Galveston Bay Area Chapter – Texas Master Naturalists

The Midden

June 2009

"We'll Relax in July!" – *by Mary Jean Hayden, President 2009*

Congratulations and welcome to the '09 MN class! Probably our best advice is to try out something new and just a bit challenging before settling into your niche (talk to Bev Williams about her "I don't wanna, don't think I can, but I will…omigosh, I love it" experience). Chapter members celebrated Earth Day by volunteering. May, as usual, was filled with school fieldtrips and planning for Camp Wild and Treasures of the Bay this month. Stewardship continues and turtle monitoring is at its peak - two turtles nested on Galveston Island on a single Saturday, depositing over 200 eggs! So get in there and get after it - we'll all relax in July!

In This Issue

The Midden has started to run the Advanced Training "Tenner" tests. The key for the Sea Turtles Tenner test is on page 2 of the April *Midden*. On page 12, refresh your memory on Sea Turtles by taking the "Ridley's Believe or Not" Tenner test. On page 13 and 14, check to see if you know the "Ten birds everyone should know!" This test was contributed by Greg Whittaker of Moody Gardens for the last AT workshop on May 2. If you missed that AT opportunity, you may attend any of the public offerings at Moody Gardens.

Birding 101 is offered the second Saturday of each month. Free
Birding 201 is offered the third Saturday of each month. $5.00 fee
9 am – 11 am
Moody Gardens Aquarium

Check their web page for dates: http://www.moodygardens.com/Calendar_of_Events/
These workshops are approved for AT credit.

Inside This Issue: **Page**

Photo by Vic Madamba

June - July

ADVANCED TRAINING OPPORTUNITIES
by Diane Olsen, AT Chairperson dianeo@wt.net

Chapter Meeting – June 4, 2009
Presenter: Anita Tiller, Mercer Arboretum botanist will cover conservation of endangered plant species of Texas .
6:30 Social, 7:00 Presentation, 8:00 business meeting
Carbide Park 1 Hour AT

Ongoing
Galveston Island State Park
Every Saturday- Beach Explorations
Every Sunday- Bay Explorations
10 am. Meet at the Welcome Center
Tours are 1 to 1 ½ hours long.
Prepare for sun and mosquitoes.
Bring water and family.

STEWARDSHIP OPPORTUNITIES

Project of theYear:
Prairie and Dune Restoration/Debris Removal
Galveston Island State Park
Tentative Dates:
Thursday, June 25
Thursday, July 23
Thursday, August 13
9 AM until NOON
Contact: Shirley Foster MFoster689@aol.com

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

EDUCATION-OUTREACH VOLUNTEER OPPORTUNITIES

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

Key to "Tenner" test: Diurnal Raptors

1. Turkey vulture
2. Red tail hawk
3. Osprey
4. American kestrel
5. Caracara
6. Black vulture
7. White tail kite (Not white tail hawk)
8. Swainson's hawk
9. Red shoulder hawk
10. Coopers hawk

Junior Master Naturalists

article and photos by Mary Jean Hayden

Our Chapter's Jr. Master Naturalists were certified at a May 20th ceremony at Austin Middle School with parents, siblings, teachers and Master Naturalist volunteers in attendance. Awards, pizza and cake topped off the wonderful evening.

We started a bit late this year due to Ike but managed to squeeze in almost the full planned calendar of activities anyway. Each Wednesday's meeting centered on in-depth exploration of one of the six in-class modules - water, Galveston Bay, wetlands, coastal prairie, birds and the Gulf of Mexico. Students conducted water experiments (surface tension, buoyancy, capillary action) and water quality testing. They studied insects and osmosis, developed a simple taxonomic guide, dissected wildflowers, owl pellets, oysters, fish and squid (dissection of anything is a universal favorite). Each group of 5 designed a fish for display in the school's trophy case and made a pond biosphere for the science room (one of the surviving fish had 6 babies!). Students practiced keeping lab notes, working as a team, working with the public and making a presentation. They did a wonderful job manning their booth at FeatherFest/GrandKids festival, had difficulty with the "town meeting" activity that required role playing and thoughtful compromise, but had no problem whatsoever researching their team's shark and developing and delivering a PowerPoint presentation at their certification ceremony. Fieldtrips are essential to the program and we took five (ABNC, Sea Center, Bolivar's Crenshaw School, East End Flats & Fish Market, and High Island, plus the all-class trip to Galveston Island State Park.

