



HIGHLAND LAKES CHAPTER



## MISSION

The Texas Master Naturalist program is a natural resource-based volunteer training and development program sponsored statewide by Texas A&M AgriLife Extension and the Texas Parks and Wildlife Department.

The mission of the program is to develop a corps of well-informed volunteers who provide education, outreach, and service dedicated to the beneficial management of natural resources and natural areas within their communities for the state of Texas

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January 2013

Volume 4, Issue 1

## YEAR OF THE WATER SNAKE

BY LINDA O'NAN

What a great start to the new year at our January 2<sup>nd</sup> meeting! The celebration of the 10<sup>th</sup> HLMN anniversary was highlighted with Wade Hibler's always entertaining overview of the beginning of Highland Lakes Master Naturalists. I am always mindful and appreciative of the contributions of many of our charter members building this group, particularly past presidents Marvin Bloomquist and Bill Luedcke --scores of unlogged VS hours to get us where we are today! The festivities continued with a decorative table setting, courtesy of Fredi Franki and Sue Kersey, a fantastic cake (dragonfly adorned, of course), complimentary coffee from Starbucks, and Sue's iced tea. I could get used to this...thanks again, all, for a memorable event.

Speaking of events, January is off with a bang. Many in HLMN participated in the Christmas bird count and were rewarded (!!!) with a dusting of snow in some parts of the area. Sherry Bixler tells me this year was outstanding—more info about the bird count to come. Doris Mager's always popular "Birds of Prey" events were wildly successful—super attendance. Doris definitely lives life "growing bolder". I know we all aspire to have her enthusiasm and purpose



in life. Thanks to all the HLMN volunteers participating in these events.

I'm not a big Chinese horoscope follower, however, this year, 2013, is the "Year of the Water Snake"! Wouldn't you know, not my favorite critter in the big scheme of things. I'm trying to do better, learn more about them, not scream like a girl (okay, maybe that one time), kayak with my eyes open.... so would like more info on beneficial water snakes this year (any member want to do a program or field trip??) According to a recent fortune cookie (how do I footnote that info?), the snake is influential and insightful, uses humor to avoid confrontation, and always gets the last word. Sounds good to me!! So see you all soon. Can't wait.

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## FRIENDS OF THE UPPER HIGH-LAND LAKES NATURE CENTER (UHLNC)

by Billy Hutson

Well things are starting to warm up at the UHLNC as we begin to prepare for a memorial day event at RPR. I don't have all the details yet but the Nature Center will be a major part of it. We will be starting to develope new trails and fencing around nature mountain in the next week or so, depending on the weather and we have a lot of signed up volunteers to get the tasks done. Our goal is to have two satelitte buildings up by the middle of May so we can have some practice runs for all the public that will be coming.

We had an interesting and knowledgable speaker in our last meeting to discuss the various aspects of life here in the Burnet area with the native americans, Buchanan dam, etc! Did you know that the indians dined on wild cattle ever since the Spanish abandoned hundreds from their missions way before the white man arrived? Did you know that bison hides were used in the making of belts for water powered machinery before the electrification of the area? There was lots to learn and several members asked to have our speaker back on a more specific subject.

If you haven't paid your dues or joined the yahoo group, please do so so you aren't taken off the list of 131 members. Only 61 are on the yahoo site though so let me know if you need instructions.

It's gonna be a great year.

## FEBRUARY MEETING

by Pat Campbell

The February meeting will be on February 6 at 1:00 at the Marble Falls Methodist Church. Lunch before will be at Francescos at 11:30. Dave Scott, a skilled wildlife tracker and naturalist, will be the speaker. He will be exploring the science of bird feather identification. Learn to use feather shape and morphology, as well as color, to identify individual flight feathers found in the field. Whether you are an ornithologist, master birder, or you just enjoy spending time outdoors, this lecture will draw you in to a new and exciting facet of the natural world. He has co-authored a field guide, of which autographed copies will be for sale at the meeting.

## 10 YEAR ANNIVERSARY FOR OUR CHAPTER!

Photos by Jerry Stone

Charter members present: Linda O'Nan, Dave Skinner, Marvin Bloomquist, Judy Bloomquist, Bill Luedcke, Karen McCurley, Jim Cox, Darlene Ostermeyer, Ray Hufford, Ellis Winkler. Not present: Robert West, Jacquelyn May.

