



Highland Lakes Steward

May 2012

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MISSION

The Texas Master Naturalist program is a natural resource-based volunteer training and development program sponsored statewide by Texas 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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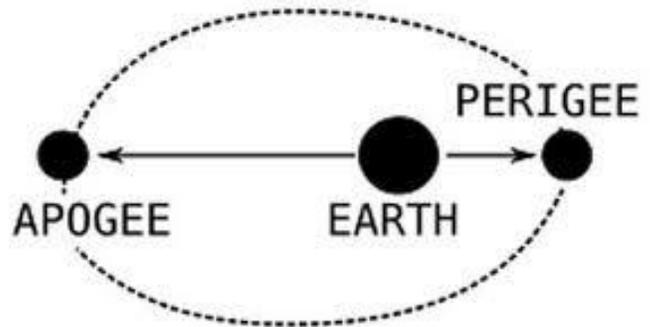
WE JUST HAD A FULL MOON MAY 6TH

By Fredi Franki

We just had a full Moon on May 6. Did you notice how bright it appeared, especially on the horizon? Journalists referred to it as a “Super Moon”, not a scientific term but first used in 1979 by the media. A Super Moon appears ten to fifteen percent brighter than normal. The Moon was in perigee on May 6 which means it was at the point closest to earth during its orbit. The Moon has an elliptical orbit around the Earth and the Earth is not in the center of that orbit.



The Moon orbits the Earth every 28 days and so it is in perigee once every month. However, the dates of the Moon’s phases change each month. A Super Moon occurs when the full Moon and perigee are on the same day, which happens about once a year. The next Super Moon will be June of 2013.



Apogee is when the Moon is furthest from Earth. The full Moon on November 28 this year will be in apogee. We know the Moon affects the tides and yes, a perigee Moon makes the tides higher than normal. An apogee Moon means there is less of a difference between high and low tide. For comparison the perigee position on May 6 was 221,822 miles

2012 to date

| DATE OF FULL MOON | DATE OF PERIGEE |
|-------------------|-----------------|
| Jan 9 | Jan 17 |
| Feb 7 | Feb 11 |
| March 8 | March 10 |
| April 6 | April 7 |
| May 6 | May 6 |

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JUNE MEETING

by Linda O'nan

Join us Wednesday, June 6, at the Kingsland Library at 1 pm for our regular monthly meeting. HLMN members Sherry Bixler & Marvin Bloomquist will present an informative and enjoyable program on dragonflies. Join us early for lunch at Gattis' Pizza in Kingsland at 11:30.

Nature Center News

by Billy Hutson

It's been a good month for the nature center with a great family day event for the Marble Falls Rotary Club Sunday afternoon on the 6th. They were treated to a BBQ lunch, swimming, fishing and a trip to the top of the highest peak. It was too hot to entice them to take an interpretive hike but several stayed to get nature information from our volunteers. Their president mentioned after the visit that they had some ideas of how to further the cause of the NC and since visiting have a new idea. They will be in touch soon. Thanks to volunteers Phil, Sherry and Jerry Stacy for the great job done. Two kids out fished Phil and taught him a thing or two about fishing.

We purchased a silo from the Buckelew family and were able to dismantle the roof after 4.5 hours of work by 5 friends and were rained out of finishing the sides on the 8th of May. (But we sure like the rain). It is being rescheduled and should be complete and moved to RPR this month before it gets too hot.

A new short trail is in the works that will start at the NC and make a loop. It will feature native flora and the geological features on one path. The entrance design on the road is in the works and should look pretty good by now if it doesn't get rained out also.

New business cards are being printed for anyone of the friends that would like to have some to pass out to interested people. And the beat goes on!!!

FULL MOON*(Continued from page 1)*

from Earth to the Moon. On November 28 the distance will be 252,522 miles, a difference of 30,700 miles. The measurements vary slightly from month to month because everything in the Universe is in motion at all times.

Other Lunar Lore

What is a Blue Moon? When two full Moons occur in the same calendar month, the second Moon is called a Blue Moon although it is not actually blue. August 2012 will have a full Moon on the 2nd and the 31st. Most Blue Moons occur in January and March because February is a short month. A Hunter's Moon or Harvest Moon is the full Moon nearest the autumnal equinox. At that time of year there is a shorter period between sunset and moonrise in the northern hemisphere giving hunters and harvesters plenty of light to complete their tasks. In 2012, the autumnal equinox is September 22 and the closest full Moon is on September 29. Watch for this beautiful Harvest Moon.

