

T E X A S

Master Naturalist™



# CHAPTER NEWS

## A MESSAGE FROM PRESIDENT DAVE

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Greetings everyone. I've spent the last couple of weeks visiting up North. I must say, it sure was nice to be able to comfortably sit on a porch any time of the day. What was especially pleasing was hiking in the sun without sweating away pounds of water. After a few days back, I'm just now beginning to adjust enough to be able to stand 2 or 3 minutes in the sun without breaking a sweat. After that, forget it. Nice to be home though.

Ruby's hanging in there with the library program. We are half done with another round still to go in July. If you can help at your local library, please consider doing so. It's not a long program and you get to interact with children and parents who really want to be there.

Fishin' Fiesta in Freeport is this upcoming weekend. We will have our normal outreach event for this. Come on out and play.

Our chapter will migrate time keeping to the state's Volunteer Management System in the upcoming months.

Please routinely send Jerry your time updates so you won't have to manually enter a lot of backlog time into the new system when it's activated. You'll hear a lot more about this as we progress.

AND, our general meeting this month is very special. We will adjourn to GCBO for a BBQ luncheon following our regular meeting, where we'll celebrate our accomplishments, honor some special achievements by members, and have a good time socializing. I'd hope to see everyone there.

May the Fourth be with you

—Dave

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The Texas Master Naturalist program is coordinated by the Texas A&M AgriLife Extension Service and the Texas Parks and Wildlife Department.

Texas Master Naturalist programs serve all people without regard to socioeconomic level, race, color, sex, disability, religion, age, or national origin.

*Dave Brandes is the President of the Cradle of Texas Chapter. He can be reached at [brandes@tmn-cot.org](mailto:brandes@tmn-cot.org).*

## MEMBERSHIP REPORT by Jerry Eppner

As of June 29, fifty-two COT members have turned in timesheets totaling 4,746 hours of VT. This brings the COT cumulative total VT since inception to 159,561.

At the July general meeting, members to be recognized include **George Bettinger, Barbara Burkhardt, Susan Conaty, Marty Cornell, Leo Novak, Leo O'Gorman, Kirby Rapstein** and **Pam West** for recertification. Also, **Joan Simonsen** has reached the 1,000 hour VT milestone. Good job, Members.

As mentioned in the last general meeting, the state TMN organization is migrating to an online timekeeping system, the Volunteer Management System. We have been notified that our time to migrate is the third quarter. The COT transition team (Dave Brandes, Connie Stolte, Jerry Eppner and Ed Barrios) will get our first orientation this week. The new system will in the long run be much simpler for members to record their hours, but short term will represent quite a change for some of our members. So be sure to read all communications that will be coming out in the near future to ensure you know what is expected of you.



<http://facebook.com/TMN.COT>

**Texas Master Naturalist Program  
Cradle of Texas Chapter  
General Meeting and Advanced Training  
Wednesday, July 8, 2015  
Texas AgriLIFE Extension Building  
21017 County Road 171  
Angleton, TX 77515-8903**



<b>8:30 AM - 9:00 AM</b>	<b>Fun and Fellowship</b> Morning refreshment Team Gerald Forrest, Ed Johnson, Roy Morgan, Kim Richardson
<b>9:00 AM - 9:50 AM</b>	<b>General Meeting and quiz</b> <i>This meeting is approved for volunteer 1.00 hour Volunteer time. Advanced training credit will be announced at the meeting</i>
<b>10:00 AM – 12:00 PM</b>	<b>Program: CO<sub>2</sub> in Perspective</b> <b>Speaker: Marty Cornell, TMN-COT member.</b>

**Abstract.** Carbon dioxide has a profound effect on life on earth. On one hand it is a greenhouse gas that contributes to the warming of our planet, and, due to the burning of fossil fuels, its atmospheric concentration has increased to the highest level in two million years. The trend is to double that concentration within this century. Some argue that these higher levels will be devastating to the biosphere and that increasing CO<sub>2</sub> emissions must be stopped. On the other hand, carbon dioxide is a gas of life, for it is the raw material photosynthesized by plants into food. CO<sub>2</sub> is also the product of low cost energy, which enabled much of mankind to escape from drudgery to live healthier, and longer lives. Empirical data will be used to show the relative role of CO<sub>2</sub> in climate and in plant productivity. For perspective, the impact of other factors that affect our climate will also be reviewed, such as the *El Niño* Southern Oscillation.