It has been a great year working with an wonderful group of 5th graders and an incredible bunch of volunteers: Diane Olsen, Pat Turk and Sandra Linton worked with the Island Adventures program for all five 5th grade classes; Judy Anderson, Carey Battle, Nancy Cooley, Joie Elmer and Norma Rubin supervised teams of Jr. MNs almost every single Wednesday and on Friday fieldtrips. Specialists taught several modules - Steve Alexander did biomes and plankton, Carey Battle did insects, Dick Benoit handled owl pellet dissection and guided our prairie fieldtrip, Sandra Linton did wildflowers, and Julie Massey, with Erin Gingsberg's assistance, did water testing, fish dissection, fish printing, squid dissection and painting of the pelican banners. Our thanks to them all for keeping GBAC-TMN in the forefront by conducting the state's first Jr. Master Naturalist program!

PRAIRIE *by Dick Benoit*

PONDERINGS

The Galveston Bay Area Chapter spring training class has been involved with prairie restoration. They have planted 50 one-gallon pots of grasses in Armand Bayou Nature Center's prairies, 50 one-gallon pots of grasses in Texas City Prairie Preserve's prairie, and made seed balls for the Carbide Park Prairie. Hopefully they will also help in the restoration of Galveston Island State Park's prairie at their class there.

On April 4, 2009, five chapters were involved with planting 300 one-gallon pots at Brazos Bend State Park. Tom Solomon and Jim Duron were the leaders of this event. The day began with a talk on prairies by Dennis Jones followed by the planting in the public frequented areas.

The **First State of the Prairie Conference** (below) was held on April 17, 2009, at Armand Bayou Nature Center mainly for prairie managers in the area. Over sixty persons attended the day-long conference. The keynote speaker was Fred Smeins, who spoke on the current state of the Coastal Prairie. There were concurrent sessions on Prairie Management and Education Options. Some of the main speakers were George Regmund, Wade Harrwell, Larry Allain, Brenda Wiser, Pat Merkord, Dennis Jones, Tom Solomon, John Jacob and Jaime Gonzalez.

Keep tuned for the active prairie restoration programs at the local sites. There are over 5,000 one-gallons pots staged at Armand Bayou Nature Center at the ready for groups to plant in the near future. Texas City Prairie is up and running also, with help needed in updating the plant beds around the center. Galveston Island State Park has had a monthly clean up and planting, with more prairie work planned for coming months. And Reitan Point Prairie has 500 plants in preparation for when water is available. Sheldon State Park has the ongoing Prairie Tuesday workday. The Wetland Team is also working at the site.

photos by Dick Benoit

WETLAND *by Diane Humes*

A N D E R I N G S

A digression on toads heard and seen in a Michigan wetland:

Warm sun, spring rains - a couple hundred amorous American toads congregated in a small constructed wetland pond at the Matthaei Botanical Gardens of The University of Michigan. Single males sang along the edges of the pond, puffing out their throats to enhance the sound. Pairs of toads mated all over the pond; males chased around like crazy, pursuing females, other males, couples, threesomes, getting in fights. The surface of this small pond actually jumped with all the springtime activity!

Strings of eggs (left) floated like beads on the water. Turns out that frog and toad eggs are laid in rounded masses (Wood and Leopard Frogs), loose clusters (Tree Frogs), long necklace-like strings (Toads), thin surface films (Bull and Green Frogs), or deposited in single or small clusters (Spring Peepers). Many more eggs are laid than hatch – good thing, or the little pond would have no room for all of them – mostly eaten by fish, turtles, aquatic insects, or succumbing to desiccation. Turtles were "chilling out" in the Michigan spring sunshine, content for winter to be over.

In the Houston/Galveston area, the Wetland Restoration Team works to create space for all species. Since its inception, the Team has contributed 4400 volunteer hours to wetland restoration.

