Galveston Bay Area Chapter – Texas Master Naturalists

The Midden

April 2009

"In Like a Lion" – *by Mary Jean Hayden, President 2009*

March sure did blow in like a lion and Chapter members are blowin' and goin' too! GBAC-TMN's eighth training class has 24 enthusiastic participants and a waiting list! Our favorite class presenter, Dr. Sammy Ray, celebrated his 90th birthday at a big TAMUG party and we'll celebrate all over again at our March 12th class. (Did you see the picture of Julie with Dr. Ray on the front page of the Daily News?) The rest of us, of course, continue getting educated - Steve's sea turtle program was sold out; Dick's on diurnal raptors March 9th is filling up. Galveston Island State Park is re-opening on March 21st and MN volunteers are up to their armpits in making it happen - cleaning, sawing, hauling, planning and planting. Monthly Chapter work days at the park started February 19th and will continue all year - the next one is March 18. Everyone should turn out for Trash Bash on March 28th. FeatherFest is April 2nd through the 5th and many chapter volunteers will be working this event that draws birders from all over the U.S. But nothing interferes with our established projects and programs - stewardship at Sheldon, Armand Bayou Nature Center, Texas City Prairie Preserve, Reitan Point and Sundance are going full blast and the Wetlands Team continues to muck about at various sites. Our school programs, Bay and Island Adventures and Jr. MN Club will be winding up with spring fieldtrips. Camp Wild follows right behind, June 8-12, and the next week we've got Treasures of the Bay teacher workshop, June 16-19. Whew! Every single one of these projects, programs and events can use your help. New class members are especially welcome. Check the website calendar www.gbamasternaturalist.org to see what's on for the day, then double click on something that looks interesting to find out who to contact. Drop in, try it out, no commitment required!

Don't Miss the April 5th Chapter meeting. Dr. John Anderson, of Rice University, will discuss his book *The Formation and Future of the Upper Texas Coast.*

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The last meeting of the Advanced Training Team had a surprise visitor, a Gentoo Penguin chick, thanks to Diane Olsen of Moody Gardens. Diane is the new AT Team Leader.

April - May

ADVANCED TRAINING OPPORTUNITIES

by Diane Olsen, AT Chairperson dianeo@wt.net

Chapter Meeting – April 2, 2009
Presenter: Dr. John Anderson, Rice University geologist/oceanographer and author of *The Formation and Future of the Upper Texas Coast,* will cover the high points from his very timely book.
6:30 Social, 7:00 Presentation, 8:00 business meeting
Carbide Park 1 Hour AT

Dance of the Lepidoptera – April 28, 2009
Presenter: Anna Wygrys
9AM – 12PM 3 Hours AT
Aquarium at Moody Gardens
Maximum class load 50
For more information, contact Project Leader Louise Bell - ltbell2@comcast.net
Register with Emmeline Dodd - txdodd@aol.com
Master Gardner and lepidopterist, Anna Wygrys, will identify local butterflies and the plants that attract them. Bring your binoculars for a close-up look at Lepidoptera as Anna leads us to observe butterflies and their eggs. Bring your lunch and something to drink and enjoy a picnic on the tables surrounding Moody Gardens if you like. Mrs. Wygrys' book on Butterflies will be available for purchase for $8.00.

Birding 101 – May 2, 2009
Presenter: Greg Whittaker
9AM – 12PM 3 Hours AT
Aquarium at Moody Gardens
Maximum class load – 25
For more information, contact Project Leader Diane Olsen – dianeo@wt.net
Register with Emmeline Dodd txdodd@aol.com
Learn the basics of birding. Find out the dos and don'ts of binocular use and basic ID techniques. The class will end with a walk with Greg around Moody Gardens in search of various birds. We will also visit Offat's Bayou, wetland and landscaped areas, and a flood control area. Perhaps the black - necked stilts will have chicks again.

STEWARDSHIP OPPORTUNITIES

Project of the Year
Prairie Restoration/Debris Removal
Galveston Island State Park
Wednesday, March 18, 2009 **AND**
Saturday, April 18, 2009
9 AM until NOON
Plant Prairie Grasses
Contact: Shirley Foster MFoster689@aol.com

March Project of the Month
Sundance Gardens
Friday, March 20, 2009
9 AM until NOON
Contact: Trudy Belz **trudybelz@aol.com**

April Project of the Month
Multi-Chapter
Brazos Bend State Park
Saturday, April 4, 2009
9 AM until NOON
Includes Advanced Training Credit
Contact: Tom Solomon **crandtr@global.net**