**ALL MASTER NATURALISTS AND THEIR
GUEST ARE INVITED TO COME CELEBRATE
WITH THE GRADUATES OF THE 2012 TRAINING PROGRAM**

IT'S A PIZZA PARTY!

WHEN: SUNDAY MAY 27

WHERE: REVIELLE PEAK RANCH

TIME: SOCIAL HOUR BEGINNING 4:30 P. M.

DINNER SERVED 5:30 P. M.

DRESS IS CASUAL.

COME EARLY AND/OR STAY LATE; TAKE A HIKE IF YOU WISH!

**PLEASE BRING EITHER AN UNCOOKED PIZZA FROM PAPA
MURPHY'S OR A DESSERT AND YOUR CHOICE OF
BEVERAGE.**

ADULT BEVERAGES ALLOWED.

PLEASE RSVP TO SAMMYE CHILDERS

sammyenmike@yahoo.com 830.693.5061

BY WEDNESDAY, MAY 23, IF YOU PLAN TO ATTEND.

PLEASE INDICATE IF YOU ARE BRINGING

A PIZZA OR A DESSERT.

IF YOU WISH, I CAN ORDER YOUR PIZZA AND YOU CAN

REIMBURSE ME AT THE PARTY.

HOPE TO SEE YOU THERE!!

TALES OF YELLOW “BYTRAILIA”

by Jerry Stone

While hiking on Slickrock Creek Trail in Horseshoe Bay, I spied an unusual flower. It was yellow with three petals. I didn't remember seeing one in Enquist's book so I took several photos. For years it has been a joke that when Joan and I come upon some of the many species of yellow flowers that we can't actually remember the names of, we just always call them Yellow Bytrailia. So upon returning home I was anxious to put a more scientific label on this unusual yellow bytrailia. So I searched our reference books and the internet with absolutely no luck. By now I was beginning to think I had real discovery on my hands and was thinking of naming my new flower Three-petal Stonium, in my honor of course.

I thought I had better bring in the big guns before I got too far in the naming business, so I sent a copy of the photo to Marvin Bloomquist. Marvin indicated that it looked a little like a Lindheimer Daisy or Texas Star (*Lindheimera texana*), but he had never seen one with three petals. So he forwarded the photo to Joe Marcus of the Lady Bird Johnson Wildflower Center.

Joe replied that our mystery plant was a fairly common variation of *Lindheimera texana*. Well so much for having a plant named after me, I hadn't even found an “uncommon” variation.

Well, attached for those who haven't spied their own three-petal Texas Star here is a copy of my photo along with the 5 petal version.

While also hiking at Slickrock Creek on 4/21, I took a picture of another yellow bytrailia. Again I had difficulty identifying it upon returning home. It looked somewhat like sneezeweed (*Helenium quadridentatum*) in Enquist's book with the exception that my flower had no red at the base of the petals, as you can see in the picture to the left. While looking in the *Wildflowers of Texas* book it looked just like purple-head sneezeweed (*Helenium flexuosum*). The problem was the book indicated that purple-head sneezeweed doesn't exist in the hill country and resides mainly in East Texas.

Again I consulted Marvin and he indicated that he had seen a similar plant on his place in 2007 and he thought it must be a variation of *Helenium quadridentatum*.

On 5/4, I went back to the trail and found the same plant(this particular sneezeweed plant was almost 6 feet tall, so it was easy to spot) and took the second picture that is attached. As you can see the all yellow petals now have the red at the base. So Marvin was correct it was *Helenium quadridentatum* or sneezeweed. I find it fascinating that the petals seem to start all yellow and add the red as they mature.

(Continued on next page)



Lastly while at the Slickrock trail, I spied my third yellow bytrailia. By the way, not all of the ubiquitous yellow flowers are yellow bytrailia, some are yellow byroadia. A picture of this flower is attached. It has yellow petals but the outer half of the petals are white. Luckily, there were other all yellow flowers of the species on a nearby plant and an image of those flowers is attached. I could fairly easily identify the all yellow flower as being Slender-Leaf Hymenoxys (*hymenoxys linearifolia*) in Marshall Enquist's book "Wildflowers of the Texas Hill Country". I did a web search and discovered that the plant is more com-

monly called Fournerved Daisy and has a second latin name of *Tetraneuris linearifolia*. A web search of *Tetraneuris linearifolia* produced the explanation of the "fading" seen on the first image. I learned that this plant has a phase where as their flower heads go to seed and begin to dry out, the central disk bulges upward into a hemisphere. At the same time, the surrounding rays fade to white and turn downward and typically fold in against the flower head. The third picture in this set shows the flower with all white petals completely folded in.