Marvin Bloomquist telling about putting that first class together



Dave Skinner speaking about the beginnings of the chapter



Karen McCurley provides her viewpoint



Wade Hibler with more tales



Bill Luedcke with his take



Linda O'Nan with more early chapter reflections.

## GALLERY



Pictures of Frostweed (*Verbesina virginica*) taken 12/11/12 in Horseshoe Bay by Jerry Stone



Yellow-throated warble on our porch!!!!

By Sue Kersey

## BELL'S VIREO (*VIREO BELLI*) AND IMPORTANT BIRD AREAS

By Sherry Bixler



The Bell's Vireo is one of three breeding bird species of special concern in the hill country, according to the National Audubon Society's state list (see previous articles about Painted Buntings and Chimney Swifts). The resident species Northern Bobwhite is also on the list. Species of concern are not considered endangered or threatened but their population numbers are edging downward or their habitat is threatened.

There are fifteen species of vireo in North America and the Bell's Vireo is one of the smallest. Vireos can be difficult to watch as they are quite active while feeding on small insects, larvae and berries. They build a compact nest suspended in a horizontal fork and lay 3 to 5 eggs. While they are a common cowbird host, they defend their nest when possible.

Bell's Vireos are found in the central part of the United States and southwest through New Mexico, Arizona and California during the breeding season. Other vireos found here are the Red-eyed, White-eyed, Warbling, Black-capped, Yellow-throated and, in winter, Blue-capped. Bell's Vireos sound much like

White-eyed Vireos but vireos can be differentiated by their size, wing-bars or lack of wing-bars, eye-stripe or spectacles, eye color and over-all color.

Important Bird Areas are chosen for their suitable habitat for any of the birds on the watch list and riparian areas along our lakes and rivers provide very good habitat for breeding birds. Accurate count date done over a three year period is vital when applying for IBA designation and this will be done at Inks Dam National Fish Hatchery and possibly at Inks Lake State Park. A message requesting volunteers will be sent out in March since the areas will be divided into several sections and should be counted weekly through the breeding season.

## DORIS MAGER AND HER BIRDS OF PREY

### From Sue Kersey

Doris Mager returned to Kingsland on January 3<sup>rd</sup> with her birds of prey program. 62 attended the program at the Kingsland Library and it was very well received. She showed her beloved "Cara" for the first time and told of her caracaras life and death. The program was sponsored by the Highland Lakes Master Naturalist at the Kingsland Library.

I asked Doris and she feels at least another 100 plus community folks attended her other programs at the Inks Lake State Park and other venues.

### From Joanne Fischer

The Eagle Lady and her Birds of Prey entertained at Blanco State Park.

Although the skies were overcast, the wind was blowing and the temperature hovered around 45 degrees, over 70 people showed up at the Pavilion at Blanco State Park on New Year's Day to "experience" the Eagle Lady and visit with her birds of prey.

Doris Mager, who founded the non-profit organization Save Our American Raptors (S.O.A.R.) is a nationally recognized raptor rehabilitator. On New Year's Day she entertained adults and children alike with her stories about saving and rehabilitating raptors, traveling the country with them and spending time doing what she loves best – sharing these marvelous specimens of nature with the public.

She educated the audience on the hunting habits, nesting habits, weight and digestive systems, flight patterns and wings, imprinting, and overall appearance and lifestyles of owls and hawks. She was accompanied by ET the Great Horned Owl, an Eastern Screech Owl and an American Kestrel (also known as a Sparrow Hawk – the smallest of the raptor kingdom).

Doris also made sure to point out the importance of never trying to make a raptor (even a baby that has fallen from a nest) into a pet. She stressed that whenever possible, try to return babies to the nest or a makeshift shelter until the adult parent birds are able to return and take care of the baby.

Doris' visit to Blanco State Park was jointly spon-

sored by Friends of Blanco State Park and by the Highland Lakes Chapter of Master Naturalists. Given that the audience remained throughout the presentation, asked questions afterwards, and got up-close and personal with the birds was a good indication that the event was worth braving the inclement weather conditions and enjoyed by all.