Ongoing Activities:
Mondays - Reitan Point, second and fourth,
Contact: Liz Gimmler gimmler@consolidated.net
Tuesdays - Texas City Prairie Preserve,
Contact: Marybeth Arnold mbarnold@aol.com
Wednesdays - Wetland Restoration Team,
Contact: Marissa Sipocz m-sipocz@tamu.edu
Fridays- Sundance Garden,
Contact: Trudy Belz trudybelz@aol.com
Prairie Friday, ABNC, 9AM - NOON
Contact: Dick Benoit RBenoitTEX@aol.com

SPRING TRAINING CLASS

Class every Thursday though May 14

EDUCATION-OUTREACH VOLUNTEER OPPORTUNITIES

Galveston FeatherFest – April 1- April 5 - Help with event set-up/take-down, man MN booth, serve as liaison for birding guide, etc. – Contact: Norma Rubin nrubin@utmb.edu

Boeing Earth Day Fair - April 22 - Man MN booths at employee fair, 9:00-11:00 a.m. @ 13100 Space Center Blvd., 9:00-11:00 a.m. @ 502 Gemini, 12:30-2:00 p.m. @ 3700 Bay Area Blvd. – Contact: Mary Beth Arnold Mbarnold1@aol.com

Challenger Park Earth Day Celebration - April 25, 9:30a.m.-1:00 p.m. - Man MN activity booth for children, lunch provided – Contact: Bill Callahan bcallahanjr@comcast.net

Armand Bayou Watershed Earth Day - April 25, 10:00a.m. - 4:00 p.m. - Huge event! Man MN activity booth for adults and children - 2-hour shifts – Contact: Mary Jean Hayden bean1219@earthlink.net

Fieldtrip - May 7 and May 8 - 8:30a.m. - 2p.m. - Guide fifty 5th graders either/both day(s) on trip to Galveston Island State Park - students rotate in small groups to beach, bay, prairie – Contact: Mary Jean Hayden bean1219@earthlink.net

Fieldtrip - May 19, 10:00a.m. - 2:00p.m. - Help guide 22 WAVE science 7th graders on trip to Galveston Island State Park – Contact: Claudia Edwards claudia@duckduckgoose.net

Camp Wild - June 8-14, 8:30a.m. - 1:00p.m. - Counselors lead ten 4th 5th graders through instructor-led outdoor activities at Galveston Island State Park (lunch provided) – Contact: Mary Jean Hayden bean1219@earthlink.net.

Treasures of the Bay Educator Course - June 16 - 19, 9:00 a.m. - 3:00 p.m. - Mini-MN training course for teachers and informal educators – Contact: Bill Ashby jbashby@comcast.net

Ongoing Activities - Bay Adventures Dickinson Contact: Sara Snell snellsw@verizon.net; Island Adventures Galveston and Jr. Master Naturalists – Contact: Mary Jean Hayden bean1219@earthlink.net.

The members of GBAC - TMN believe all Master Naturalists should be acquainted with members of the local plant and animal groups. Below is the first of several Tenner Tests that will be published in *The Midden*. If you attended the Advance Training workshop on March 9, 2009 presented by Dick Benoit, you may have already taken this test. If you missed any questions, here is an opportunity to improve your knowledge.

If you did not attend the workshop, give the test a try.

First, look at page 4 and write the names of all the raptors you recognize.
Second, place the letters from the answer list **below** in the appropriate blanks on page 4.
Then use a guidebook to check all your answers and draw arrows to all the identifiable features of the hawks.

a. American Kestral

b. Black Vulture

c. Cooper's Hawk

d. Crested Caracara

e. Osprey

f. Red-Tailed Hawk

g. Red-shouldered Hawk

h. Swainson's Hawk

i. Turkey Vulture

j. White-Tailed Hawk

The key will be published in the next *Midden.*

Galveston Bay Area Diurnal Raptors "Tenner" Test



1_____



2_____

The answers will be posted in the next *Midden*!


3___



4_____



5____



6_____



7_____



8_____



9_____



10____

PRAIRIE *by Dick Benoit*

O N D E R I N G S

March 2009

State of the Bay Symposium in January

About a dozen of the 300 participants were Texas Master Naturalists. Diane Humes presented a poster along with Marybeth Arnold on prairie and wetland projects done by the Master Naturalists in the Galveston Bay Area. Many of our partners were presenting and present. Some sessions of special interest were *Evaluating Water Quality and Water Storage Functions of Coastal Prairie-Freshwater Wetlands*, *Quantifying Water Budgets for Coastal Prairie Freshwater Wetlands*, and *Integrated Management of Invasive Plants in Coastal Prairies of Texas.* Mark Kramer also gave an interesting overview session titled:
Armand Bayou Nature Center: A Case Study in Preservation and Ecological Restoration.

Armand Bayou Nature Center Prairie

The stewardship team, Tom Solomon and Jim Duron, have been busy digging, sprigging, and planting the prairie along with the Prairie Friday Team. There are nearly 4000 one-gallon pots ready to be planted in the near future. Please check the stewardship programs and help restore the prairie.