GOATSUCKERS (*Caprimugidae; Chordeilinae*) AND CRYPTIC COLORATION IN BIRDS

By Sherry Bixler

Goatsuckers were mistakenly named because of the belief that they took milk from goats. Nighthawks, nightjars, poor-wills and pauraques belong to the goatsucker family although new scientific discoveries may divide them further. They are usually nocturnal or crepuscular and catch insects with their wide mouths. Some will fly in daytime if the sky is overcast following a rain.

There are 89 species worldwide and four of the six common North American species can be found in the hill country. The Lesser and Common Nighthawks, Common Poor-will and Chuck-will's widow are summer species while the Common Pauraque is seen in south Texas and the Whip-poor-will occurs both east and west of central Texas (some range maps indicate that the Whip-poor-will occurs here occasionally. Rarely, Antillean Nighthawks are reported in the Florida Keys and Buff-collared Nighthawks are occasional visitors to southern New Mexico and southern Arizona.



Nighthawk



Chuck-will's-widow

These birds roost quietly along horizontal limbs or on the ground in daytime and blend well with their surroundings. In flight, the nighthawks can be identified by the large white bar on their wings. Other goatsuckers are rarely seen in flight since they fly close to the ground, but are often heard and can be identified by their calls, which sound like their names.

North American goatsuckers range in size from 8

inches to 12 inches; all have long wings, large heads and short, weak legs. These birds do not build nests but lay their eggs on dead leaves or gravel. While their main diet is insects, the Chuck-will's widow may occasionally eat small birds.

Oddly, the Whip-poor-will was not recognized as a separate species until the early 1800's because observers did not see them and thought the call was a variation of the call of the nighthawk. The Whip-poor-will also has a rare talent in that it times its reproductive cycle with the moon, ensuring that there is a full moon when the chicks hatch and making it easier for the parents to catch insects for them at that crucial time.

Some of the goatsuckers can drink while in flight by hovering over water with their mouths open. None of them walk or hop on their weak legs – they are always either flying or roosting or on a nest.

Goatsuckers have cryptic coloration that serves them well as camouflage. Cryptic coloration occurs in many ground-nesting birds and is not the same as cryptic species; these are species that look alike but are genetically different. Scientists are still trying to understand why some bird species have cryptic coloring while others flaunt neon colors that draw attention to them. Many birds blend so well with their chosen habitat that predators regularly overlook them, as do birdwatchers!

SNIPPETS ABOUT MUSSELS AND OTHER BIVALVE MOLUSKS

By Phil Wyde



Figure 1 Freshwater mussels (Taken from <http://people.cst.cmich.edu/>)

At this year's Great Outdoors Program I helped out at the Lake Ecology Station. As each class passed through, Jerry Stacy showed the children several mussel shells taken from the exposed lake bottom of Lake Buchanan and asked them what kind of animal used to live in these shells. Not unexpectedly, the children almost invariably guessed that the shells were from clams. After watching this routine a number of times I realized that I did not know what differentiates clams from mussels. I began asking my fellow volunteers if they knew and soon came to understand that I was not the only person with this deficiency. Once I started doing research on these animals, I found out that there were a lot of things about bivalves and mollusks that I did not know.

One of the first things that I found out about mussels is that they are found worldwide. However, the United States has more mussel species than any other place in the world. (In fact 304 of the 1000 known mussel species live in U.S. waters.) Within the United States, the most abundant sources of mussels are the

Ohio, Tennessee, Cumberland and Mobile Rivers. The Mississippi River has 49 species of mussels (but only 4 species of clams). The inland waters of Texas have a number of mussel species, just not as many as the areas just named.

Next I learned that despite the invasive and destructive nature of the most notorious mussel species in the United States, the zebra mussel, most mussels are actually beneficial. Through their siphoning activity (which they use when eating and excreting), mussels filter bacteria, algae, and other small particles. Thus, mussels are one of the few animals that improve water quality. They also serve as a food source for many species of fish, reptiles, birds, and mammals – including man. Mussel beds and the shells of mussels also often provide a place for aquatic insects and plants (e.g., algae) to hide and live. Even after a mussel dies, its shell can be beneficial. For example it can still harbor insects and algae, and if open even partially, provide a hiding place or nesting site for small fish.