### From Phil Wyde

As you know, Doris Mager, the Eagle Lady, gave a number of presentations in our area. On the morning of Saturday, January 5th, she showed her birds and gave her talk in the very large "Shop Building" at the Inks Dam National Fish Hatchery. Although the temperature was cool, the day was beautiful. I think that this contributed to the good turnout that we got: 59 adults, 25 children and 22 first rate Highland Lakes Master Naturalists (HLMN) and Friends of Inks Dam National Fish Hatchery (FOIDNFH) volunteers. Doris and her birds were in top form. We heard and received nothing but the most laudatory comments about her, the birds and the entire presentation. Indeed, the event could be judged as very successful by a number of measurements: 1) Doris and her organization, SOAR, got a goodly number of donations; 2) she had good sales; 3) the attendees learned a lot about raptors, nature and conservation; and 4) the Inks Dam National Hatchery, the HLMN and FOIDNFH got a lot of good exposure and public relations. There was a lot of laughter, ooos and aaaahs, along with a number of memorable moments, during the event. The last mostly involved either the birds (e.g., E.T. flying) or the interaction of the birds with the children (see Fig. 1). I think most, if not all, of the children were simply awed. Thus, I think that it is not an overstatement to summarize Doris's Inks Dam National Fish Hatchery presentation as truly "awesome."



## THE HUMBLE SUNFISH?

by Phil Wyde

You often hear fresh water fishermen bragging about the big bass or catfish that they have caught. In contrast, with the exception of Kim Bacon or a fishing person 10 years old or under (see Fig. 2), you never hear anyone boast that they caught a sunfish. Certainly the Texas Parks and Wildlife Service does not rate them very highly; they classify sunfish as a “non-game fish” (i.e., any fish that is not listed as a sport fish or belongs to a threatened or endangered species<sup>1</sup>). However, I hope that all of you including the non-fishing contingent of our chapter read on because there are a number of interesting things about the humble sunfish that you probably do not know – but should. Moreover think about how impressed your grandchildren will be the next time that you take them fishing and you can wax eloquent about the fish that they very much love to catch. Even Ralph (Herter) and Billy (there is only one Billy) should read on. I know that I learned a lot pulling together the information that I am going to present. And those elite of you that also belong to the Friends of Inks Dam National Fish Hatchery – this is a must!

Before I start giving you information, I want you to know that I am sitting here imagining Sherry (there is only one Sherry), Sue Kersey, Joan Mukherjee and all of you other avian enthusiasts oooing and aaahing over the image shown in Fig. 1 of a male blue gill sunfish in full ardor during the mating season. Admit it; he is prettier than any male painted bunting at any time of the year!

Moving on, sunfish are in the animal kingdom, the phylum Chordata, the class Actinopterygii, the order Perciformes and the family Centrarchidae.<sup>2,3</sup> Bingo! This already brings us to the first thing that you probably do not know about sunfish: sunfish and BASS are very closely related! Yes, the Centrarchidae, or sunfish family, contains 27 fish species including rock bass, largemouth bass, small mouth bass, crappie, green



Figure 1. Blue Gill Sunfish (from Ref. 3)

sunfish, long ear sunfish, red ear sunfish, warmouth and blue gills. (See next page Fig. 3 for images and genus and species names of some of these.) Now Billy, Ralph and the rest of you tell the truth, did you know that the lowly, often disparaged sunfish (whatever species) was closely related to the esteemed large mouth and small mouth bass? (I will bring this point up again when we talk about killer largemouth bass virus.) Note that despite of the eminence of bass, in everything that I read they call the Centrarchidae the SUNFISH family and not the BASS family!



Figure 2. Youngster (Andrea Roach's son several years ago) satisfied with sunfish catch

Let's get something straight about naming right away. Although bass are in the sunfish “family,” anglers NEVER call bass sunfish. They are bass. Anglers call the small, compact species of fish in this family that readily fit in a frying pan (e.g., green, long ear, red ear, warmouth and blue gill sunfish) “sunfish.” (I will give a more scientific definition of sunfish below.) The latter subgroup is also called bream, brim and panfish. In short, names like bass, sunfish and brim are general classifications. Names like blue gill, long ear, largemouth bass and warmouth are specific (species) names. You might ask what difference it makes. Well, first off, try telling a game warden that you have 20 sunfish when you really

