



We are a group of trained volunteers who share our appreciation and knowledge of nature with the community through outreach, education and conservation/restoration projects

Pollinators and Pollinator Gardens

By Jamie Fairchild



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On September 6, our monthly meeting was super interesting and super fun with an appearance of the largest bee we've ever seen! Ed Irwin, Bee Harmony Director, gave us all kinds of fascinating facts about bees.

To begin with, 80% of all flowering plants require pollinators - and that includes 1/3 of our food supply.

The first flower evolved during the Jurassic Period (200 to 145 million years ago), during which plant life consisted mostly of conifer and ferns. The first bee evolved 150 million years ago during this same period. There are now 4,000 species of bees in North America and 20,000 species of bees in the world.

Honey bees evolved in Asia 20 million years ago and were brought to North America in 1622. They have 5 eyes with the 3 on the top of their heads picking up polarized light. They will travel 2 ½ - 3 miles from the hive to get the flowers that they prefer. They flap their wings at a rate of 2,000 times/minute. Each hive has about 200 males whose only purpose in life is to mate with the queen; they do no work and die after they mate. The queen lays 1500 – 2000 eggs/day and if the queen doesn't produce enough eggs, they will kill her and create a new queen. There are 40-50,000 bees in a hive and have a 42-day life. The bees store the nectar on their faces to take back to the hive. The pollen that they collect is high in protein and is what is fed to the babies. The nectar gets turned into honey. Honey bees keep their hive at 94 degrees inside no matter what the temperature is outside. If you are stung, SCRAPE the stinger out, don't squeeze! The poison sack will continue to pump for 10 minutes. About 5,000 bee hives were destroyed by Harvey.

Solitary or Native bees pollinate 15% of our plants. 70% of them nest in the ground. They will collect a ball of pollen, put it in a hole, and lay an egg.

Continued on the next page-----

Please send chapter events and nature-related articles, photos, and items of interest to the chapter to [Lynn](#) by the 25th of the month.

Suggestions for the newsletter are also welcome. Thanks.

***Lynn Trenta,
Courier Editor***

Pollinators and Pollinator Gardens (Continued)



Plants attract pollinators by fragrance carried on the wind. Different plants produce nectar at different times of the day. Plants attract their preferred pollinators by their shape, size, color, and odor. Beetles prefer bowl-shaped flowers.

Colony Collapse Disorder: Prior to 2006, the annual loss of honeybees was 6–8 %. From 2016-2018, the losses grew to 43% and in some states the losses reached 60%. These losses may be due to a number of stressors on the bees including genetics, pesticides, parasites, and monocultures. A class of pesticides called neonicotinoids are highly suspect in the disappearance of the bees. France has already taken the step of banning this class of pesticides. The pesticide coats the pollen of sprayed plants and is then taken by the bees back to the hive and fed to the babies.

Some differences between flies and bees that were discussed at the program are:

FLIES: 2 wings

Less hair

Large eyes near front

Antennae short

Don't carry pollen

BEES: 4 wings (and wasps)

~ 3,000 hairs

Eyes off to the side can see 180 degrees

Long antennae with > 100 receptors

Do carry pollen

Go to BeeHarmony.org to further explore this topic!

Chapter Field Trip on October 20th

Oct. 20 Field Trip will be to the Brazoria National Wildlife Refuge. from 9:30-1:00. The address for GPS is 2022 County Road 227, Freeport, Tx. It is a 414-acre wildlife conservation area along the coast of Texas.

We will explore the boardwalk over the marshland to see many species of birds and plants. Our Guide, Stan will show us the greenhouse where they are growing milkweed and other plants. We can visit the Museum and there is a driving Auto Tour where you can see the Prairie Areas. There is also a Butterfly Center which is small so groups of five are allowed to enter at a time.

<https://www.fws.gov/refuge/brazoria/>

There is no cost and bring your lunch and water. Restroom facilities are available.



Winging It! *By Janet Marinelli* August 1, 2018



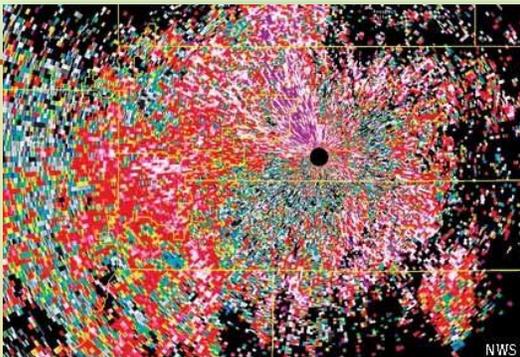
Kazuo Unno

WHILE MASSES OF MONARCH BUTTERFLIES making their way south each fall once sipped nectar from seaside goldenrods that dot the beach near my Shelter Island, New York, home, the insects have become less common as they have declined. On a crisp day last September, however, hundreds of butterflies that looked like miniature monarchs fluttered around the golden flowers, flashing their orange-and-black wings. On closer inspection, they turned out to be a less-famous butterfly that also migrates long distances in autumn: the [painted lady](#).