Texas City Prairie Preserve

The potting shed, above ground pond, and dirt pile are established and functioning. On February 21 seventeen volunteers planted over 300 one-gallon plants. Each Prairie Tuesday more plants are sprigged in ready to be planted under the leadership of Marybeth Arnold and the team.

Sheldon State Park Prairie

This is the second year that the Prairie Restoration Team has established its potting shed and dirt pile. This is a multichapter effort lead by Tom Solomon and Jim Duron. On February 14 they, with the help of the Amigos, planted over 2000 one-gallon plants.

Galveston Island State Park Prairie

Last fall the prairie was controlled burned and also Ike passed its wake over the area. This year this prairie has been designated Project of the Year. The bay area side of the park has been the focal point. On February 19, twenty-two persons, mainly Master Naturalists, cleaned up the Nature Center and the area around it and made preparations for a Water Smart Garden adjacent to the Nature Center. On February 27 six persons collected about 70 one-gallon plants from the prairie for the Garden.

Notes:
Please check the chapter website and stewardship announcements to keep current with present and future prairie events.

WETLAND *by Diane Humes*

A N D E R I N G S

The Wetland Restoration Team is gearing up for the anticipated wetland restoration (Phase II) at Sheldon Lake State Park this summer. We have been moving plants from the nursery ponds in Baytown (NRG) to the ditches at Sheldon Lake SP. While freeing up space at NRG, the thalias, cannas, iris and pickerel weed are getting a taste of their new home AND we will only have to dig them up once more to plant them!

The Phase I wetland restoration of 2005 involved creating a series of ponds and marshes in fields that had been farmed for years. Using old aerial photos and soil maps of the area, the old wetland – prairie potholes - were mapped along with former mima mounds. The old, filled depressions were excavated to create the wetlands and native wetland plants set in place. Although bone-dry during planting, the ponds filled with water after the first rain and are now a lush oasis for wildlife.

Phase II will follow the same strategy on a grander scale. To find out more about the Wetland Restoration Team and its projects, contact: Marissa Sipocz, m-sipocz@tamu.edu

A boy scout helps Diane on the first workday in 2005.

The same area at Sheldon this year.

LATE-BREAKING NEWS: The Wetland Restoration Team has just learned that our project on Brays Bayou, the Mason Park Stormwater Wetland, has won the highest honor from the Houston-Galveston Area Council's Parks & Natural Areas Best Management Practices Awards for 2008. In addition to creating habitat and flood amelioration, the Team's water testing data demonstrates that the wetland greatly improves water quality. Yeah, Team! Good job.

The Wetland Restoration Team meets at their new office at: 1250 Bay Area Blvd. Meet there to ride the A&M van (save gas!), bring a lunch, and enjoy the company of fellow wetlanders.

GIS/GPS FOR DUMMIES

by Vic Madamba

Most of us who signed up for the GIS/GPS FOR DUMMIES workshop did not know what GIS, or for that matter GPS, was and how to use it once we did. So on the morning of January 31, all 26 of us gathered at the Environmental Institute of Houston, University of Houston at Clear Lake, to become experts on GIS/GPS. Ms. Heather Biggs, our instructor, has over 10 years of experience with Geographical Information Systems (GIS) and presently is an instructor at UHCL teaching Fundamentals of Geographical Information Systems. Currently she is also a Geo-information Specialist at the Texas Coastal Watershed Program.

The workshop had two sessions. Session I was introduction to Global Positioning System (GPS) and the GPS handheld devices. During the morning session the class covered topics such as: Satellites, Latitude and Longitude, Universal Transverse Mercator (UTM), brands of GPS units, Prime Meridian, common map projections, Geo-caching and of course where is North and South and more. Session II was working with GIS at the Computer Lab putting together the information from the GPS and integrating it with GIS using computers and the internet. With so much information overload, the class became enlightened and found simple entertaining uses for GPS like downloading their residences, backyards and even their swimming pools via satellites. Some were still confused at the end, but enjoyed what was covered, especially the Geo-caching portion. Geo-caching is simply a form of "Hide-n-Seek" or a "Treasure Hunt." Using your GPS, you hide an object(s) in a field or woods or even underwater and get a position fix on the object(s). Another person is given the coordinates of the object and is challenged to find the object using their GPS. If they succeed in finding it, they get the object or a prize. This same method can be applied to unlimited data collection for Master Naturalists in the field such as: transecting, invasives, monitoring plantings, animals, and turtles. How about an "Easter Egg Hunt" at TCPP?