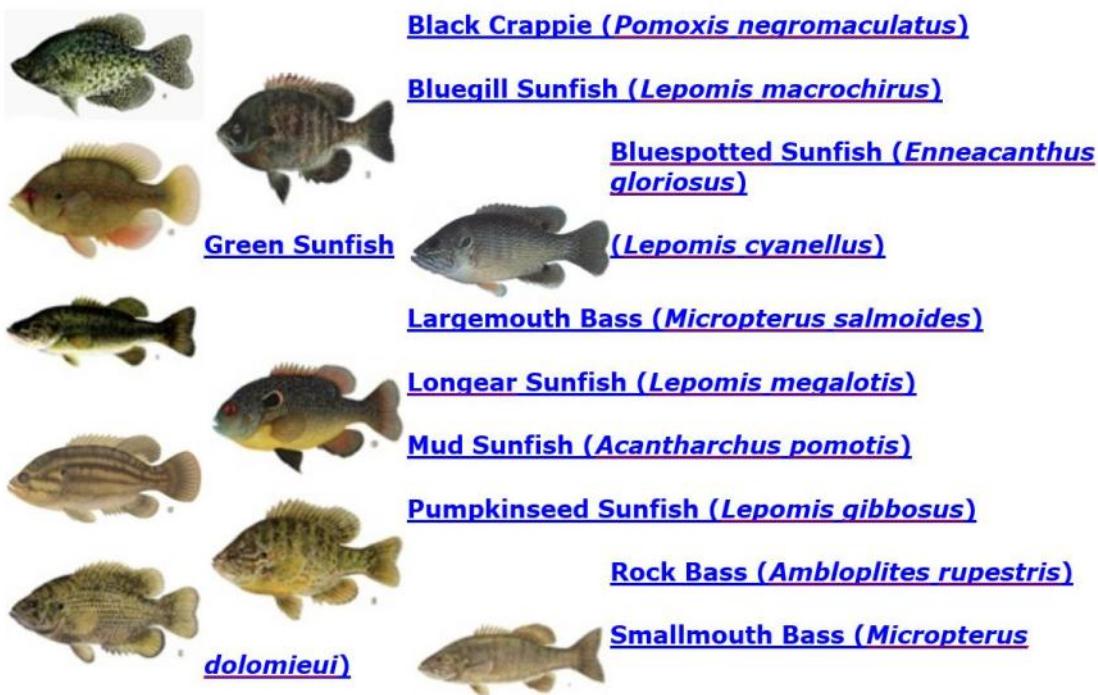


Fig. 3. Images and scientific names of some of the fish species in the fish family, Centrachidae.

have 20 bass and the daily bag limit is 5 bass/day. In addition, look at the image in Fig. 4 and see what happens when a fishing person catches a bass. That guy looks pretty smug doesn't he? (It is also obvious that that fisherman doesn't often catch a fish of that size.) Of course there are some fishing persons that don't even care if they catch a fish (Fig. 5).

Naturally Texans have made the naming situation worse. Almost all Texans know sunfish as "PERCH" and DON'T KNOW THAT THEY ARE REALLY SUNFISH! This makes a difference since there are perch that are REALLY perch! Luckily the real perch are not generally found in Texas. For those of you that have a problem with Latinized binomial names, I think that they are absolutely necessary because of TEXANS!!!!!!! Henceforth in this article, when I say sunfish, I mean the "little, pan-sized variety," (i.e., the species and not the family).

One of the major characteristic of fish in the fish family Centrarchidae is that they are all "ray-finned fishes";<sup>3,4</sup> that is they all have fins that consist of webs of skin supported by bony or horny spikes (seen in the images shown in Figures 1, 2, 3 and 6). These spines



Figure 4. Bass caught at Caddo Lake in 2012 by Billy Hutson



Figure 5. Examples of less serious fishing persons.

provide a good deal of protection. As you can imagine they are hard to swallow from behind when the fins containing bony spines are erect.

I will not go into a detailed description of each different species of sunfish. Let it suffice that most of



Fig. 6. Warmouth sunfish (*Lepomis gulosus*)

them have the general shape and relative size of the fish shown in Fig. 1 and the names of the different sunfish species generally allude to a distinguishing characteristic (e.g., green, long ear, red ear, red bellied and blue gill). To help you out, I will point out the distinguishing characteristic for the bluegill, probably the most common sunfish species in this area, and the warmouth. The bluegill is noted for the dark (black) spot that it has on the posterior edge of its gills (the spot is very evident a little behind the eye, and just posterior of the gills of the fish shown in Fig. 1). Now look at the mouth of the warmouth shown in Fig. 6 and compare this mouth with that of the bluegill shown in Fig. 1. (Not seen clearly in Fig. 6 are the impressive teeth of the warmouth). The mouth of the warmouth is obviously significantly larger than the mouth seen on the bluegill seen in Fig. 1. (Indeed it is much bigger than the mouths of all sunfish species). Because of its relatively large mouth and the presence of "prominent" teeth, you can imagine why this species is called a warmouth.