It was a banner year for this butterfly. In September 2017, scientists observed two large, successive waves of painted ladies heading southward from the northern United States and Canada. That summer, abundant rainfall throughout the species' breeding range produced huge numbers of painted ladies, says [Royce Bitzer](#), an Iowa State University entomologist who studies the species and its close relatives in the genus [Vanessa](#). "Then, when a cool front moved south during Labor Day weekend, they were suddenly on the wing, sailing with the winds coming from the north." When it seemed they had moved on, he says, "there was a second large wave that came southward during the last week of September." This second wave created a hubbub of excitement around Denver, when thousands of airborne painted ladies were spotted on radar (below)

Despite being one of the world's most cosmopolitan butterflies—found on every continent except Australia and Antarctica—the painted lady's migrations long remained mysterious. In North America, scientists have learned that the insects migrate northward during spring from the deserts of northern Mexico and the U.S. Southwest. In summer, they have been recorded throughout most of the United States and Canada south of the Arctic. Unlike monarch butterflies, which migrate in fairly predictable numbers, they are inconsistent migrants. According to Bitzer, the size of the migration can vary substantially from year to year, often depending on climatic anomalies such as El Niño events.

In the Eastern Hemisphere, recent studies reveal that the species' migration there can make the round-trip, up-to-6,000-mile, multigenerational journey of North America's [monarch](#) seem like a leisurely jog. Each spring, the diminutive painted ladies—each weighing less than a single paper clip—cross the punishing Sahara Desert and then the Mediterranean Sea, continuing through Europe as far north as the Arctic Circle. They remain there for just a few weeks before their offspring begin retracing the route in autumn—an epic 9,000-mile trek. Throughout their range, Bitzer notes, "much remains to be discovered about the butterflies' habits and how their behavior and seasonal distribution vary by geographic location."



NWS



John E. Heintz, Jr.



Rick McNelly

Winging It! (Continued)

PAINTED LADY Like monarchs, painted ladies complete their long migrations over the course of several generations. Traveling north, female butterflies lay eggs on plants in the daisy family, particularly thistles, on which emerging larvae munch. Once caterpillars have spun their chrysalises and emerged as adults, this new generation continues the journey, fanning out across North America to feed on wildflowers such as blazing star, iron weed, joe-pye weed, milkweed and aster.

Migration mysteries

The same could be said of most migratory insects. Though scientists have long scrutinized the seasonal movements of larger animals, from [birds](#) and [caribou](#) to salmon and whales, they only have recently begun to take a close look at insect migration. According to [Dara Satterfield](#), a post-doctoral researcher at the Smithsonian Institution who studies the phenomenon, it was only in the past 100 years that researchers recognized that insects could travel long distances. Even then, they “assumed insects were being haphazardly blown by the winds, unable to control their direction,” she says.

Thanks to innovative radar and other technologies, combined with observations by entomologists and citizen scientists, the fact that many insects migrate long distances is now well accepted. While many small species indeed are blown randomly about by wind, Satterfield says, studies have shown that some larger-bodied insects “can select winds moving in favorable directions and, using the winds to their advantage, travel more than 400 miles per night.”

Like all migrating animals, insects are driven by shifts in the availability and location of food and other vital resources. Recently, scientists discovered that the magnitude of these insect movements can be staggering. In a 2016 report in [Science](#), researchers from Great Britain and Israel calculated that 3.5 trillion insects migrate above the southern United Kingdom annually, dwarfing the estimated 2.1 billion migrating passerines (songbirds and other perching birds) that traverse the region each year.

That sheer number of insects, along with their 3,200 tons of biomass, led the scientists to speculate that insect migrations play a major role in redistributing energy and nutrients between geographic regions. If densities observed over the southern United Kingdom “are extrapolated to the airspace above all continental landmasses,” they wrote, insect migration “represents the most important animal movement in terrestrial ecosystems.” To continue reading this article go to:

https://www.nwf.org/Home/Magazines/National-Wildlife/2018/Aug-Sept/Animals/Insect-Migration?s_email_id=20180910_MEM_ENG_Habitat_News_September_Edition|MTMemAct

Autumn Beauties for the Fall Garden (NWF) *By Doreen Cubie* October 1, 2006

Fall-blooming native plants offer food for wildlife and a feast for the eyes; no matter where in the country you live, there are good species to choose from. A PATCH of goldenrod teems with wildlife. Bees swarm. Painted lady and red admiral butterflies drink nectar. Green lacewings and other beneficial insects take shelter. Goldenrod spiders lie in wait, ready to ambush prey. Cottontail rabbits browse the leaves.