Since the workshop was maxed out, a follow-up workshop is scheduled for April 9, 2009 at the Environmental Institute of Houston, NOA (North Office Annex) building at the University of Houston, Clear Lake. If you want to sign up for this workshop, contact Emmeline Dodd TXDODD@aol.com

Some of you have asked which GPS Unit should I purchase or use? There are many makes and models on the market, but for general purposes a high level model is not required. The more expensive, the more bells and whistles you'll get, but they can become confusing to use. The instructor recommends a basic GPS, under $100.00, is sufficient which may be purchased on Amazon.com under Garmin Etrex. The Garmin Etrex H Handheld GPS ($94.89) or the Garmin Etrex Legend GPS ($99.95) have all the required capabilities you will ever need. This is just a recommendation and I in no way am promoting the product. Make your own assessment before deciding.

Brazos Bend Camp Out 2009

By Vic Madamba

The 5th Annual Campout at Brazos Bend State Park, hosted by the Gulf Coast Chapter of Texas Master Naturalists, was a considered a big success. Meet and greet started Friday evening, February 6, followed by an International Potluck Dinner provided by the attendees.

After dinner, the first scheduled event was Introduction to Making Walking Sticks, by Claudia and Jim Edwards, member of Houston Area Woodcarver's Club, who demonstrated and talked about making walking sticks. Each attendee had a chance to pick out a stick and carve it in any manner they desired. The rest of the evening was devoted to small talk by the camp fire. Several hard core campers slept the night away in tents, while others brought camper trailers. However, the majority slept inside the Dining Hall, where the campout took place. It was lights out after KP duties were assigned. Being one of the hardcore that tented, I was serenaded by coyotes howling their mating songs till dawn's early light until the owls hooted their sunrise service.

Saturday morning started with the aroma of fresh coffee brewing and the smells of rolls baking; it was 7 o'clock. Our outstanding chef, Anice Petersen and her K.P. elves had prepared a five star breakfast. It was yummy, tummy great. Saturday was a full day of events, which started with Orienteering with map and compass, presented by Ben Scrivener and his wife, Helen. After the class room portion, compass and maps were distributed to those who wanted to participate in the orienteering (hiking). We were divided into groups and taken to a faraway place within the State Park boundary. Each group had to navigate with map and compass to ten different points. There were no fast movers in the group, so it was an easy pace and all the groups succeeded in making all points. This event was just thing to build an appetite for lunch and what a lunch it was. Our chef, Anice, started with Taco soup and corn bread, accompanied by green salads, pasta casseroles, fruits and a variety of desserts. What? No siesta? We had to stay on schedule and it was towering Dick Benoit and his bubbly assistant Sara Snell next on stage, presenting Journaling. Both kept all awake and interested on how important journaling is to Master Naturalists as a way to maintain a historical data on daily experiences significant or insignificant with accurate and quantified information. There is no right or wrong way to journal as long as you're able to document through words, drawings, sound and pictures of what all your senses experience each day. It's a time capsule to be revisited anytime (my own ideas on journaling after having listened to Mr. Benoit on several occasions on journaling). Sara and Dick both talked and showed examples of their journals. It was now 2 o'clock in the afternoon; how time flies. After a short

break, Lucy Condon started on her presentation on GPS (Global Positioning System). She distributed GPS devices to those who did not have a GPS, along with a geocaching treasure hunt paper with instructions. She went through the basic GPS operation and divided the group into teams. The sheet title was "GPS Treasure Trivia," which had seven data points and coordinates with a trivia question and four possible answers. At each point is a prize and the team that got all points and answered the trivia questions first would win the grand prize. Home base was the dining hall, also the starting point. All points were located at several trailheads within a distance of about half a mile. Off we went using our GPS to guide us to each point. Half a mile isn't that far walking, but if you get off course, it could be a mile or more walk. Through the fields and woods we went watching out for snakes, alligators and bicyclists on the trails. Several hours later the teams were back at the dining hall comparing treasures and swapping tales on the trails. No team won the grand prize through no fault of their own, but because of a word glitz in the trivia sheet. The important thing was the geo-caching experience and hiking through the woods.

We all gathered around the campfire to observe the preparation of a variety of foods including: pork tender loins, shish kabobs, baked beans, baked onions, potatoes, lima bean casserole, King Ranch Chicken and two different desserts. Our chefs Carol Westbrook and Jerrel Geisler accomplished most of the cooking in Dutch ovens. We all salivated while watching the cooking processes, and thought - hurry - for our tummies were gurgling for the yummiest meal. This rivaled any five star hotel dining: it was grrrreat!

Sunset was upon us and the stars were beckoning for Diane Humes to take center stage with her Astronomy presentation. After an inside presentation the group went outside just in time to observe the Space Station going overhead. Diane must have had some high level connections. After the excitement, Diane proceeded with showing how to find the Polaris by using the Big Dipper and other constellations such as: Cassiopeia, Belt of Orion, Little Dipper, Gemini, Great Bear and more. It was a great and interesting talk and as the stars did their rotations, all were anxious to hit the sack - it was a long day.