Regardless of some individual characteristics, all of the true sunfish have deep, flattened, laterally compressed bodies, a terminal mouth (oriented straight forward), prominent scales and a lateral line that is arched upward anteriorly [anteriorly.<sup>3</sup>] (If you look at Fig. 1, you can see a good lateral line. It is towards the

upper part of the body and runs all along the side of fish in this figure from just above the blue gill back to the tail. In this figure the lateral line separates the dark scales near the top of the fish in the image from the lighter scales on that fish's side). Sunfish can live up to 11 years, generally range from four to 12 inches long and reach a maximum size of just over 16 inches.<sup>3</sup> The largest bluegill ever caught was four pounds, 12 ounces in 1950.<sup>4</sup> Keep this fact in mind and then look at the image of the "average" bass caught by Billy last year at Caddo Lake (Fig. 4.). You should now realize why bass are esteemed and sunfish not.

Sunfish are native to North America. However, their distribution on this continent, as indicated in Figure 7, was not as widespread as it currently is. That is because sunfish have been introduced into new areas of the United States and elsewhere – where they have sometimes become quite invasive.<sup>4,6</sup> Quoting from Ref. 6, "Today they [bluegills] have been transported most everywhere else in North America, and have also been introduced into Europe, South Africa, Asia, South America, and Oceania. Bluegills have also been found in the Chesapeake Bay, indicating they can tolerate up to 1.8% salinity."<sup>[1]</sup> In some locations where they have been transplanted, they are considered pests: trade in the species is prohibited in Germany and Japan. In the case of Japan, bluegills were presented to the then-crown prince, Akihito in 1960 as a gift



Figure 7. Distribution of bluegill in North America (from Ref. 2)

by Richard J. Daley, mayor of Chicago. The prince, in turn, donated the fish to fishery research agencies in Japan, from which they escaped, becoming an invasive species which has wreaked havoc with native species, specifically in Lake Biwa in Shiga Prefecture. The emperor has since apologized.<sup>[2]</sup>"

Blue gill and other sunfish generally live in the shallow waters of lakes and ponds or in the slower flowing areas of streams and small rivers. Usually these locales have plants or some other type of cover (e.g., fallen logs) where the sunfish can find food, spawn or rest with some level of protection. Very interestingly, these fish usually have a very limited home range, i.e., about 320 square feet, during nonreproductive months. I was surprised to find out that "Bluegill are usually found in schools of 10 to 20 fish, and these schools will often include other sunfish, such as crappie, pumpkinseeds, and smallmouth bass." I never realized that they schooled in those numbers or with other fish.

All sunfish are carnivorous.<sup>3,4</sup> Younger individuals feed primarily on small invertebrates such as insects, rotifers, crustaceans, mollusks and water fleas. Older fish and larger species eat aquatic insect larvae (e.g., mayflies, caddisflies, dragonflies), crayfish, leeches, snails and smaller fish. I can testify that they are very fond of red wigglers and nightcrawler worms. When food is scarce, sunfish will also feed on aquatic vegetation – and if things are really tough, they will feed on their own eggs or offspring.<sup>4</sup> Of interest to those of you that favor artificial bait, sunfish will hit artificial lures, e.g., popping bugs and dry flies. Keep in mind that with the exception of the warmouth, they have small mouths.

How sunfish feed is interesting.<sup>7</sup> They use gill rakers and bands of small teeth to ingest their food. They are also voracious eaters. During summer months, bluegills can consume 35 percent of their body weight each week and up to six times their weight during a summer. To capture prey, bluegills use a suction system in which they accelerate water into their mouth. The food (i.e., prey) comes in with this water. However, since only a small amount of water is able to be suctioned in, the fish must get within 1.75 centimeters of the prey.<sup>7</sup> That is really close (2.5 centimeters to

an inch)! So do sunfish have any importance? You can see from what I typed above, it appears that they play an important role in pond and lake management by keeping crustaceans and insect populations in check. Also keep in mind that they serve as a food source for larger fish and such water birds as herons and egrets. (From what I told you above, you now know why these birds always eat these fish head first.)