Marty Cornell graduated from the University of Dow in 2003 after serving 35-plus years in R&D. His last assignment was as the senior scientist of Dow's automotive business unit in Auburn Hills, Michigan. He grew up in Ohio, got a degree in Chemistry from Miami University, Oxford, Ohio (not to be confused with the University of Miami), hired on at Dow in Midland, Michigan in 1967 and a few months later got transferred to Freeport for a three-year assignment that lasted 34 years, interrupted by a three-year assignment in Brazil. Some 43 years ago, he married Carole Lassiter from Freeport and thereby became a naturalized Texan.

Marty has since become a professional volunteer, logging over 6,000 volunteer hours as a Texas Master Naturalist, starting as part of the Cradle of Texas Chapter's Class of 2004 class. Since then, Marty has served COT as trainer (2 years), Outreach Chair (1 year), and Secretary (3 years).

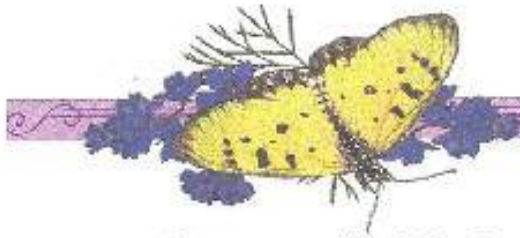
Marty is a member of the board of the Friends of Brazoria Wildlife Refuges where he serves as their Grant Administrator, which among other things resulted in his testifying before the U.S. Congress last year on behalf of our refuges and the US Fish and Wildlife Service. He is an eleven-year docent in the refuge's DEEP program, and a member of the planning committees for Migration Celebration and the *A Taste for Nature* Fundraiser.

Marty has been selected by the U.S. Fish and Wildlife Service to be a mentor for their renewed national program to coach new or struggling Friends groups around the country.

Marty's curiosity about man's influence on climate was first perked in 2001, while at Dow, when he was investigating initiatives that would change the way cars would be built. One of those initiatives was the hypothesis that CO<sub>2</sub>, a product of fossil fuel combustion, would need to be lowered to mitigate its dangerous impact on warming the globe, i.e. for cars and trucks that meant that new powertrain systems would be required, like hybrids that minimize the use of gasoline or diesel fuel, or total electric-powered vehicles that use batteries or fuel cells.

Since then, Marty has become a student of climate, attending climate symposiums and joining The Right Climate Stuff, a group of mostly-retired, mostly NASA guest scientists and engineers of the Apollo-era space missions. The Right Climate Stuff holds meetings in Clear Lake with scientists having expertise in specific aspects of climate science, and are pleased to have Dr. John Nielson-Gammon, the Texas State Climatologist and professor in the department of Atmospheric Sciences at Texas A&M University, as a regular participant in the group's discussions.

Marty finds climate science to be fascinating, including the agendas and politics associated with it. He is here today to share some of the things he has learned about climate science during the past 14 years.



*This year, Phil Huxford has acquired 10,000 OT hours!!!  
Neal McLain and Sandy Henderson have acquired 5,000 hours!!!*

## **LET'S CELEBRATE "TIME WELL SPENT"**

*Wednesday, July 8, 2015  
(After regular TMN meeting and program)*

**Where?**

**GCBO**

**Please bring a side dish with serving utensils.**

*(BBQ brisket, chicken, sausage &  
dessert provided.)*



## Photo Gallery Update - Focus on Texas Invasive Species by Peggy Romfh, Photo Gallery Editor

When we started expanding the Photo Gallery database in mid-2012, the question arose as to whether we should limit the site to only native species. We decided that our goal was to provide a reference to all plant and animal species found in the county and we would try to flag those photos that represent non-native species. Of the non-natives, of particular concern are the 'invasives,' i.e., those *species that are non-native (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.* (definition from U.S. Executive Order 13112)

**Source of Ecological Threat Information is [www.texasinvasives.org](http://www.texasinvasives.org)**

### Chinese Tallow tree (*Triadica sebifera*)



**Ecological Threat:** Chinese tallow will change native habitats into monospecific (single species) tallow forests without good land management practices; will alter light availability for other plant species; and will replace native plant species, reducing habitat for wildlife. Tallow leaves contain toxins that alter soil conditions, thus affecting native plant species.