Before going on, I need to make sure that you

know that mussels and their close biologic relatives, clams and oysters are all mollusks and bivalves. Thus, all 9,200 species of clams, mussels and oysters are grouped within the phylum *Mollusca* into the animal class, *Bivalvia* (www.answer.com). The name *Bivalvia* gives away one of the main characteristics common to all clams, mussels and oysters: they all have two mirror-image shell halves -- also called valves. The shell halves are held together (i.e., are joined) on one edge by a ligament and interlocking "teeth" which can be found on each of the two valves. The ligament and interlocking teeth together are known as the "hinge." This arrangement is very important to bivalves. When endangered, the two valves can be closed tightly to provide a protective armor.

The second major characteristic that all clams, mussels and oysters -- and for that matter all mollusks -- have in common is that all of them are soft tissue, invertebrates (www.answer.com). In English, that means that no mollusk has a skeleton or backbone.

Before getting back to bivalves specifically, I would like to tell you some interesting facts about mollusks in general. There are about 85,000 species that belong to this phylum (<http://en.wikipedia.org/wiki/Mollusca>), and they are very varied. For example, in this group are seemingly mindless worms (both segmented annelids and flat worms) as well as highly neurologically advanced and intelligent cephalopods (squids, nautilus, cuttlefish and octopus). Also in the phylum are very small gastropods (e.g., snails and slugs) and giant and colossal squids. Their habitats are equally divergent. They can be found in freshwater, salt water and in countless different terrestrial habitats. As you might guess from these statements, the shapes and physiologies of this group also varies substantially. For example, scallops have numerous eyes, octopi and squids have excellent eyes, and clams, mussels and oysters have no eyes.

Getting back to bivalves, all of them are filter feeders. They take in water through an incurrent siphon, filter out plankton, phytoplankton and digestible debris with their gills, and then sweep this material towards their mouth on a layer of mucus. The water is then expelled from the animal using an excurrent siphon. (This is the first time that I have ever heard of gills being used for something other than obtaining oxygen.)

Some bivalves are sedentary, attaching themselves to a substrate (oysters and mussels), some burrow and move around on the bottom (clams) and a few can swim (e.g., scallops; the latter also differ from clams, mussels and oysters in that they have eyes ([http://](http://www.clovegarden.com/ingred/seabival.html)

www.clovegarden.com/ingred/seabival.html). In general clams live under sand, while mussels and oysters often cling to hard surfaces such as rocks and reefs. The mussels and clams are both mostly symmetrical (i.e., have shells that are similar in shape), while oysters have a cupped bottom shell and a flatter upper shell. Oysters differ from clams and mussels in that they have a somewhat smooth shell, live primarily in salt water and attach themselves to one spot for most of their lives (www.reference.com). Mussels live predominantly in fresh water and have a little mobility. Clams are very smooth and have shiny shells and can live in salt or fresh water. Clams and mussels also have a "foot" on which they can use to "travel." Travel in this case means very short distances.

As you come to this point, I hope that you feel what I feel: somewhat frustrated and disappointed. I was hoping that I could find some easy characteristic that I could use to differentiate between clams and mussels (for example, habitat, shell shape, mobility). No such luck with phrases like "in general," "often," "mostly," "somewhat," "most," "predominantly," and "little." Nothing discussed to this point can be used to allow one to definitively differentiate these bivalves! All we can say is that if you find a bivalve in fresh water, it is likely to be a mussel, since they predominate there (remember the example of the Mississippi River above, 49 species of mussels to 4 species of clams). You can also be pretty sure that if you find a bivalve in salt water that it is a clam or an oyster, and not a mussel.

It turns out that there is a clear cut characteristic that does separate mussels and clams. However, before telling you about this characteristic I would like to hold you in suspense, take one moment to stray from our true subject and discuss the swimming habits of scallops. (It is just too interesting to not tell you.) Most of the time scallops just lie on the sandy or muddy sea floor with their shells slightly open, filter-feeding. But when danger approaches (remember that scallops have eyes); e.g., if an octopus or starfish comes near, they can contract a powerful muscle that pulls their shells together, shoot out water and move "quickly" forward in the water. I think the term "quickly" is relative to the speed that other bivalves move. Regardless, although I can see how this mechanism of escape could work against a slow moving starfish, I cannot picture it being much use against an octopus.