Sunday morning after another good breakfast, the last speaker, Dennis Jones, Assistant Park Director at Brazos Bend State Park, presented a talk about the Park and the many contributions that the Master Naturalists have provided. The Campout was a success, and there were many volunteers from the Gulf Coast Chapter to thank. Integrally involved were: Pat Compton, procurement person, Sharon Young, K.P. Sergeant, Sarah Smith, Campout Registration and others that made this campout a success. Master Naturalist Chapters attending the Camp Out 2009 included: Gulf Coast, Galveston, Cradle of Texas and Coastal Prairie. See You Next Year!

February Chapter Meeting

by Diane Humes

Our chapter held its first general meeting of 2009 on February 4 at Carbide Park, starting off with a wonderful potluck and "green" feast brought by the membership. The one hundred or so members and guests attending heard Dr. Allan Treiman, geologist from the Lunar & Planetary Institute, speak about "Global Warming – Is it Real? And Is It Man-Made?" After an overview of Earth's climate drivers, Allan explained some of the evidence for global warming, including recent (last 200 years) climate data, worldwide glacial retreat, and USDA planting zone changes. He then discussed measured CO_2 levels and inferred temperature measurements using oxygen isotope ratios from gas bubbles trapped within Greenland and Antarctic ice cores, calibrated to give a climate history for the last 400,000 years.

"Thousands Join Protest Against Global Warming"

Allan discussed the plethora of mis-information that is disseminated, especially over the internet, and the futility of herding a bunch of cats, i.e., scientists, to form any kind of conspiracy. He stated that ten years of climate data was not enough to discern a climate trend, but that atmospheric CO_2 has risen to its current level of 387ppm since the Industrial Revolution and is definitely caused by human activity. Those in attendance came away better enabled to sift through the opposing claims about this issue and reach the real science.

As a result of some of the excellent and probing questions generated by our February chapter meeting, further study uncovered other interesting information from the study of ice core data. Not only does ice hold a record of world climate, but it records world pollution levels. Scientists have measured levels of lead, copper, zinc, mercury and tungsten in ice cores dating from 7000 years ago, corresponding to the rise and fall of the Roman Empire and its smelting activities – copper and lead levels rising in 500 B.C. until 300 A.D. Lead levels then fell to background levels, rose again with the Industrial Revolution and increased further in modern times, then fell abruptly in the 1970's when leaded gasoline was phased out!

Sources:

Nriagu, Jerome O. "A History of Global Metal Pollution." *Science.* April 1996, 272:12.

Sungmin Hong, et al. "History of Ancient Copper Smelting Pollution During Roman and Medieval Times Recorded in Greenland Ice." *Science.* April 1996, 272:12.

Ridley's Believe it or Not: Sea Turtles of the Gulf of Mexico

by Claudia Edwards

Dr. Steve Alexander introduced Christi Hughes, a Texas A & M Graduate student who has coordinated the Turtle Patrol for the last two years. Her presentation entitled *Sea Turtle Restoration Efforts at Texas A&M University at Galveston and How Master Naturalists Can Help*, focused on the life history of the Kemp's Ridley turtle. In 1947, a film was made of 40,000 female Kemps-Ridley Sea Turtles coming ashore at their major nesting grounds at Ranch Nuevo, Mexico. In 1985 the number of turtles nesting was about 300. The reason for the sharp decline was due to destruction of the nests, as the eggs were gathered for food. In spite of attempts by the Mexican government to protect the turtles, their numbers continued to decline.

The Turtle Patrol was established as an attempt to change the trend, and the data from the last two years in particular showed that the Turtle Patrol is really making a difference. When the nests are located, they are excavated and the eggs taken to a secure facility where they are protected until they hatch.

Christi showed slides of the process of monitoring the turtles, from adding the satellite antennae, to releasing the turtles back into the Gulf. It was a bonus for us to see our own Master Naturalist members involved in working with the nests and the turtles. Since Hurricane Ike made the dunes disappear, naturalists are worried about the turtles' ability to locate nesting sites in 2009, because normally they crawl towards the dunes and nest at the base of them. This year is a big unknown, and the Turtle Patrol will be especially important.

"Ila," a Kemp's Ridley, nested at 39th beach in Galveston in May of 2008.

Mel Measeles, Ron Atkins, and Bev Frannea shared their experiences with the Turtle Patrol last year. Mel's slides added visuals to the comments about their experiences. They were quite enthusiastic and it sounded like they plan to continue with the Turtle Patrol for 2009.

Steve continued our workshop with descriptions of all of the turtle species found in the Gulf, their similarities and differences. To aid us in learning, he provided a worksheet for us to fill in which was really helpful in preparing for the Tenner Test.