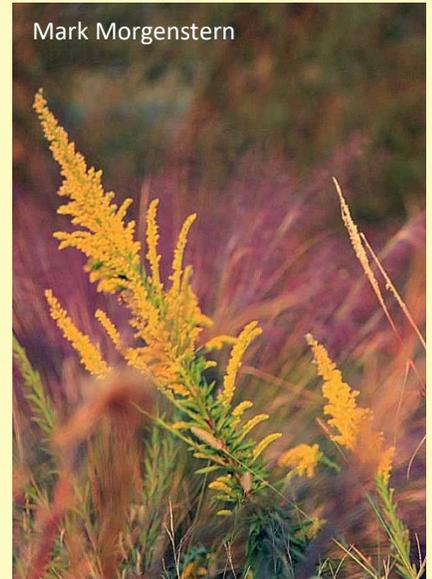
Planting goldenrod in your garden, along with other fall-blooming native perennials, can turn your backyard into a wildlife mecca every autumn. And, best of all, you don't have to worry about allergies. "Goldenrod doesn't cause hay fever," says Kim Todd, a University of Nebraska professor and extension horticultural specialist. The heavy, sticky pollen of goldenrod clings to the insects that pollinate it, she explains. Ragweed, which blooms at the same time and has light, windborne pollen, is the real cause of sniffles and sneezes.

Goldenrod's only drawback is aggressiveness—some species are rapid colonizers—but a number of varieties have now been tamed for the garden. In eastern states, Mark Sellew, owner of Pride's Corner Farms in Lebanon, Connecticut, recommends growing a cultivar of rough-stemmed goldenrod called "Fireworks." Monarchs make a beeline for it, he says, and it produces a lot of seeds for songbirds.

Stiff goldenrod is a good species to try in the prairie states, according to Todd. This 3- to 5-foot plant thrives in poor soil and is tolerant of drought. Farther west, southern goldenrod is a possibility, especially for moist areas.

If you live in the eastern two-thirds of the country, ironweed and joe-pye weed also make excellent additions to your fall garden. On the Great Plains, "our best butterfly magnet is joe-pye weed," says Todd. Reaching 5 to 7 feet tall with mauve flowers, joe-pye weed pulls in gulf fritillaries and several kinds of swallowtail butterflies (eastern tiger swallowtail, above). It grows in moist areas but will adapt to the drier conditions found in most backyards. All species, including spotted joe-pye weed, are native to North America.

Mark Morgenstern



Bud Hensley

Autumn Beauties for the Fall Garden (Continued)

Ironweed, which begins sprouting purple flowers in late summer and continues to bloom into the fall, is another attractive butterfly plant. Sparrows and goldfinches devour its seeds. New York ironweed is the most common species in the East. Western ironweed is found across the Great Plains to the foothills of the Rockies.

Widespread, with more than 150 native species, asters also attract both butterflies and songbirds, as well as native bees. They are the larval food plant for several orange-and-black butterflies called crescents. In addition, a number of western checkerspots lay their eggs on asters, and Harris's checkerspot, found in wet areas of the Northeast, only deposits its eggs on the flat-topped white aster.

In the northern states, Sellev advises trying New England aster. In the Midwest, Todd recommends a cultivar of Fendler's aster called "My Antonia."



Lynn Trenta



Stephanie Brundage

"I use great northern aster quite a bit," says Oregon landscape architect Gretchen Vadnais. It grows in moist areas from Alaska south to Oregon and eastward to Montana. Because some asters can overrun your yard, Vadnais recommends doing a little homework before you plant a new variety. Stick to flowers that are native to your section of the country. They are less likely to get out of hand and are also adapted to local conditions.

Autumn perennials are especially valuable to wildlife when you let at least some of the plants go to seed, says Todd. "If you can keep them standing during the winter, it gives you the best opportunity to provide food for different kinds of birds." Small mammals such as white-footed mice and meadow voles will also partake. And any seeds missed by animals will fall to the ground, perhaps to germinate and give you even more fall flowers the following year.