Back to mussels and clams and the major difference between them: mussels unlike clams require a host for

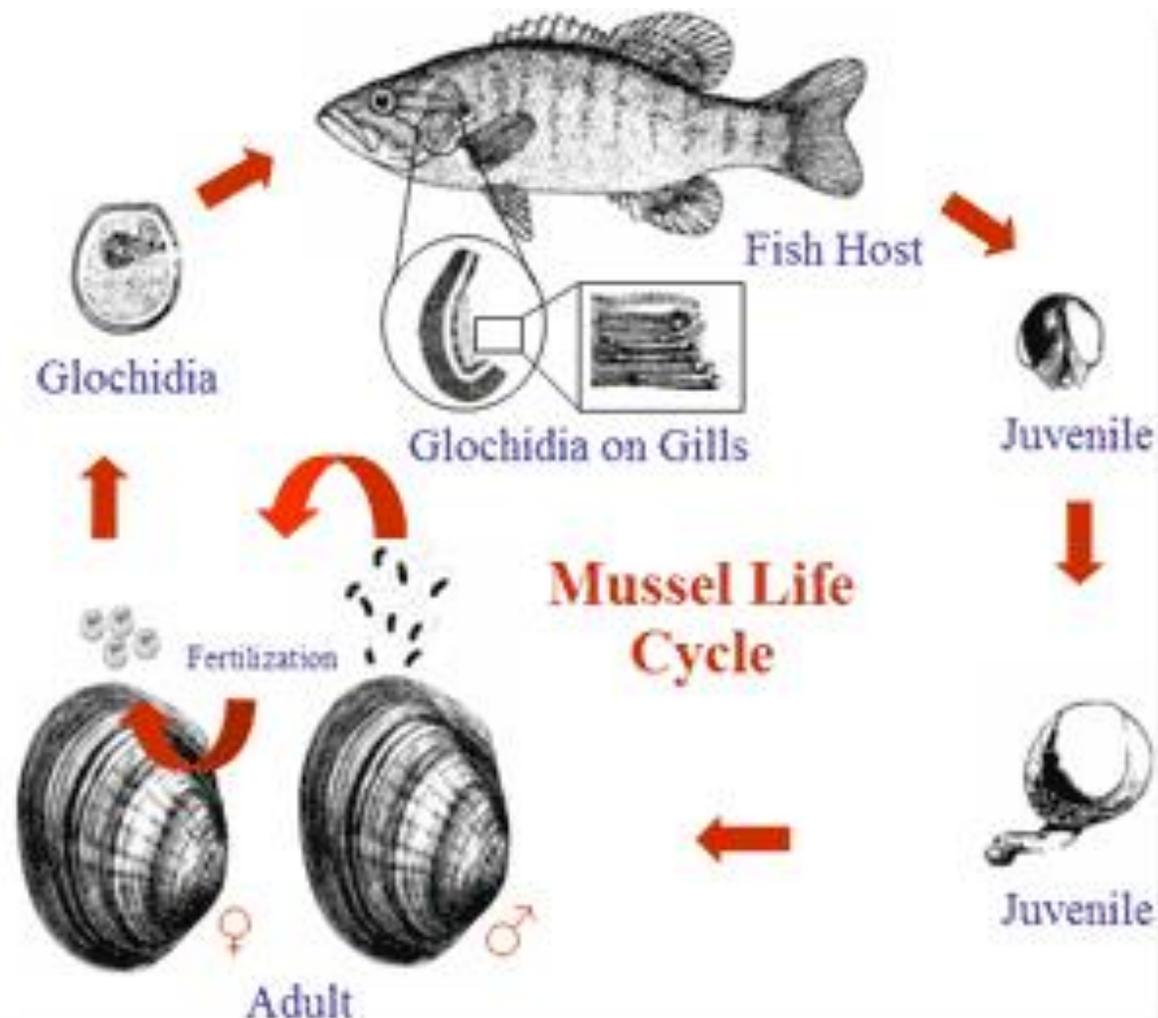
glochidia development (<http://dnr.wi.gov/org/gmu/mississippi/-pdf%20files/pdf%20files/mussels/Life%20Cycle%20of%20a%20Feshwater%20Mussel.pdf>). But good luck on making use of this fact! As you will very shortly see, the average person will not see glochidia.