Of course, we need to talk about the sex life of sunfish.<sup>4</sup> Spawning season for these fish usually starts in late May and continues through most of the summer. Peak spawning usually occurs when the water temperature is between 67 to 80°F. The males go to the mating site (usually in shallow water where there is sand or fine gravel) and make a spawning bed six to 12 inches in diameter. During this time these fish tend to be protective and will attack most anything that comes near their nest, especially other male sunfish. They have even been known to attack humans that approach too close. The ritual begins with male circling and making grunting noises when a female sunfish approaches. This circling and grunting appears to attract the females. Interestingly, size matters. Females usually pick males with larger bodies and "ears." If the female enters the nest, both the male and female will circle each other. If she stays, the pair will enter the nest, and several times touch bellies, quiver and spawn. When spawning is done, the male will chase the female off and then stay to guard the eggs. The entire fertilization process is external (i.e., the sperm combine with the eggs in the water). Smaller males will often hide in nearby weeds and dart into the nest to try and fertilize the eggs. One thousand to 100,000 eggs can be produced by a female depending upon her size and health. The male protects the nest until the larvae are able to hatch and swim away on their own. Bluegill generally can spawn at one year of age and can live up to 11 years.<sup>7</sup>

Look at the body shape and the number of different fins on the sunfish shown in Figs. 1 and 6. These help sunfish to both move fast and change directions quickly. For example, the pectoral fins help control the direction of movement when moving forward. They also help the sunfish to decelerate quickly. (See Fig. 7 for identification of fin types.) Another example

is the notched caudal fin. This promotes quick acceleration of the fish. The sunfish's flat, slender body reduces water resistance and allows it to slice efficiently through water. This maneuverability enables bluegill and other sunfish to successfully catch prey as well as elude predators (e.g., blue catfish and large and small mouth bass).

These fish have other mechanisms to help them catch prey and elude predators. For example they have a lateral line system, as well as inner ears, that act as receptors for vibration and pressure changes. Thus they can sense the presence of approaching prey or predators. However, bluegill and other sunfish mostly use sight when searching for food and avoiding predators. Of course sight is less effective at night. Note that although sunfish have the ability to make short, swift movements with frequent turns, they do not readily cruise or go long distances in the water.

This brings me to the subject of largemouth bass virus (LMBV).<sup>8</sup> The virus belongs to Iridovirus family

Hatchery). The spectrum of LMBV induced disease in largemouth bass ranges from unapparent disease to death. In those cases where the virus infection has lead to death, before dying the fish are found near the surface, often with a bloated appearance and they often have trouble swimming. However, the dying fish do stay upright. This behavior is apparently due to the fact that LMBV seems to infect the swim bladder causing bass to lose their buoyancy. Sores may appear on some fish but these are caused by secondary bacterial or fungal infections.

Researchers have determined that LMBV can infect other bass and sunfish species, as well as trout.<sup>8</sup> However; to date this virus has proven to cause fatal disease only in largemouth bass. Other members of the sunfish family found to be susceptible to LMBV include smallmouth bass, spotted bass, Suwanee bass, bluegill, redbreast sunfish, white crappie, and black crappie. Maybe more disturbing, amphibians and reptiles MAY also be carriers of LMBV. How can one control the virus, especially to keep it out of a hatchery facility such as Inks Dam National Fish Hatchery, if this is true?! Because of the popularity of largemouth bass, many state and federal agencies, universities (including Texas A&M), and private interest groups are working hard to learn more about the virus.<sup>7</sup>

Here is something just for Hollis. (I am checking to see if she will read to the end.) The bluegill has 39 to 44 lateral line scales, its dorsal fin contains 9 to 11 spines and 10 to 12 soft rays. Its anal fin has 3 spines and 10 to 12 rays. ("Lateral-line scales are counted along the lateral line starting from the scale just behind the upper end of the gill opening to the base of the caudal fin. [The base of the caudal fin is determined by bending the caudal fin from side to side.] Longitudinal scales may be used for fishes lacking pores on mid-lateral scales, and longitudinal scales are counted from the scale just behind the upper end of the gill opening to the base of the caudal fin."<sup>9</sup>)