There were lots of good questions and answers, which showed that the attendees were attentive and engaged in the material being presented. A Tenner Test gave us a chance to show how well we were paying attention!

Loggerhead

For anyone interested in becoming a member of the Turtle Patrol, contact Steve for the appropriate forms to submit to Christi Hughes. Official monitoring will be by ATV in three areas: Surfside, West Galveston Island, and Bolivar. Officially, foot patrols not planned, because those areas are popular bathing beaches and there will be plenty of signs with phone numbers for the public to report turtle activity. However, master naturalists are planning foot patrols of their own. Christie did say that the more eyes that are looking, the better. That's especially true in this first season after Ike.

Coastal Birds Enjoy Eating Crabs Too

by Steve Alexander

Crustaceans represent more than 38,000 species and include some of the most familiar animals, such as crabs, shrimp, lobsters, and crayfish. They also include less familiar animals, like barnacles, copepods, amphipods, isopods, and water fleas. Crustaceans are so diverse, widespread, and numerous they are often referred to as the insects of the sea.

There are many species of crustaceans in the Galveston Bay area, but only blue crabs and penaeid shrimp are commercially important, being caught in sufficient numbers to satisfy our taste for seafood. All other crustaceans found locally are either too small in size or too few in number to offer much of a fishery.

Although blue crabs are the only crabs we eat, our local birds regularly eat crabs we ignore, especially the shore crabs of local beaches and bays.

I first got a glimpse of this fact several years ago on the beach at Galveston Island State Park. I was walking down the ramp to the beach, when I spotted a yellow-crowned night heron standing on the beach gazing toward the dunes. As I watched, it crept slowly forward, moving only a few steps at a time. The heron finally reached the dune with its eyes still fixed on the same spot. Suddenly, it lunged forward and came up with something protruding from its bill. Fortunately, it flew directly overhead and I was able to clearly see what it was. Projecting from its bill were the legs of a good size ghost crab. Since it was early afternoon, I assumed this crab would soon be lunch.

Last spring during sea turtle patrols on Galveston Island's East Beach, I often came across yellow-crowned night herons in the dunes. Sometimes they would fly off and other times just stand and watch. On several occasions, I spotted them stalking ghost crabs (see photo) and even spotted one breaking off the claws after capture.

Ghost crabs aren't the only crabs on the menu for local birds. I have seen willets chase fiddler crabs along the bay mud flat and have watched white ibises poke their long curved bills down into fiddler crab burrows. This hunting method is sometimes successful, because I have watched as a white ibis pulled a fiddler crab out of its burrow.

Forster's terns also hunt fiddler crabs, but their method employs dive bombing the bay mud flat from the air. I recently watched as a tern flew over the mud flat and dove time and time again until it flew off with a fiddler crab protruding from its bill.

Ghost crabs and fiddler crabs are plentiful resources on our coastal beaches and bays. It's a resource we don't exploit. And I'll bet that makes a lot of birds happy.

Recycling is All Around Us!

The ***Green Team*** has a list of recycling opportunities in the Galveston County area, maintained on the GBAMN website, at http://gbamasternaturalist.org/Recycle%20Tips.htm. We welcome your additions or corrections! Please share this information with your non-MN friends as well, to encourage them to recycle!

Local municipalities provide many opportunities for recycling. Check websites or phone them if you have questions:

City of Galveston (702 61st St) 7am-5pm Monday-Saturday
(409)789-6410 *http://www.cityofgalveston.org (select "City Services", then 'Recycling Center")*
They take all types of papers, metals, glass (all colors, but no broken glass), car and rechargeable batteries, electronic devices and inkjet cartridges, old tires (5 per week), old gas, and antifreeze. They also take brush. A current city water bill required for tires only.

League City (1535 Dickinson Ave, Public works bldg) 7:30am-5:30pm M-F
Lucky residents of League City have curbside pickup for many items. This site accepts glass only.

City of Nassau Bay (18900 Upper Bay Rd, Lake Nassau Park)
Always available (public park). Leave newspapers, plastics, and aluminum.

Ellington Field --Hwy 3 @ Brantley Open 7 days, 8am to 8pm
http://www.houstontx.gov/solidwaste/clearlake.html
This cooperative site of the City of Houston, Houston-Galveston Area Council, and Texas Commission on Environmental Quality accepts all types of paper, plastics (#1 & 2), metal (including aerosol cans), cardboard, and glass. There is a disposal site for non-rechargeable batteries as well,

City of Pearland, Stella Roberts Recycling Center (5800 Magnolia (off Harkey Rd)
8am-5:30pm M-F, 9–1 Saturday (281) 489-2795
http://www.cityofpearland.com (select "Departments", then "Recycling Center)
This center will take all types of paper, plastic (#1 and 2 but no bags), all types of metal, cardboard, glass (all colors), car batteries, motor oil, cooking oil, most car fluids, appliances, TVs and most electronic devices. They take some hazardous wastes at limited hours, free to residents of Pearland, Friendswood and Brazoria County but with fees to others.