South Carolinian Doreen Cubie is the owner of Certified Wildlife Habitat™ #34426. Learn more about native plants and gardening for wildlife.

RELATED RESOURCES

*More Late Bloomers: "Enhancing Your Fall Garden Experience"
"Greening Your Fall Garden Cleanup"*

*Garden for Wildlife: NWF's Certified Wildlife Habitat Program
View Past Articles: Wildlife Gardening Archive*

Plant of the Month, Virginia Sweetspire (*Itea virginica* L.)

By Mark Morgenstern

This month's featured plant is Virginia Sweetspire with the scientific name of Itea virginica. This deciduous shrub grows 3' to 6' tall but mine are always under 4'. The white flowers grow in drooping spires and are a favorite of bumblebees and nectar insects. They bloom from April to June. Soil types listed are anything from sandy to clay but always moist. Its listed as growing in wet wooded streambanks, swamps and pine barrens.

My personal experience with this plant is that it needs to be well situated in order to thrive. This is an understory shrub that can tolerate full sun in limited hours. The leaves are green turning to red in the fall. They should be planted in a cluster to avoid a spindly look. This plant also can be purchased at local nursery stores. This is the time of the year for sales at many of them and would be a great addition to a pollinator habitat.

Sally and Andy Wasowski



Peter Loos

The Monthly Bird Spotter

Black-bellied Whistling-Duck

-by Jade Hems

- *The Black-bellied Whistling Duck is a duck with goose-like habits!*
- *The unusually long-legged silhouette, bright pink legs and bill, striking white wing patches and loud whistling call, give the Black-bellied Whistling-duck a conspicuous presence in wetlands, parks and agricultural fields.*
- *Listen around sunset, as boisterous flocks head out from their roosts to feed nocturnally.*
- *Vocal flocks of Black-bellied Whistling Ducks are common in the wetlands at Seabourne Creek Nature Park!*
- *Not closely related to true ducks, Black-bellied Whistling-ducks resemble geese in that males and females look alike and they do not exhibit complex courtship behaviors commonly seen in ducks. They form long term pair bonds, with both parents caring for the young.*
- *They were formerly known as Tree Ducks, for their habit of perching in trees, on power lines, fences and other structures.*
- *Usually nesting in tree cavities, Black-bellied Whistling-ducks readily use nest boxes. Females frequently lay their eggs in the nests of other Black-bellied Whistling-ducks, a practice known as egg dumping.*

Continued on the next page-----



John Donaho

Black-bellied Whistling-Duck (continued)

- *A pair may raise as many as 18 young in a single brood!*
- *In wetlands, Black-bellied Whistling-ducks feed by dabbling for aquatic vegetation and insects. They also forage in fields, golf courses and lawns, for grasses and grain*
- *In the southern United States, Black-bellied Whistling-ducks are common and expanding in range. North American Breeding Bird Survey data shows a 6% annual population increase from 1966 to 2014. As with all species that use wetlands, Black-bellied Whistling-ducks may be locally impacted by poor water quality, but overall, they have adapted well to modified environments.*

References:

Cornell Lab of Ornithology, https://www.allaboutbirds.org/guide/Black-bellied_Whistling-Duck/overview
Kaufman Field Guide to Birds of North America, by Kenn Kaufman





TMN 20th Anniversary Annual Meeting Registration OPEN!

<https://txmn.org/2018-annual-meeting/> Join us for our Texas Master Naturalist Program Annual Meeting to gather, learn and celebrate our 20th Anniversary. This year's event will kick off Friday October 26th and run through the weekend to October 28th. It is being hosted at the Sheraton Georgetown Hotel and Conference Center.

This year's agenda is PACKED with over 150+ sessions – more than we've ever had before. As in years past, registration includes signing up for technical sessions and field session attendance as many of the classrooms and space available on the field sessions is limited. Please prepare before registering with your preferred attendance at sessions. Our field sessions typically fill up very quickly!

All hotel room reservations for the meeting dates (Friday night & Saturday night) will be made through the TMN Annual Meeting Registration Page. Please DO NOT call the Sheraton Georgetown.

Links for the Annual Meeting

[-About Georgetown](#)

[-Agenda](#)

[-Registration](#)

[-Lodging](#)

[-20th Anniversary Gala](#)

[-Annual Meeting Contests](#)

[-Sponsorship Requests](#)

[-Silent Auction](#)

[-Texas Waters Day](#)

[-Texas Wildlife Association](#)

[-Call for Proposals](#)



James B. Harrison Nature and Wildlife Field Day

September 15th several members of our chapter volunteered for the 1st Nature and Wildlife Field Day, held at a James B. Harrison Foundation property. This foundation is our new partner and the event was offered to children in the Fort Bend County 4-H Club. Our chapter President, Amber Leung is working with the 4-H club and the foundation.