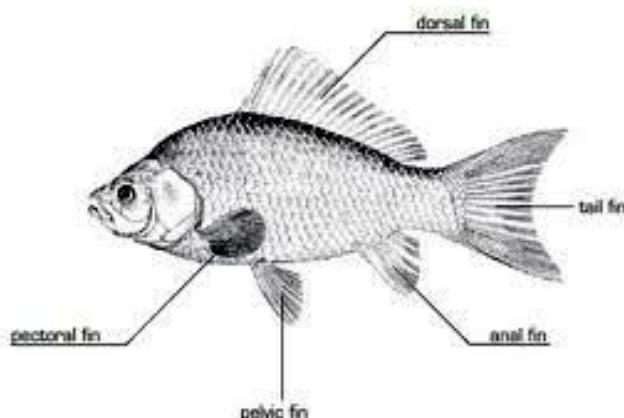


Figure 8. Major fins of fish

of viruses and the virus genus Ranavirus. As the genus name suggests, LMBV is related to a virus found in frogs and other amphibians. Although a number of different fish species can be infected by LMBV, it produces overt disease only in largemouth bass. It is not certain how the virus is transmitted and there is no known cure or preventative. The virus has been found throughout the southeast United States and as far west as Texas (including Inks Dam National Fish

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By Lyn Davis



## WHERE'S YOUR BOTTLES?

Please save and/or collect your **glass** containers and bring to the HLMN meeting on Wednesday, February 6. We are not close to 100% participation. Why are you not being a part of this drive???? An empty bottle is of no use to you.....dispose of it properly.

## RED ADMIRAL BUTTERFLY

By Kay Zagst

If you're a gardener and nature nerd like me, the winter can be a little blue. But during these drab, gray months, I've discovered a simple way to keep a touch of spring around—attract red admiral butterflies!

Outside our kitchen window, we have two flowerpot hangers on posts, upon which we have placed a black plastic plate and a glazed ceramic dish. In those dishes, I put some unpeeled, overripe bananas which I've poked with holes in a zig zag pattern using a fork. Every few days, I set out new bananas.

On a slightly warm day, the red admirals flock to the bananas. They bask in the sunshine on the post, and—with their red “epaulet” band that gives them their characteristic name—they look lovely, adding color and movement to a dull winter day.

The red admiral (*Vanessa atalanta*) is a common butterfly throughout North America. According to the *Field Guide to Butterflies of North American* (Brock and Kaufman), the red admiral is common throughout the summer and at least one other season in all of the lower United States and northern Mexico.

Red admirals are in the brushfoot family, which includes many familiar butterflies. This family includes our famous monarch and queen butterflies; the emperor butterflies, such as the hackberry and tawny emperor; the American snout; leafwing butterflies, including the goatweed leafwing; buckeyes, including the common buckeye; the ladies, both American and painted; and the commas, including the question mark. All of the above mentioned butterflies can be found in our part of Central Texas.

Since the red admiral is an easy butterfly to identify, you'll impress your non-natured oriented friends when you quickly declare with authority, “That's a red admiral.” The red admiral is between 1.8 and 2.5 inches and is a soft velvety black on the top (known as “above,” which is the view of the butterfly when the wings are open) with the fiery red-orange “epaulets” previously mentioned about half way through the fore or top wing at a diagonal across the tip. Past the “slash” and out at the tip of the forewing are white spots. The lower, or hind, wing is a brown-blue color-



Red Admiral Butterfly

Photo by Kenneth Dwain Harrelson (Indiana) @ en.wikipedia

ing with a band on the edge that runs from pale buffy-orange band to the same fiery red-orange of the diagonal forewing slash.

When the red admiral is sitting with its wings folded, the lower wing looks like a swirl of brown and cream resembling chocolate ice cream with vanilla ice cream “swirled” or marbled in. The forewing shows the end of the red-orange band along with two faint blue lines, a white wavy line and finally a white dot.

According to Brock and Kaufman, males “hilltop” in the late afternoon and early evenings, where they will set up a territory on a small rise or hill and wait for females to come by. The males will also set up territories in back yards and clearings. Red admirals, particularly the males, are aggressive, darting out at almost anything that crosses their territory, even humans. At our home, I've watched red admirals compete with honey bees for the “bee syrup” I've put out. They'll fight off the bees with a quick flap of their wings and pugnaciously stay on the syrup and refuse to give up their spot!