[Photos by P. Romfh, Brazoria County, 11/2013]

### Japanese honeysuckle (*Lonicera japonica*)



**Ecological Threat:** Japanese honeysuckle kill native shrubs and small trees by girdling and by blocking sunlight from leaves. Their vigorous root systems help honeysuckle spread and displace neighboring native vegetation.

[Photo by D. Mudderman, Brazoria NWR, 03/2013]

### Nutria (*Myocastor coypus*)



**Ecological Threat:** Nutria cause widespread damage to rice and sugar cane crops, as well as to many wetland plants.

[Photo by J. Eppner, Brazos Bend State Park, 03/2015]

### Feral Hogs (*Sus scrofa*)



**Ecological Threat:** The presence of feral hogs affects wildlife and plant communities as well as domestic crops and livestock. Extensive disturbance of vegetation and soil occurs as a result of their rooting habits. There often is a shift in the plants that will immediately grow on the disturbed area. Large trampled, muddy areas where hogs have uprooted vegetation are seen throughout the county. [Photos: L – M. Mullins, NW Brazoria County, 10/2009; R – P. Romfh, Brazoria NWR, 12/2013]

### European Starling (*Sturnus vulgaris*)



**Ecological Threat:** Introduced in the 1890's as part of a plan to bring to the United States all birds mentioned in the works of Shakespeare, the starling has proliferated widely. It competes with blue birds, purple martins, woodpeckers, and other cavity nesting birds. European Starlings often take over the nests of native birds, forcing the occupants out. This bird is perched on a purple martin house at Quintana. [Photo by P. Romfh, 04/2014]

See Photo Gallery for photos of other invasive and non-native species.

### Red Fire Ant (*Solenopsis invicta*)



**Ecological Threat:** Fire ants displace native ants from their habitat. Bites are painful to humans.

Chicks or unhatched eggs from ground-nesting birds such as the Bobwhite Quail are eaten by fire ants. The large mounds created by the ants permanently alter lawns, ranches, or other lands. [Photo by N. McLain, Brazoria, 05/2014]

# MOTHS, MOTHING, MOTH-ERS by Monica Krancevic

## NATIONAL MOTH WEEK, JULY 18-26 2015

<http://nationalmothweek.org/>

Many folk curse moths (actually the larva) that cause destruction to clothes, grains, fruits, nuts and vegetables. Those are a tiny proportion of the huge number of moth species that occur just in the United States and Canada.

All moths belong to the **Order Lepidoptera**. Within that taxon, there are 35 Superfamilies in the United States and Canada:

- **Papilionoidea**—all Butterflies, knobbed antennae (~500 species)
- **Hesperioidea**—all Skippers, hooked antennae (~275 species, most in Texas and Arizona)
- **Moths**—a convenient non-scientific term to call the other 33 Superfamilies, ropy or pinnate antennae (~12,000 species)

From the size of a pinhead to a hand's width, moths flaunt a dazzling number of wing and abdomen shapes, patterns and colors.

Most of us know the largest macro-moths—the so-called Silk Moths like the Polyphemus, Imperial, Luna and Cecropia...



Photograph by: Stephen Lody Photography

Photograph by: Mike Mullins

Photograph by: Christy Kneupper

Photograph by: Monica Krancevic

...and the lovely Sphinx or Hawkmoths that nectar from dusk to dawn among flowers. Their caterpillars are the big “hornworms” that can defoliate a tomato, moon vine or other desirable plant in a day. In our area, according to The Moth Photographers Group, there are **40 species of Sphinx**, many with colorful hindwings or abdomens...if you can get them to open up!