Congratulations to the following Team members and their recent accomplishments:
(50-100 hours), Frank Budny, Milt Gray, Shirley Foster, Ellen Gerloff, Vic Madamba, Millie Morgan, Susan Severance, Tom Solomon, Charlotte Wells,
(100-200 hours) Lynne Ray, Paul Roling, Nathan Veatch,
(750+ hours) Dick Benoit, Diane Humes.

Happy National Volunteer Week - Celebrating People in Action!!

To volunteer for getting wet, talking dirt, and slinging mud all in the name of wetland restoration, contact Marissa Sipocz, Wetland Program Manager, Texas Coastal Watershed Program, Texas AgriLIFE Extension Service/ Texas Sea Grant, m-sipocz@tamu.edu

Dance of the Lepidoptera

by Louise Bell; photos by Vic Madamba

Anna Wygrys' recent workshop, titled “Dance of the Lepidoptera,” not only increased our knowledge of butterflies, but it also taught us how and why we need to attract these creatures to our own habitats. Anna (Master Gardener, 1992) provided a colorful slide show to complement her enthusiastic presentation. Staring with the title of the workshop, we found that butterflies and moths belong to the order, Lepidoptera. Lepidos is Greek for "scales" and ptera means "wing." The scaled wings of butterflies and moths are different from the wings of any other insect. Lepidoptera is a very large group; with the exception of beetles, there are more butterflies and moths than any other type of insect.

Photo by Vic Madamba

The six families of butterflies found in Galveston County are: Swallowtails, Whites and Sulphurs, Gossamer-wing Butterflies, Metalmarks, Brush-footed Butterflies, and Skippers. All of the families begin life the same way: adult females deposit tiny eggs underneath a leaf on a tree or shrub (we found some butterfly eggs outside of Moody Gardens). The egg soon becomes a caterpillar (larva). During this stage, the caterpillar sheds its skin up to four times as it grows to its full length of about two inches. In the third stage, the larva forms a protective covering called a chrysalis, or pupa. In the final stage the butterfly emerges from the pupa as an adult butterfly.

The larva stage is the eating stage. Mrs. Wygrys rebuked us when we moaned about the hungry larvae stripping the leaves of our citrus trees. We were encouraged when she said that usually the scruffy looking leaves would sprout again. The adult butterflies have no chewing mouth parts, instead they have a long "proboscis" which unrolls to make a straw-like tongue to take up nectar from their favorite plants. They must stand on something while the proboscis is working, so they look for flowers that offer a place to light: clusters, spikes, or daisy shaped flowers fill the bill. Butterflies also need water and salts so they can often be seen sipping at the edges of little puddles.

Commercial and residential development and pesticides have reduced butterflies' habitats, but we have an opportunity to remedy this situation by re-introducing host and nectar plants to attract our fluttering-winged friends to our gardens.

GIS/GPS FOR DUMMIES II

by Vic Madamba

Our GIS/GPS for Dummies II went well with ten Master Naturalists attending, as well as two ABNC personnel and one college intern assisting Ms Heather Biggs, our instructor. The morning portion covered the Global Positioning System (GPS) followed by a geo-caching exercise using handheld GPS. The class was divided into four teams, then they each received instructions and geo-caching coordinates. Waypoints/geo-caching sites were positioned on ABNC before the class date.

Prior to starting the geo-caching exercise, the class had to manually input each waypoint coordinate on their GPS. Each team had to find their starting position prior to starting the geo-caching. Each waypoint had a container with a plastic egg containing critter prizes, a question, and a hint to get to the next waypoint. If the team correctly answered the question provided at each waypoint, the team would be able to solve the final big question. The critical part of the exercise was to manually program the correct North and West coordinates into the GPS and knowing how to switch to compass. The compass would then point to the direction of the next caching site. Other critical actions included insuring that waypoints were in degrees and minutes, right time zone and in English. It was also important to give the GPS time to lock on as many satellites as possible for better positioning and shortest distance. Some GPS units can be affected by trees or other objects above.

Everyone did succeed in locating all the geo-caching sited and answered the final question: "Who was ABNC named after?" The rest of the afternoon was devoted to GIS and mapping adaptation of the internet (Google). Feedback indicated that over all, the workshop was excellent and enjoyable. Another GIS/GPS class is planned for later this year.