Of course, if you want butterflies to come to your yard and stay longer, be sure to provide the females with their preferred host plant for laying eggs. According to Jeff Keverline, a member of the Austin Butterfly Forum, the two preferred plants in Central Texas are Pennsylvania pellitory (*Parietaria pensylvanica*) and

heartleaf nettle (*Urtica chamaedryoides*).

Pellitory, also known as cucumber plant because it smells like a cucumber, is a small annual herb found in 48 states and the District of Columbia. If you are weeding your beds on one of our lovely 70 degree winter days, you might find this little forb just starting to grow in the shade of the other plants. We did—in the asparagus bed—just recently.

Heartleaf nettle is also an annual herb found generally in the southern Plains states and the southeast. In *Butterfly Gardening for the South*, author Geyata Ajilvsgi has a subsection titled “Adopt a Weed.”

“A patch of Nettles (*Urtica spp.*) may not be what you want growing up front among the Zinnias (*Zinnia spp.*)”, Ajilvsgi writes, “but a healthy stand of it at the back of the border and out of harm’s way will ensure you of many generations of Red Admirals. Just cultivate



Heartleaf nettle

Photo by Robert L. Stone @ Lady Bird Johnson Wildflower Center

the attitude of mind that Nettles are not really weeds but future butterflies.”

Keverline says that both species of plants like shady areas under live oak trees, Ashe junipers and other evergreens. They are cool season plants which grow in the fall and winter and will mature and set seed in late spring. If you wish to collect the seeds of the nettle, Keverline says it's easy to shake the stalk into a large paper bag, but be sure to use gloves when handling the nettle since it will sting. Scatter the seeds in a shady area, and the red admirals will use the plants to lay their eggs in the spring.

Give yourself a bright spot for the wintertime. Put out some bananas close to a window and start enjoying the nautical leaders of the butterfly world—red admirals!



Red Admiral butterflies on two bananas in different stages of ripeness. Note the goatweed leafwing butterfly at the far end of the yellow banana.

Photo by Kay Zagst



Pennsylvania pellitory

Photo by Kay Zagst

**JANUARY - FEBRUARY EVENTS & VOLUNTEER OPPORTUNITIES**

Highland Lakes NPSOT Monthly Meeting - Westcave Preserve Plants and Animals Marble Falls Library	Jan 19th 1pm
Sparrowfest Balcones Canyonlands National Wildlife Refuge - Flying X Ranch	Feb 2 7am
TPWD Hummingbird and Hummingbird Garden Workshop - North Texas John Bunker Sands Wetland Center, Seogoville, TX	Jan 19
Whoopers and Hummers Workshop Cleburne, TX	Feb 6 9am-4pm

**FUTURE EVENTS & VOLUNTEER OPPORTUNITIES**

TPWD Becoming an Outdoors Woman (BOW) Brownwood, TX <a href="http://www.tpwd.state.tx.us/learning/bow/schedule.phtml">http://www.tpwd.state.tx.us/learning/bow/schedule.phtml</a>	Mar 22-24
Wings over the Hills Nature Festival Fredericksburg, Texas	Apr 26-28
13th Annual Songbird Festival Balcones Canyonlands National Wildlife Refuge	Apr 26-29
13th Annual Songbird Festival Fledgling Fest Balcones Canyonlands National Wildlife Refuge	Apr 28

For volunteer opportunities and events scheduled at Inks Lake State Park, Blanco State Park, and Balcones Canyonlands, Balcones Canyonlands Preserve, check these websites for information:

<http://www.tpwd.state.tx.us/state-parks/inks-lake>

<http://www.tpwd.state.tx.us/state-parks/blanco>

<http://www.tpwd.state.tx.us/state-parks/inks-lake> <http://www.fws.gov/southwest/refuges/texas/balcones/>

<http://friendsofbalcones.org/>

<http://www.ci.austin.tx.us/water/wildland/onlineregistration/ecowebevents.cfm>

Please submit pictures, articles, reports, stories, calendar and event entries, etc. to [chili865@gmail.com](mailto:chili865@gmail.com). Photos should have captions and appropriate credits. The deadline for submissions to each month's newsletter is the 10th of the month and publication will be by the 15th.