Amber shared the following on our chapter members-only Facebook page: "The BIGGEST of thank yous to our great group helping with the Nature and Wildlife Field Day this morning!! We had a perfect size group of families join us and perfect sunny (but muddy) conditions. Bill Johnson, Margo Johnson, Jaci Elliot, Debby Wendt, Mark Edward Morgenstern and Andrea Morgenstern donated seed materials and made native seed balls for giveaways."

Jay Roussel and his daughter, Jessie, are also seen with bird boxes.



Seabourne Goings Ons *By Lynn Trenta*

Pergola is Completed!

The wonderful pergola in the Seabourne Prairie Demo Garden is now complete!

Last Wednesday, C.J. McDaniel and the Seabourne Volunteers presented Jerry Trenta with a plaque to commemorate his work on the pergola. He designed and built the pergola this last year with help from C.J., Sal Cardenas, Kevin Engelhardt and others. The many man hours he put into this project are much appreciated by our chapter and the pergola will provide shade and a work area for outreach and meetings for years to come. Way to go, Jerry!



Photos by Jade Hems

New Signs and Pamphlets in Prairie Garden

The Prairie Demo Garden Divas have been working on pollinator habitat gardens signs and pamphlets. Seen below are signs for the hummingbird, prairie bird and native bee gardens. The hummingbird and native bee pamphlets are also available and the prairie bird pamphlet will soon be in place.



Prairies & Pollinators: A Regional Celebration

Each fall our prairie partners in Greater Houston host a wonderful series of events focused on prairies and pollinators. These events include inspiring public prairie plantings, restoration workshops and skills building classes, nature festivals, a bioblitz, prairie hikes, urban pocket prairie tours, monarch butterfly celebrations, film nights, and more! We call this collective offering *Prairies & Pollinators: A Regional Celebration*.

This year's *Prairies & Pollinators* events will run from September 22-November 10, 2018. If you'd like full details and registration links to all of these events please

[visit this webpage for more information.](#)

Here is just a small sampling of all of the events:

September 29 - Fall Day at Lawther Deer Park Prairie - Visit one of Texas's most famous little prairies.

October 5 to 22 - Texas Pollinator Bioblitz (across Texas) - Help count and document our region's rich pollinator community using the iNaturalist app.

October 6 - Monarch Madness @ Meadows Place - Join Monarch Gateway and others to celebrate and learn about the magnificent monarch butterfly

October 8 - Seed Collect @ UH Coastal

2018 PRAIRIES & POLLINATORS A REGIONAL CELEBRATION!



SEPT 22 - NOV 10

EXPLORE	RESTORE	LEARN
<p>SEPTEMBER 22 Wildscapes Workshop</p> <p>OCTOBER 5-21 Texas Pollinator Bioblitz Throughout Texas</p> <p>OCTOBER 17 Wild About Houston Film Festival Houston, TX</p> <p>OCTOBER 27 Urban Prairies by Light Rail Katy Prairie Conservancy (KPC) & Coastal Prairie Partnership (CPP) Houston, TX</p>	<p>SEPTEMBER 22 Plant It for the Planet Sheldon Lake SP Houston, TX</p> <p>SEPTEMBER & OCTOBER Prairie Plantings at Three Parks Houston Parks & Rec. Dept. Houston, TX</p> <p>OCTOBER 20 Prairie Pandemonium Armand Bayou Nature Center Pasadena, TX</p> <p>NOVEMBER 10 Putting Down Roots Prairie Planting Katy Prairie Conservancy Waller, TX</p>	<p>SEPTEMBER 29 Fall Prairie Day Prairie Pollinators in the Urban Garden Talk LaPorte, TX</p> <p>OCTOBER 19 Prairie Restoration Roundup Workshop Texas City, TX</p> <p>NOVEMBER 3 Nature Festival TMN-Coastal Prairie Chapter Rosenberg, TX</p> <p>NOVEMBER 3 First Saturday Refuge Tours of Attwater Prairie Chicken NWR U.S. Fish & Wildlife Service Eagle Lake, TX</p>

AND MUCH MORE!

CO-PRESENTED BY



FEATURING PROGRAMS BY



CONNECT WITH US!