Texas City Biosphere 1 (3301 Loop 197 North)
8am-4pm Mon-Sat, Noon-4pm Sundays
(409) 643-5814 http://www.texas-city-tx.org/Biosphere.htm
This site accepts papers, plastics (#1 and 2), metals (aluminum and steel), cardboard, glass (all colors), and motor oil. A current city water bill required to dispose of trash & brush only.

Some businesses are involved in recycling programs as well:

- ❖ UPS Stores & possibly other mail service stores accept cardboard boxes and foam packing.
- ❖ PetsMart provides prepaid mail-in envelopes for cell phones and inkjet cartridges, with proceeds to help stray animals. See *http://www.petsmartcharities.org/donate/toner-cartridge-recycling.php*
- ❖ Radio Shack accepts rechargeable batteries and cell phones. See *http://www.radioshackcorporation.com/cc/environmental.html*
- ❖ Office Depot accepts a variety of electronic items via cardboard boxes which customers purchase and fill with recyclables. Details at *http://www.officedepot.com/a/promo/pages/0928_recycling/*
- ❖ Home Depot accepts compact fluorescent light bulbs. See http://www6.homedepot.com/ecooptions/

Also consider:

- Many public school campuses recycle newspapers and magazines in outdoor dumpsters.
- Most grocery stores accept plastic shopping bags.
- Thrift & resale shops accept plastic bags, clothing, furniture, etc--and some take rags as well.
- Some Walgreen's will refill empty printer cartridges in the photo department
- Half Price Books will buy CDs, DVDs and LP records in addition to books & current magazines.
- Armand Bayou has receptacles for paper and aluminum cans in the parking lot
- Discover excellent resources for conservation and recycling at *http://earth911.org/*
- Remove yourself from catalog mailing lists at *http://www.catalogchoice.org/*

The Texas Chainsaw Massacre

by Diane Humes

The Chinese Tallow tree is native to Central China and Japan and has been cultivated for at least 1400 years as a seed crop and ornamental tree. The seeds have a waxy white covering – the tallow – traditionally used to make soap and candles, waterproof cloth and fuel. The seed kernel yields a drying oil called Stillingia oil used for machine oils, lamp oils, and in paints and varnishes. The biomass leftover from processing is used as a protein source, compost, similar to manure. Presently grown in China, Hainan Island, Hong Kong, Japan, Taiwan and Korea, tallow trees have been introduced to Sri Lanka, Indochina, Bengal, India, Sudan, Martinique, the southern U.S., southern France and Algeria. Currently, Chinese Tallow is being considered for sources of petroleum substitutes and/or direct conversion to charcoal, ethanol, and methanol.

First introduced to South Carolina by Benjamin Franklin in 1776, Chinese Tallow was introduced to the Gulf Coast in the 1900's by the USDA in hopes of starting up a local soap industry. The species has since been widely planted as an ornamental – mainly for its fall color; perhaps 200,000 – 300,000 tallow trees have been planted in Houston residential areas.

So, why is *Triadica sebifera* one of the 31 listed noxious weeds and prohibited plants in Texas? Chinese Tallow readily escapes cultivation due to traits shared by most invasive species – huge reproductive potential, seed viability, vegetative vigor, non-palatability and extreme adaptability. Chinese Tallow trees have a huge reproductive potential because saplings mature at 3 years and continue producing seed for 100 years. A single tree may make 100,000 seeds each year – widely scattered by birds and water. Seeds may remain viable in the soil for 7 years. In addition, a tree is hard to kill; a cut stump will re-sprout repeatedly, necessitating herbicide use. Animals and insects do not eat vegetative parts of the Chinese Tallow. This species adapts to many habitats – tolerates salinity and freshwater, sun and shade, wet and dry – except extreme dry and/or cold climates. In the eight-county Houston area, it is now the most common tree species – 152.5 million tallow trees – comprising nearly 25% of the tree canopy.

Out of 250,000 + plant species worldwide, some 1000 of them share invasive and weedy characteristics with Chinese Tallow. Invasive species are a major threat to biodiversity and agriculture and great effort is spent on understanding and controlling them. In an effort to predict which species will become invasive, scientists have noted that certain plant families have more "undesirable" members than others. Among the 12 weedy plant families, seven of the Top 10 Texas Plant Families – the mustards, sedges, grasses, composites, legumes, hibiscuses and euphorbs – have the most number of "bad children." So, maybe it is genetic – some families are just "born bad." Of course, very large families also have the most "good offspring."