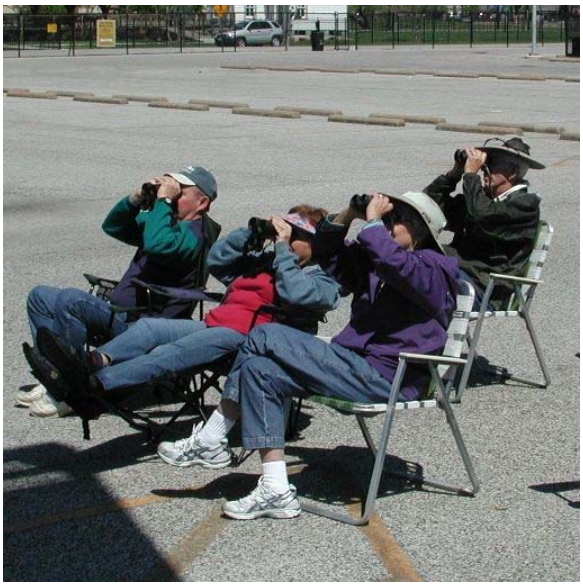
Tips from Vic: If you are interesting in getting a GPS, "as far as type of GPS is concerned, keep it simple. The Garmin eTrex H runs about $99.99 at most stores along with the eTrex Legend H. at about $149.99. I would checkout Amazon.com for bargains, especially reconditioned ones. The less bells and whistles the better, especially for beginners. I hope this will help with your purchase."

River of Raptors 2009

by Diane Humes

In the annals of hawk watching at LaPorte, Texas, April 20, 2009 was a day for the history books! Four fortunate observers – Marybeth Arnold, Dick Benoit, Dorothy and Ken Russell – watched and counted as 25,152 Broad-winged Hawks and 21,488 Mississippi Kites streamed overhead in a river of raptors. In addition, on this extraordinary day, 333 Cooper's Hawks, 181 Sharp-shinned Hawks, 39 Swainson's Hawks, and 7 Swallow-tailed Kites - always indicative of a very good day – soared past. These birds are spring migrants, in a hurry to get to their northern breeding and nesting grounds from their winter homes in Central and South America.

Neotropical bird migrants make a yearly round trip between breeding and wintering grounds, migrating each spring and fall. While passerines (perching birds), such as sparrows and warblers, generally migrate at night, avoiding predators and navigating by stars or internal compass, raptors travel by day. They make maximum use of the rising air currents that develop in sunlight - weakly in the early morning, rising to less than 100 m (~300′), then gaining strength in the afternoon and rising to 1000–1500 m (~3000-5000′). Thermal columns have an upward velocity of around 3 meters per second and can expand in width to exceed 1000 m. As the thermal column grows, it may lean in a strong wind and even become "detached" from the ground. Thermals may be stable for minutes or several hours and are the primary source of lift for migrating raptors that soar to the top of a thermal column, then glide on course with the wind, flapping their wings for powered flight as seldom as possible.



Thermals seldom form over water, as it takes three times the amount of energy to heat water as to heat the same volume of soil. Therefore, most raptors do not readily fly over water, except Peregrine Falcons, Merlins, Northern Harriers, and Ospreys, which have long wings and are more capable of powered flight. This is also why the birds fly less on rainy or foggy days, or when the ground is wet with dew; it takes a long time for thermals to form over wet ground. Thermal columns form more strongly in hilly terrain than flat, form better over land than water, and better on bare soil than ice and snow.

Thermals weaken at their tops and clouds may form below the top of the rising air column. Most raptors begin gliding out of the thermal before reaching the top and before reaching the cloud base. Although some birds have been observed coming out of clouds, radar studies do not document birds flying in clouds, perhaps because visibility is poor. Visibility of birds for the hawk watcher becomes poor when the birds are flying at high altitudes; above ~500 m (1600′) birds are difficult to see **without** binoculars and over 1000 m (3000′) they are difficult to see **with** binoculars!

A hawk's-eye view from 3000 feet. Where to roost? Where is dinner?