DECEMBER 2018
Prairie Stampede: Celebration & Awards Dinner
Houston Zoo

MONTHLY MEETINGS
Native Prairies Association of Texas - Houston Chapter
Fourth Wednesday of each month. More at houstonprairie.org

WATCH US ON YOUTUBE
[youtube.com/user/prairiepartnership](https://www.youtube.com/user/prairiepartnership)



MORE INFORMATION AT
PRAIRIEPARTNER.ORG

In Our Own Backyards and Other Places

Ribbon Snake and Water Gardens *By Diane Eismont*

Below is a Gulf Coast ribbon snake on a waterlily pad, moving in to grab a dragonfly, in a stock tank that serves as a water garden.

These galvanized tanks, sold by feed stores, in sizes from 50 gallons up, make great water gardens. In addition to water lilies, this one has arrowhead plants and lemon bacopa. It has an automatic water fill, an outlet to drain water and mosquito fish to eat mosquito larvae. The fish may also be attracting the snake. Flowers could be planted to camouflage the sides.

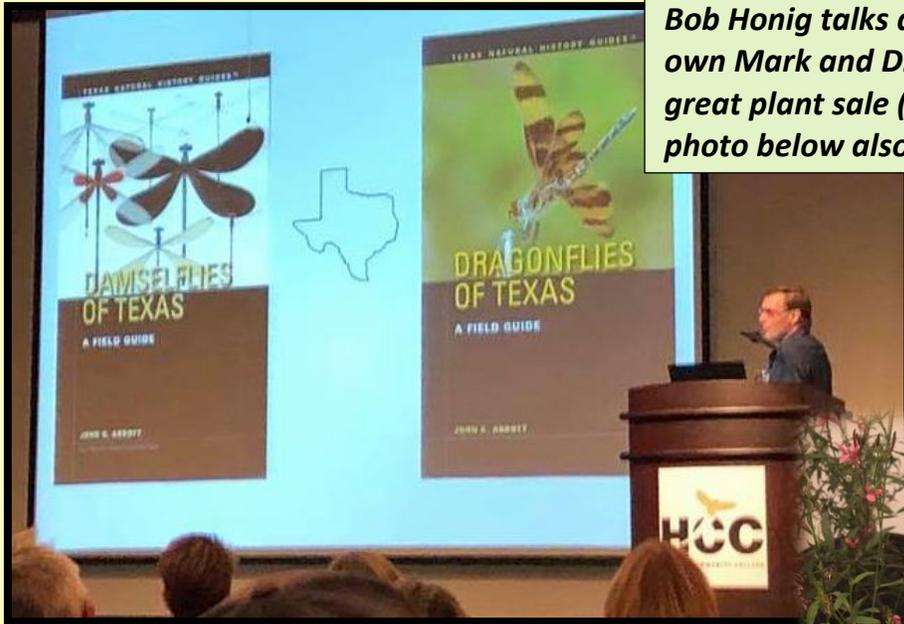
I have three and really enjoy not only the flowering plants, but also the variety of wildlife that visits my water garden tanks! They draw dragonflies, bees, water snakes, frogs, deer, raccoons, and even birds that want to drink or dive for goldfish or frogs. Lots of activity!

For your water gardens, check whether the drain opening will accept a faucet or valve. Then you can add a short hose to drip into a bird bath type pan on the ground for birds or other small creatures, keep a bog plant wet or just use it to keep the bottom clear or to drain the tank.



Wildscapes Photos

Wildscapes, the Native Plant Society's wonderful native plant workshop, was held on September 22nd this year. Several chapter members were in attendance. Below, Bob Honig talks about dragonflies and damselflies. Our own Mark and Drea Morgenstern were in charge of the great plant sale (see photo from NPSOT). See the group photo below also.



Seabourne Nature Fest

One way to publicize SNF is to share the following information on your Facebook, Twitter, or Next-Door accounts. Margo Johnson has developed the follow short blurb for everyone to share on their social media. You can attach the flyer, either using this photo below or go to the website and use that photo at <https://txmn.org/coastal/files/2018/05/SNF-2018->

Seabourne Nature Fest

Saturday, November 3 10 a.m. - 4 p.m.
Seabourne Creek Nature Park, 3831 Texas 36 South,
Rosenberg 77471

There will be lots of activities for kids and families! See butterflies and caterpillars, alligators and snakes, hawks and owls, beekeepers, and more. There will be a native plant sale, edible plant display, children's crafts, a petting zoo, face painting, nature talks, prairie walks and horse-drawn wagon rides.

The nature festival entry and events are free. There will also be a variety of food truck vendors.