Banded Photograph by: Dave Brandes

L to R: Walnut, Pink-Spotted, Achemon, White-Lined

Photographs by: Monica Krancevic

However, some of the most interesting forms are among the smaller, in some cases much smaller, moths.



The true “moth-ers” have special MV/UV lights, baits and live traps. Many capture the moths, put them in the refrigerator for a few minutes and take indoor photos with controlled lighting. Seems like a lot of work, so all the images above were shot on my window or house siding under plain old porch lights with a bridge camera (a higher end point-and-shoot).

If you're tempted to try some mothing, or learn more about National Moth Week, continue to the next page...

## MOTHS, NOTHING, MOTH-ERS Cont'd

National Moth Week encourages everyone to learn more about moths and their roles in the ecosystems they inhabit. This event is world-wide and 30 partners hail from every continent but Antarctica. From the National Moth Week website: "National Moth Week offers everyone, everywhere a unique opportunity to become a Citizen Scientist and contribute scientific data about moths. Through partnerships with major online biological data depositories, National Moth Week participants can help map moth distribution and provide needed information on other life history aspects around the globe."

### Ready to turn on the porch lights and see what might appear?

Here are some tips and techniques from Dr. Chuck Sexton, an avid moth-er and retired Wildlife Biologist for the Balcones Canyonlands National Wildlife Refuge.

#### Routine:

Turn the porch lights on at dusk and wait an hour or so before initially checking for moths. Check a few more times before calling it a night. [Editor's note: best nothing seems to be between midnight and 4 a.m.—definitely a plus for night owls]

When photographing moths at a porch light, it is important to (1) be *prepared*, and (2) be *stealthy*. Many moths are very flitty at a light and the slightest disturbance will send them twirling or departing. Set up the camera before going outside to the lights. That means turning the camera on, making sure it's in the right mode, checking other settings, and flipping up the flash ready to shoot. Turn on a small headlamp or flashlight in advance and have a millimeter ruler at hand. Move *slowly* and *deliberately*. Open the door slowly and quietly. Make all your gestures in slow motion.

For many moths, size is useful or even critical for species ID. The trick is to approach a moth with the ruler very slowly. Place the ruler very gently on the surface about 1"-2" away from the moth, then carefully and smoothly slide the ruler over closer to the moth, trying to get/stay parallel to the front edge of one of the forewings. Take a preliminary picture without the ruler, then with the ruler some distance away, just in case the moth departs before the ideal shot. Don't bump the moth or its antennae.

#### Other Tips and Settings:

Use the *largest image format* available on your camera to capture the maximum detail—so important in moth photography!

Moth wings can be highly reflective. When using flash at very close range, images from certain angles can be washed out or shiny, obscuring the pattern. *Make sure the flash setting (if adjustable) is as soft (low) as it can be set.* It takes some experimentation to gauge the best way to get a clear image of the pattern on any given moth. Here are some other things to try: (a) *back off* a few inches and zoom in to compensate for image size; (b) *rotate* the camera 90 degrees left or right to bring the flash from a different angle; (c) photograph the moth from slightly *in front of, or behind a vertical position* or slightly from one side—particularly for moths posing with wings flat like geometrids.

For moths that hold their wings rolled up like many micromoths, take pictures *both* from a top view *and* a side view. For the latter, getting the plane of focus is trickier; try to keep the moth in the center of your focus rectangle.

Keep a small *step ladder* handy just in case there is something interesting but out of reach while standing on the ground.

Keep lighting inside the house to a minimum, particularly any entryway lights near the door or near a picture window. This will keep all the moths focused on the porch lights and limit their urge to depart *\*into\** the house when a door is opened.

For anything new or interesting, take a first image from some distance—just in case that moth decides to fly as you approach closer. Then take closer images.

Keep in mind that the best moth ID web sites (e.g. Moth Photographers Group; Butterflies and Moths of North America) will show images in plan view with the moth facing straight up or horizontally to the right or left. Either when composing a picture in the "field" or when editing images later, keep that in mind. Otherwise, trying to match your upside down or diagonal image of a moth to those formal guides just adds an extra layer of translation for the brain to untangle.