This brings us to the life cycle and sex lives of bivalve mollusks. (Be still Cindy Sterling's heart!) I will present a generalized version since the life cycles and sex lives of bivalve mollusks are somewhat complex – and there are variations between species. However, despite my making light of it, you really do want to know about the sex lives and life cycles of bivalves since 1) you will find out what glochidia are; and 2) once you get an idea of the complexity of their replicative cycles you should also get the idea that this could be where bivalves are most vulnerable. (In general, most animals with complex replication cycles are more susceptible to destruction and extinction than animals with simple replication cycles. There are exceptions.

For example, it is the very complex life cycle of the malaria parasite that makes it so difficult to make an efficacious malaria vaccine that could lead to the elimination of malaria.

I am going to use for my example of a generalized life cycle of bivalve mollusks the life cycle of a freshwater mussel (taken verbatim from “Exploration of the Mississippi River,” by Jeff Jarvrin, Wisconsin DNR as presented on the WEB site (<http://dnr.wi.gov/org/gmu/mississippi/pdf%20files/pdf%20files/mussels/Life%20Cycle%20of%20a%20Feshwater%20Mussel.pdf>; see diagram below). The accompanying paragraph below is loaded with interesting biologic information.

“The life cycle of a freshwater mussel is quite complex. Fertilized eggs (most species of mussels reproduce sexually) develop into **larvae**, called **glochidia**, in the **marsupium** of the female mussels. Glochidia, when released from the female, must come in contact with a passing fish and attach to the gills, fins or body



of that fish. During this parasitic stage, the mussel glochidia are harmless to their fish host. The mussel-host fish relations helps disperse a basically immobile creature (the mussel), within and between aquatic systems. Many mussels are “host specific” in that their glochidia can only survive on a specific species of fish. If a glochidium attaches to a fish that is not the species it is looking for, it will not survive. After a few days to several weeks, the glochidia free themselves from the host, drift to the **substrate** and begin their lives as juvenile mussels. Quite often, mussels are concentrated in certain areas of the river bottom called **mussel beds**. Mussel beds are often located in areas inhabited by a wide variety of fish species. The areas frequented by fish tend to accumulate higher number of glochidia and eventually a mussel bed develops. It may take several years (2-9) before juveniles mature and can reproduce as an adult. Adults may live 60-70 years if conditions are right. However, studies have documented that it is not uncommon for some species of mussels to successfully reproduce only once out of seven or more years.”

Just in case you did not get what I mean by PACKED WITH INTERESTING BIOLOGIC INFORMATION, I am going specifically repeat what should POSITIVELY MAKE YOU SCINTILATE IF YOU HAVE ANY BIOLOGIC CURIOSITY AT ALL: 1) mussels reproduce sexually; 2) the larvae (glochidia) MUST come in contact with a passing fish; 3) the mussel-host fish relations HELP DISPERSE A BASICALLY IMMOBILE CREATURE (the mussel) WITHIN AND BETWEEN AQUATIC SYSTEMS; 4) if a glochidium attaches to a fish that is not the species it is looking for, it will not survive. (WHY?!!!!!!!); 5) if you are a mussel (or oyster) you require a substrate to land on; 6) it takes a relatively long time to become sexually mature (2 to 9 years); and 7) adults mussels can live 60 to 70 years! I AM QUIVERING, THERE IS SO MUCH BIOLOGY HERE!

If you are impressed with the 60-70 year lifespan of some mussels, and you should be, listen to this. In October 2007 an [Arctica islandica](#) clam was collected off the coast of Iceland. It was determined to be at least 405 years old.

I have just a few additional comments on the life cycle of mussels. Obviously male mussels cannot readily move about to seek a partner. Instead they must release their sperm and depend on river currents or water movements to take it to female mussels located nearby or downstream. Then the female mussels must

draw the sperm in through their incurrent siphon so the sperm can get to their eggs (which can range from hundreds to hundreds of thousands). This step is not even close to the end of the reproductive cycle. As indicated above, once fertilized, the eggs develop into glochidia within the gills, reach maturity and then are released into the water to try and find an appropriate fish host. Then IF the glochidia attaches to the correct species of fish, it encysts into the fish's tissue and undergoes a short life as a parasite. (The term “encysts” may provide a clue to the WHY?!!!!!!! comment above – histocompatibility-based receptor sites or recognition may be necessary for the encysting to occur.) After several weeks, each glochidia develops into a juvenile (microscopic) mussel with gills and a foot. Then it still must drop off the host fish and land on the proper substrate to begin its life on the stream bottom. WOW! I will bet that a high percentage of fertilized eggs do not become mature mussels.