Free and Open to the Public
Conducted by Coastal Prairie Chapter – Texas Master Naturalists

The Texas Master Naturalists are sponsored by Texas Parks and Wildlife Department and Texas A&M AgriLife Extension Service. For additional information call 281-633-7033 or email mmcdowell@ag.tamu.edu

Website: <https://txmn.org/coastal/>

FACEBOOK <https://www.facebook.com/TXMNCoastal/>



7th Annual SEABOURNE NATURE FEST
 November 3, 2018, 10 a.m. to 4 p.m.
 Seabourne Creek Nature Park
 3831 Highway 36 South, Rosenberg TX 77471

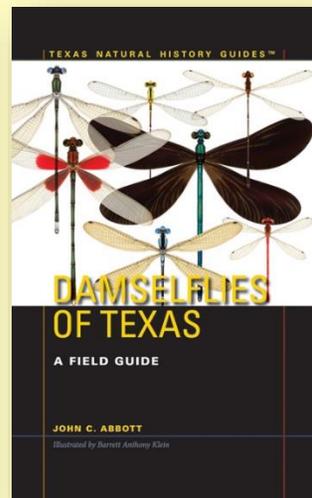
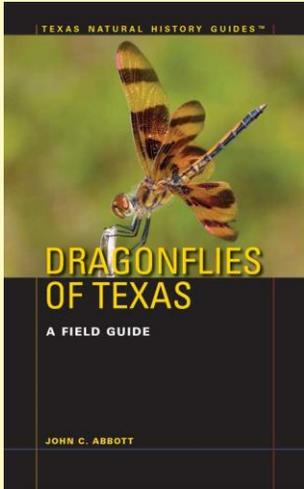
Butterflies & Caterpillars
 Alligators & Snakes
 Hawks & Owls
 Bee Keepers
 Native Plant Sale
 Edible Plant Display
 Children's Crafts
 Face Painting
 Nature Talks
 Food Trucks
 Prairie Walks
 Horse-Drawn Wagon Rides

FREE ADMISSION

RAIN OR SHINE

Hosted by
 Coastal Prairie Chapter Texas Master Naturalists
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Book Corner



Dragonflies of Texas

Damselflies of Texas

By John C. Abbott

Dragonflies and damselflies (together known as Odonata) are among the most remarkably distinctive insects in their appearance and biology, and they have become some of the most popular creatures sought by avocational naturalists. Texas hosts 160 species of dragonflies, nearly half of the 327 species known in North America, making the state a particularly good place to observe dragonflies in their natural habitats.

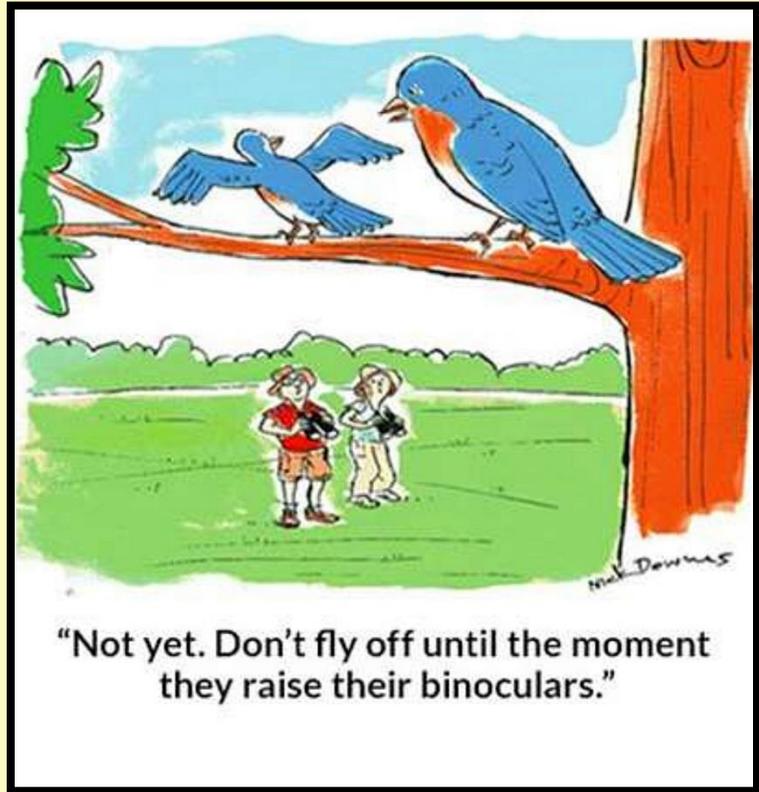
Dragonflies of Texas is the definitive field guide to these insects. It covers all 160 species with in situ photographs and detailed anatomical images as needed. Each species is given a two-page spread that includes photographs of both sexes and known variations when possible, key features, a distribution map, identification, discussion of similar species, status in Texas, habitat, seasonality, and general comments. Many of the groups also have comparative plates that show anatomically distinctive characteristics. In addition to the species accounts, John Abbott discusses dragonfly anatomy, life history, conservation, names, and photography. He also provides information on species that may eventually be discovered in Texas, state and global conservation rankings, seasonality of all species in chronological order, and additional resources and publications on the identification of dragonflies.