#### **Resources**

Moth Photographers Group: <http://mothphotographersgroup.msstate.edu/Plates.shtml>

Bugguide.net (Moths): <http://bugguide.net/node/view/82>

Texas Mid-Coast Photo Gallery (will be updated with many moth photos as time permits): <http://www.refugefriends.org/photos/index.php/Arthropda---Insecta-Insects/Sub-Gallery---Lepidoptera---Moths>

National Moth Week (events, equipment, how-to, documenting): <http://nationalmothweek.org/>

## Tockonhono Naturalist by Chris Kneupper Indianola Beaksedge

While collecting plants for the Stormwater Wetlands project, I have come upon an interesting case involving a rare hard-to-find plant called Indianola Beaksedge (*Rhynchospora indianolensis*). This species has been reported in northwestern Brazoria County, on the prairies south of Damon. A single specimen was obtained there and delivered to the UT Herbarium in 2003. It seems to be a resident of the wet coastal tall-grass prairies, and does not grow in standing water.

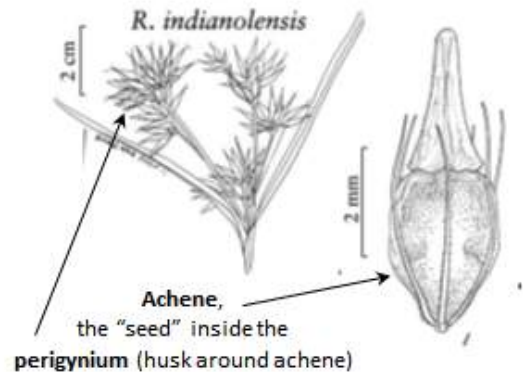


Indianola Beaksedge

My attempts to locate some in this area have met with failure. Consequently, I had to range farther afield to find some, and finally did locate some samples this spring in Matagorda and Jackson counties. The range map at the USDA PLANTS database shows this species is restricted to the middle Texas coast. However, the distribution map at the Biota Of North America Program (BONAP) shows a slightly wider distribution:



My search for this species was also initially hampered by the lack of any drawings or photos (even on the Internet) which would help in field identification. However, there is another Internet resource which I have begun to use. It is called the Flora Of North America ([www.efloras.org](http://www.efloras.org)), and it has a description and simple drawing of this species.



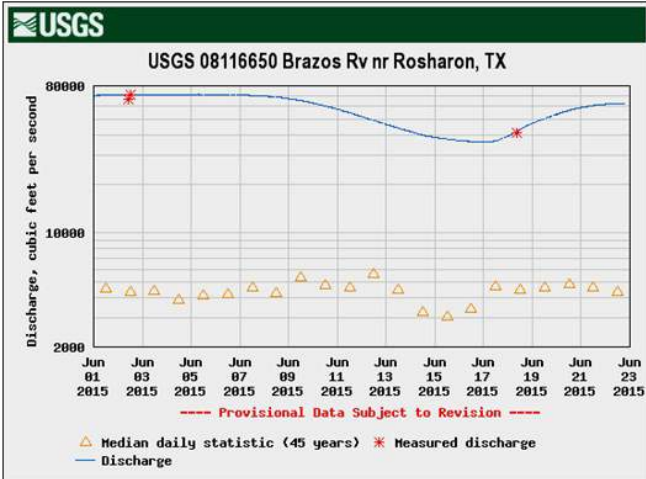
The shape of the achene is apparently a key way to identify the many sedge species. With this information in hand, I began to look for the species during trips to Matagorda Co. Eventually, some specimens were found, but mostly west of the Colorado River. It typically has a single tall spike (3 to 3.5 feet) growing from a grass-like base. The favored habitat seems to be flat coastal prairie, exposed to full sunlight. Unlike many other sedges, this species does not seem to favor low wet ditches. One dense stand was found in southeastern Matagorda county growing on both sides of a county road for about a quarter mile (see photo below). However, other locations are few and far between, and this species seems to be very uncommon. I am happy to have collected a few specimens and some seed, in attempts to propagate this species more widely. If anyone knows of it in Brazoria County, please let us know.



