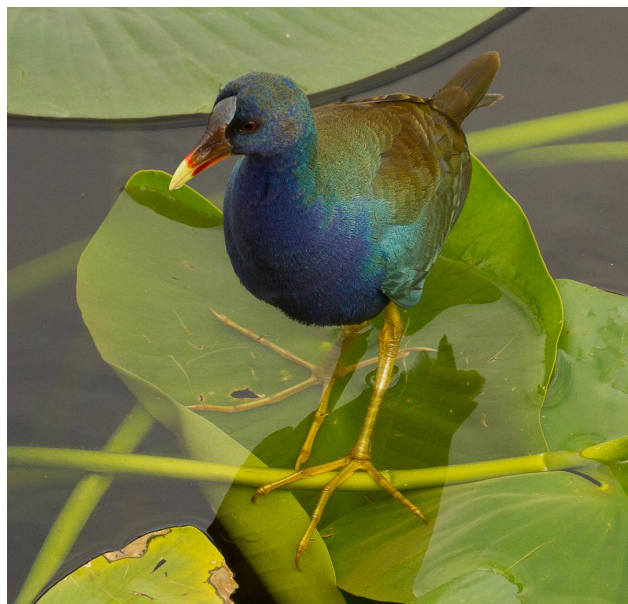
Back in my undergraduate days I took a course in Zoogeography as part of a science requirement in my Anthropology major. The primary aim of this field is to identify, describe, and explain the distribution of both land and aquatic species of animals around our planet. Now also more commonly known as Biogeography, its focus is on causal relationships between animals where possible ecological, climatic and evolutionary factors come into play.

I vaguely recall one lecture on convergent and divergent evolution that I would soon apply to an observation in marshes two continents apart.

One evening while scrolling through a number of my bird photos, I happened upon one of a Purple Gallinule (*Porphyrio martinicus*). It was walking along on the tops of a group of lily pads in a Florida wetland. Following the subtle color gradations of its rich plumage I noticed how its especially long toes enabled it to distribute its weight on the surface of a pad, which only moderately broke the surface tension of the water.

I thought I'd seen this adaptation before in a secluded cove of a lake in South Africa's Kruger National Park. Several of us were watching a pod of massive Hippos submerge, resurface and snort loudly from the relative safety of our wooden enclosure cantilevered out over the lake's marshy shore. As the hippos continued their choreography, an interesting wading bird appeared along the edge.

Sporting a distinctive chestnut, white, and black coloration and a sky-blue bill, its feet were what really set this bird apart from any other I'd ever seen. Our guide quickly identified it as an African Jacana (*Actophilornis africanus*). With its ludicrously long and claw tipped toes the Jacana utilized these uniquely designed appendages to distribute the weight of its relatively light frame and poke along across the lily pads and other vegetative flotsam with barely a ripple.



Purple Gallinule (*Porphyrio martinicus*)

Photo by Bill Van der Meer

What struck me as significant about having observed these widely separated birds was a question it raised as to how they had developed these adaptations independently.

There simply are no coincidences in nature.

Continued on next page

Similarities among organisms like galinulles and jacanas are more the result of what's known as "convergent evolution" where these two unrelated species have developed long delicate toes for adapting to nearly identical habitats and lifestyles among the lily pads.



African Jacana (*Actophilornis africanus*)

Photos by Bill Van der Meer

Another example of convergent evolution is that of the Australian Sugar Glider (*Petaurus breviceps*) and northern flying squirrel (*Glaucomys sabrinus*). The sugar glider is a pouched Australian marsupial (Metatherian) mammal. The well known northern flying squirrel is a placental (Eutherian) mammal who resides in North American woodlands.

Both are impossibly cute. They have large eyes and folds of skin between their forelegs and hind legs. When stretched across their cores it allows them to glide for relatively long distances using their short furry tails as rudders. But that's where the similarities end. These species are biologically and therefore taxonomically vastly different.

Conversely, there are organisms often existing in adjacent areas that may be biologically closely related but look very different. Known as "divergent evolution", an example is that of the extinct thylacine (*Thylacinus cynocephalus*), also commonly known as the "Tasmanian Tiger" because of its distinctive tiger-like markings along its hind quarters. The interesting thing is that due to divergent evolution this carnivorous marsupial may actually have been more closely related to the ubiquitous red kangaroo (*Macropus rufus*) than to an American Coyote with which it shares many common physical features (convergent evolution).

Although there are very poor fossil records to support this theory, genetic sequencing studies suggest that the thylacine and the herbivorous red kangaroo as well as many other Australian marsupials, most likely evolved from a common ancestral marsupial. It is furthermore accepted that they subsequently underwent processes of divergent evolution after having moved into different ecological niches. This caused each to develop the unique traits and lifestyles for success in their respective habitats.

The thylacine was once widespread across Australia, but is reported to have disappeared from the mainland around 2,000 years ago.

Continued on next page

It continued to thrive on the islands of Tasmania and Papua New Guinea until their formerly healthy populations in Tasmania experienced catastrophic habitat destruction upon the arrival of European settlers and were ultimately hunted to extinction by the mid 1930's.



Photo by Bill Van der Meer

*Single frame of an 80 second
"colourised" black and white
film taken in 1936 of the last
known Tasmanian Tiger
(thylacine)
Courtesy of The National Film
and Sound Archive of
Australia*

In retrospect the concepts of convergent and divergent evolution become very relevant when pondering various adaptations among animals we routinely see in the wild. Lectures, books and the internet merely plant the seeds to enlightenment, whereas our senses and powers of observation in the field may lead us to an exhilarating personal discovery. When combined they bring us closer to those highly coveted "ah hah" moments.

*Thanks to Dr. Mary Gubala for providing a couple of great
examples from her former lesson plans.*



*Pop up thunderstorm over Lake Borgne. They literally form overhead like they
have along the Gulf shores for most of the month of August 2022. So you pull
anchor and run. Then watch the spectacle of this life giving force of nature.*

(Photo by Bill Van der Meer)