On any warm summer day, you can easily observe damselflies around a vegetated pond or the rocks along the banks of a stream. Like the more familiar dragonfly, damselflies are among the most remarkably distinctive insects in their appearance and biology, and they have become one of the most popular creatures sought by avocational naturalists.

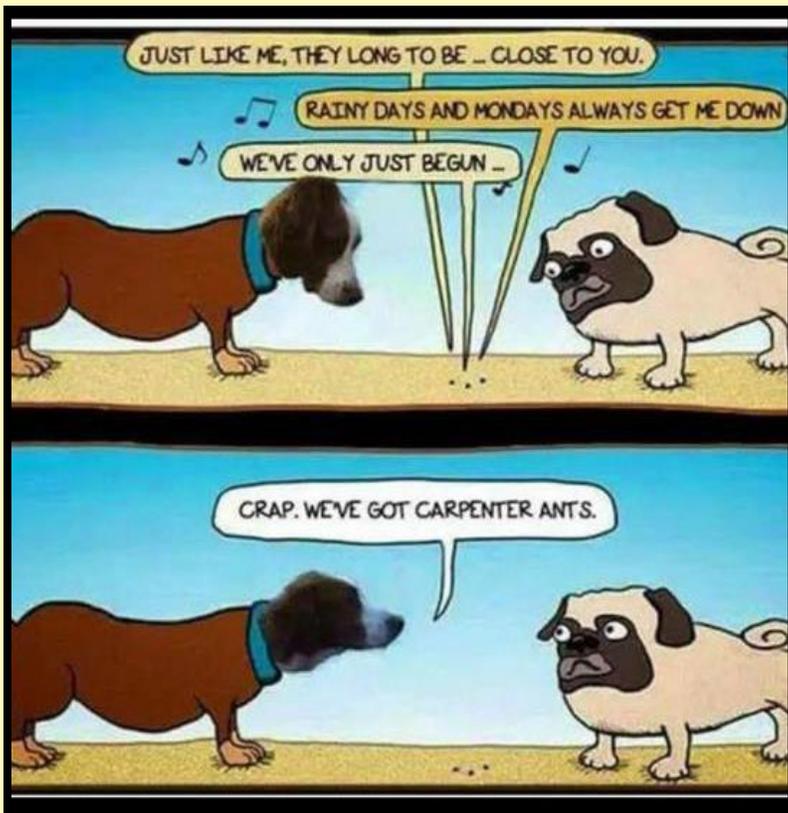
Damselflies of Texas is the first field guide dedicated specifically to the species found in Texas. It covers 77 of the 138 species of damselflies known in North America, making it a very useful guide for the entire United States. Each species account includes illustrations of as many forms (male, female, juvenile, mature, and color morphs) as possible, common and scientific names, with pronunciation, distribution map, key features, identifying characteristics, discussion of similar species, status in Texas, habitat, seasonality, and general comments.

In addition to photographing damselflies in the wild, the author and illustrator have developed a new process for illustrating each species by scanning preserved specimens and digitally painting them. The resulting illustrations show detail that is not visible in photographs. The book also contains chapters on damselfly anatomy, life history, conservation, names, and photography, as well as a list of species that may eventually be discovered in Texas, state and global conservation rankings, seasonality of all species in chronological order, and additional resources and publications on the identification of damselflies.

The Lighter Side



Thanks to Kim Farou



Thanks to Julie Gentry (Facebook)



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- New Class [Carol Hawkins](#)
- New Class Representative--Vacant
- State Representative [Carol Schwartz](#)
- Seabourne—[Jerry Trenta](#)

We're on the Web!

See us at:

<http://txmn.org/coastal>

SCNP Wetlands Dock Under Repair

I would turn back, if I were you! Rick Adams



Check out our Facebook Page at [TXMN Coastal Prairie Chapter Facebook](#)

To post photos and information, email [John Donaho](#)

Also, share our chapter Facebook entries with your friends on your Facebook Page



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1402 Band Rd
Extension Office
Rosenberg, TX 77471—8678
Phone: 281-633-7033

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