Dense Stand of Indianola Beaksedge in Matagorda Co.

## Tropical Storm Bill Deposits 'Flotsam and Jetsam' on Quintana Beach by Peggy Romfh

In mid-June, Tropical Storm Bill brought flooding rains throughout Texas along with wind and storm surges along the coast. The Quintana beach area provided a unique look at the impact of the storm from 1) high water and storm surges in the Gulf that flattened dunes and dune vegetation and deposited marine species and trash high up on the beach, and 2) flooding along the Brazos River and other watersheds that flow into the Gulf that dumped trees, organic material, and trash into the Gulf along the Brazoria County coastline.



USGS data highlights the immense discharge of water from the Brazos River, as measured at the Rosharon gauge during and after the storm compared to the median flows over the last 45 years.



(1) Debris littered the water and shoreline of Quintana Beach. (2) Enormous tree trunks and thousands of plastic bottles covered Quintana jetty. (3) Small, organic debris filled the beach a foot or more deep as far as the eye could see. Hundreds of dead or dying (4) sea anemones dotted the wet sand, while (5) hermit crabs with missing 'fingers' crept through the debris. (6) Vertebræ from a marine mammal (likely dolphin), shared the sand with (7) barnacles, thousands of broken mollusk shells and (8) blue crab carapaces and other dead crustaceans. Hundreds of (9) lightning whelks, (10) shouldered pearwhelk, Atlantic moon snails and other gastropods, opercula still intact, were deposited on the beach as the waves receded. *Photos by P&P Romfh, June 19, Quintana Beach and Jetty*





**“Water, Water, Everywhere.....”**



Frigate Bird, Bastrop Bay, 06/03/2015  
Photo by Pete Romfh

In the absence of an albatross, this frigate bird will do the honors in commenting on the water that seems to be everywhere in Brazoria County this year as a consequence of the heavy rains throughout Texas. High water from storms is often seen throughout the county, as the photos below show.

**RIVERS**



Brazos River at Hwy 35, 06/24/15 looking south toward Brazos Belle site; trees and docks under water [Photo by Pete Romfh]

**CREEKS**

**YARDS**

**BOAT RAMPS**



San Bernard River at Hanson Riverside County Park near West Columbia, 06/24/15 with dock under about 9 feet of water [Photo by Pete Romfh]



Varner Creek at Hwy 35, 06/24/15 with water near top of bridge [Photo by Pete Romfh]



San Bernard River Boat Ramp at Hwy 2611, 4/17/2015 with high water covering road and access [Photo by Neal McLain]



Boat Ramp, CR849, 6/24/2015; a few days earlier, the fence was half under water. [Photo by Neal McLain]



Yard flooding, Brazoria, 10/2006 [Photo by Neal McLain]

## CRADLE OF TEXAS CHAPTER OFFICERS

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E-mail Listserv	<a href="http://tinyurl.com/TMN-COT-Mail">http://tinyurl.com/TMN-COT-Mail</a>



### MASTER NATURALIST EMAIL LISTS

#### ***TMN-COT Chapter list***

- Instructions [http://tmn-cot.org/Email\\_Lists/index.html](http://tmn-cot.org/Email_Lists/index.html)
- Send messages to [TMN-COT@googlegroups.com](mailto:TMN-COT@googlegroups.com)
- Message Archive <http://tinyurl.com/TMN-COT-Mail>

All messages are sent immediately.

*Please reply only to the sender of group emails.*

#### ***State Master Naturalist Listserv***

- Instructions <http://txmn.org/staying-connected/sign-up-for-tmn-listserv/>
- Subscribe [listserv@listserv.tamu.edu](mailto:listserv@listserv.tamu.edu)
- All messages are held for moderation by the TMN State Coordinator

*Chapter News* is published monthly on the first day of the month by the Texas Master Naturalist Cradle of Texas Chapter. Submissions are welcome. Submission deadline is 5:00 PM the next-to-last day of the month. Submissions should be sent by email to *Chapter News* Editor at [tmn.cot@gmail.com](mailto:tmn.cot@gmail.com). Submissions may be edited for clarity, syntax, grammar, or spelling.