Moving on, bivalves, as with many mollusks, can vary greatly in size. They can be as small as ½ millimeter (nut clam) to as large as 6 feet (giant clam). They also can have a very wide variety of shapes and colors (see Fig. 1 for some examples). This variability gives rise to the funny names that many mussel species get, e.g., purple wartyback, pink heelsplitter, and threeridge. These shapes and colors likely give the mussels some biologic advantage, most likely protective camouflage, since from what I read mussels are sometimes only noticeable by the two small siphons which they use to draw and expel water.

Mussels have a large muscular foot that sticks out from their shells and can be used to move the mussel a limited distance along the stream or lake bottom. It may also be used to attract fish close enough for glochida to find them. In general, the foot is usually only seen if the mussel is quickly dislodged from its substrate or bed.

In pre-colonial and colonial times mussels were abundant and a very important food source for many Native American tribes and early colonists. (The Indians also used mussel shells as implements for tools and jewelry.) However, in present times mussel populations have been greatly reduced due to water pollution, the damming of rivers and the introduction of exotic species. It is estimated that 7% of the mussel species in the United States have gone extinct and that 70% of those remaining are in peril. Fifty percent of the species have been placed under the protection of the U.S. Endangered Species Act. Interestingly, this marked

reduction in mussel species and numbers have led to numerous attempts to cultivate mussels. For whatever it means, I have heard a lot about zebra mussels (rightfully so), but virtually nothing about the fragile state of native mussels and what is being done to protect them.

I have two last facts about the use of mussels. The first is that before the coming of plastics, most buttons were made from freshwater mussels. The second is that bits of shells from freshwater mussels were used as nuclei for inducing freshwater pearl formation in oysters.

I have run out of facts. However I could not end without talking about two metaphors that come from the observation of bivalve mollusks. “To clam up” means to refuse to talk or answer, and obviously come from the clam’s ability to close tightly. The metaphor to be “happy as a clam” is a little less obvious. I always thought that it referred to the clam’s ability to sit quietly at the bottom of the sea while all

kinds of things transpired around it. Apparently I have always been wrong. The adage appears to be a diminutive of an earlier saying, “to be happy as a clam at high tide.” It would seem that clams (and other bivalves) are so happy because they cannot be found and dug up and eaten as readily at high tide as when there is low tide (www.differencebetween.net). (Aren’t you glad that you stayed through to the end?)

To end this article, despite all the material that I read, I still cannot absolutely differentiate a mussel from a clam or oyster. After all, I cannot see glochidia and the differences in shell shapes are somewhat subtle and not easy to compare unless the different shells are right next to each other. I guess that I will have to rely on statistics and if I find a bivalve in freshwater I will call it a mussel and if I find the shells in brackish or salt water, I will call it clam or oyster, at least until I can find an expert on these animals or find a good picture reference. Regardless, I now know a lot more about bivalves in general – and I am happier for it.

MAY MEETING

By Mike Childers



Our May 2 HLMN monthly meeting was held at Reveille Peak Ranch. Our fellow Highland lakes Master Naturalist Ed Myatt, provided an interesting and entertaining (if you call eating a worm entertaining!) program on how to raise worms and prepare worm casting compost tea.



Jeff Stokes brought our youngest guest, Christopher Michael Stokes to the May meeting. He just couldn’t get excited about worms. This was also his 2nd month birthday!

2012 Great Outdoors Party

Photos by Sue Kersey

Below is a comment from one of the teachers attending this year's GOP.

I want to thank everyone who helped make this year's event a big success! We had a few challenges in which people had to jump into unfamiliar roles or roles to which they had not been assigned and, in every case, they did a wonderful job! I'm really proud to be associated with this group of people who give up their own time and effort in order to demonstrate the wonders of nature to these 1st graders.

To everyone who participated or supported: THANK YOU!



(Continued on page 13)



Additionally, below are comments of some of the other teachers as compiled by teacher, Teresa Ratliff.

We really liked splitting the bird observations into the blanket observation time and getting to see a real wood box. They seemed to have more time with the binoculars and the more hands on the more engaged the students are.

The kids love picking up a minnow and putting it in the bucket. The only suggested was the one I shared with you about when we move to the table have the other aquariums covered so they can focus on the one being shared at that moment.