But, a species is assumed innocent until proven guilty even with unsavory relatives, so instead of trying to predict the next invader, another approach is to map where they are already and predict where they might go next. Disturbed areas are very favorable for invasion, especially by weedy species. A census of the ice-free land shows 23% of the world is disturbed land, which also corresponds to known locations occupied by some of the world's worst weeds – "the global weed patch." Control of a species is easier at the edges of an invasion than in the middle and before its introduction rather than eradication after it has reached an epidemic!

At Armand Bayou Nature Center, Chinese Tallow control - the Texas Chainsaw Massacre - has been

an ongoing effort to eradicate Chinese Tallow trees from the coastal tallgrass prairie. The Chinese Tallow invaded the formerly farmed and grazed prairie, within a few decades converting the grassland into a tallow forest monoculture. Currently 645 acres of prairie are managed by mowing, burning, use of herbicide and chainsaw, and re-introduction of native species – grasses and forbs. Grassland species depend on grassland – not forest. The roar of a chainsaw followed by the falling of a Chinese Tallow tree, is one more step toward restoring a vanishing ecosystem.

Chinese Tallow, Popcorn Tree, Florida aspen
Euphorbiaceae – SPURGE FAMILY
Triadica sebifera (L.) Small
Eastern Asia – China, Taiwan

Deciduous tree to 16m (52ft), commonly to 10 m. **Sap milky, toxic** and irritating to the skin. **Leaves simple, alternate**, blades **entire**, broadly ovate, 3-6 cm wide, with broadly rounded bases and abruptly acuminate tips (**heart-shaped**); dark green above and paler below; petioles 2-5 cm long. Plants **monoecious** – single sex flowers occur on same plant. **Flowers small**, yellow. **Staminate flowers borne on spikes** to 20 cm long; **pistillate flowers on short stalks** at base of staminate spike. **Sepals 2-3 (petals absent), stamens 2-3, styles 3.** Fruit a **capsule**, 3-lobed, 1 cm wide, turning brown and splitting open at maturity to reveal **3 globose seeds** with a white, tallow-containing covering. Seeds remain attached for a few weeks. **Flowers mature April – June** and **fruit ripens September - October**. **Nectar** attracts bees, yielding light honey.

Photo: James Henson, USDA NRCS NPDC

Sources:

Henson, James. (Photo) Chinese Tallow Tree. NRCS _ Plant_Guide__triadica_sebifera.pdf

Jenkins, Clinton N. and Stuart L. Pimm. "How Big is the Global Weed Patch?" *Annals of the Missouri Botanical Garden*. 2003, 90:172-178.

Webster, Christopher R. et al. "Woody Invaders and the Challenges They Post to Forest Ecosystems in the Eastern United States." *Journal of Forestry*. October/November 2006, pp. 366-374.

Guppies from Julie

by Julie Massey

The Spring 2009 class is off and running with 24 new Master Naturalists in training! Please introduce yourself to our new Master Naturalists and invite them to join you in your favorite volunteer opportunity!

Many thanks to everyone who is helping make the class a success, especially Verva Densmore, Sara Snell and Beverly Williams, the training class co-chairs!

Discoveries

Several new discoveries have hit the news lately! A new species of fish was identified! The psychedelic frogfish is a colorful fish that uses its fins to "walk" among the coral in search of prey! Its caudal fin is curved to one side making the fish look a little tipsy as it moves over the coral! Check this fish out at http://news.nationalgeographic.com/news/2009/02/090226-psychedelic-fish-picture-ap.html

In addition, the rarely seen barreleye fish has been captured on video by the Monterey Bay Aquarium research Institute. This Pacific fish has a fighter pilot cockpit type cover over its eyes and false eyes that face forward. The 6-inch (15-centimeter) barreleye *(Macropinna microstoma)* had been known since 1939--but only from mangled specimens dragged to the surface by nets. Check out the fish at nationalgeographic.com/news/2009/02/photogalleries/**fish**-transparent-head-**barreleye**-picture/index.html

Fish are amazing!

And for all you invertebrate lovers, check out the sea biscuit life cycle video - http://www.vimeo.com/2156713 - the work of a Brazilian graduate student, BrunoVellutini!

Discoveries are all around us. Creatures and phenomena that have been on the planet for ages but are new to man!

Finally, I want to encourage you to share your poetry, haiku, stories, notes and drawings with us though *The Midden*! I have enjoyed a new collection of poems and essays by Mary Oliver, *The Truro Bear and Other Adventures*, published by Beacon Press, 2008. The writings remind me of my Master Naturalist life.

Share your writings and inspire us!
Take care and see you in the field!
Julie

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The Midden

This newsletter is published by **Galveston Bay Area Chapter – Texas Master Naturalists.**
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