The tepee and drums were awesome. The kids loved being able to touch animal fur and see the beading and all the things that could be made from animals. Thank you for letting them touch and hit the drum.

The mammal, fish, bird, amphibian and reptile puppet sorting was so great this year. The kids really were able to be involved and made connections to animal classifications.



The observation and listening area was really highlighted by the wishing tree.

Please let the volunteers know how much we appreciate their time and willingness to improve it each year. Thank you for caring about our young students and being so open to comments and suggestions.

Thank you.

Honey Creek Preserve Field Trip

By Mike Childers



Photo by Phil Wyde



Photo by Phil Wyde

On April 30, 2012, many folks from our Chapter took a tour of the Honey Creek Natural Area adjacent to Guadalupe State Park. We were guided by Honey Creek Natural Area Friends and fellow Master Naturalists J.W. Pieper and Wilt Shaw. The Friends group has restored the Rust House to be an interpretive center showing the life of early German settlers in the area. The property which makes up the Natural Area is part of a parcel of properties owned by a family of German settlers. These properties surrounded Honey Creek and the large spring which feeds it.

Our guides pointed out many historic and natural sites along the trail which culminated in a walk along the beautiful Honey Creek.

Thanks to Joanne Fischer and friends who arranged our trip and our very knowledgeable and capable guides.



Photo by Mike Childers



Photo by Phil Wyde



Photo by Phil Wyde

GALLERY

by Billy Gunther



Red Admiral Butterfly on Prairie Verbena



Prickly Poppy with friend



Clouded Sulpher Butterfly on Indian Blanket

GALLERY

by Jerry Stone



Checkered White Moth on Firewheel



Variegated Fritillary on Firewheel



Monarch on Thistle



Red Admiral on Thistle



Kaytddid on Prickly Poppy

GALLERY

by Jerry Stone



Milkweed Pearl Vine



Cardinal Plant



Skeleton Plant



Prickly Pear



False Day Flower



Lace Cactus

GALLERY

by Jerry Stone



Brown-eyed Susan un-opened



Brown-eyed Susan opened



Sensitive Briar



Day Flower



Lindheimer's Morning Glory



Mexican Hat

MAY - JUNE EVENTS & VOLUNTEER OPPORTUNITIES

| | |
|--|--------------------------|
| Seining Ponds Inks Dam National Fish Hatchery | May 21 12:30 & 1:30pm |
| TPWD Stocking trip to San Antonio Inks Dam National Fish Hatchery | May 24 8am-3:30pm |
| HLMN Training Class - Graduation Celebration and Pizza Party Reveille Peak Ranch | May 27 4pm |
| Seining and Stocking Work Inks Dam National Fish Hatchery | June 3, 7, 12 |
| Kayak and Canoe Basics - June 7,8,16,23,30; July 14,21,28; Aug 4,11 Inks Lake State Park | June-Aug 9-11am |
| HLMN Monthly Meeting - Dragonflies by Marvin Bloomquist and Sherry Bixler Kingsland Library | June 6 1-3pm |
| Kids Fishing Events at Lake Buchanan - Kids Outdoor Zone Boys KOZ Fishing Camp | June 11-16 |
| Kids Fishing Events at Lake Buchanan - Kids Outdoor Zone Girls KOZ Plnk Fishing Camp | June 17-22 |

FUTURE EVENTS & VOLUNTEER OPPORTUNITIES

| | |
|---|-----------|
| Native Plant Society of Texas Annual Symposium Kerrville, TX | Oct 4-7 |
| Texas Native Plant Week Various activities providing volunteer and advanced training opportunities | Oct 14-20 |
| Texas Mater Naturalist Conference Camp Allen, Navasota, TX | Oct 26-28 |

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://beta-www.tpwd.state.tx.us/state-parks/parks/find-a-park/inks-lake-state-park/park_events/

http://beta-www.tpwd.state.tx.us/state-parks/parks/find-a-park/blanco-state-park/park_events/

<http://www.fws.gov/southwest/refuges/texas/balcones/>

<http://friendsofbalcones.org/>

Please submit pictures, articles, reports, stories, calendar and event entries, etc. to 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.

Stewardship

An ethic that embodies cooperative planning and management of environmental resources with organizations, communities and others to actively engage in the prevention of loss of habitat and facilitate its recovery in the interest of long-term sustainability