When conditions are right, birds can travel distances of several hundred kilometers each day. Broad-winged hawks average 200 – 400 km (120 – 240 miles) per day during migration. Broad-winged hawks winter in Mexico, Central America, and northern South America. They breed throughout the eastern United States and southern Canada. Their preferred habitat is dense deciduous and mixed conifer and hardwood forests, with water and openings such as roads, trails, wetlands or meadows nearby for foraging. They avoid nesting near human dwellings. The global population of Broad-winged hawks is thought to be 1,800,000 birds.

Mississippi Kites winter in South America and breed in the southern Great Plains, east to the Carolinas and south to the Gulf Coast. Their preferred habitat is mature bottomland forest with mixed hardwood trees near open habitat such as pasture, agricultural fields, or prairie. Their range has expanded with that of cicadas, their favored prey, to New England in spring and the tropics in winter. The global Mississippi Kite population is around 190,000 birds.

The 2009 Hawk Watch season officially began March 1 and ended April 30. During that time, Dick Benoit, Marybeth Arnold, Dorothy Russell, Ken Russell, Diane Humes, Bob Patterson, Sarah Patterson, Beth Frohme, Kent Frohme, Jerry Pels, Jim Frantz, Martha Hood, John Sharp, Chris Broodley, Bebe Rizo, Bill Saulmon, Jenny Shuffield, Odie and Marie Asscherick diligently scanned the skies around Sylvan Beach and Little Cedar Bayou Park for migrating raptors. Season totals for Broad-winged Hawks (35,448) and Mississippi Kites (22,146) indicate that we may have seen 2% of the total Broad-winged population and 12% of all Mississippi Kites! Can't wait for next year and a bird's eye view of the world!

Source:
Kerlinger, Paul. *Flight Strategies of Migrating Hawks*. Chicago: The University of Chicago Press, 1989.

Phytoplankton Monitoring Network – A Volunteer Opportunity

by Sally Paulissens

There are *non*-toxic algal blooms that kill fish and sea grasses, but it is the toxic blooms that interest the Phytoplankton Monitoring Network.

Phytoplankton Monitoring Network (PMN) volunteers, led by the Marine Biotoxins Program at the Center for Coastal Environmental Health and Biomolecular Research (CCEHBR) in Charleston, South Carolina, test coastal waters for harmful algal species. Volunteers along the Atlantic and Gulf Coasts observe and catalogue target organisms and add their findings to an online database. Regular monitoring through the year helps identify trends and show where Harmful Algal Blooms (HABs) are more likely to occur.

You may ask, "So, why is this important?" Toxins produced by some dinoflagellates and diatoms can harm marine mammals, birds and humans. Many of the potentially dangerous organisms are typically present in the water. It is when the nutrients in the water (fertilizer, chemicals, sewage) allow an organism to reproduce in unusual amounts, or bloom, that they present problems. These toxins bioaccumulate, so higher level consumers can become ill from eating marine organisms that have fed on the toxic producers, the phytoplankton.

For example, **Ciguatera Fish Poisoning (CFP**), caused by a dinoflagellate, *Gambierdiscus toxicus,* has sickened some people who ate affected reef fish caught in the northern Gulf of Mexico. Within a day of eating an affected fish, one may be ill with nausea, vomiting and diarrhea, and may experience neurological problems such as dizziness, numbness & tingling of the hands and feet and - the oddest of all - reversal of perception of hot and cold.

Neurotoxic Shellfish Poisoning (NSP) is also caused by a dinoflagellate, *Karenia brevis*, living in the Gulf of Mexico. Within 3 to 6 hours of consuming affected shellfish, one may have gastrointestinal and neurological symptoms similar to CFP, perhaps with the added features of double vision and difficulty breathing. But one does not have to eat this toxin to become ill; merely inhaling the aerosolized toxins from a *Karenia brevis* red tide can cause asthma.

Other Human Health Syndromes Caused by HABs:

Amnesic Shellfish Poisoning (ASP), caused by domoic acid from a diatom, *Pseudo-nitzschia spp,* symptoms include gastrointestinal, respiratory, as well as headache, hallucination, confusion, seizure, coma, and in extreme cases, death.

Diarrhetic Shellfish Poisoning (DSP) is caused by okadaic acid from the dinoflagellate, *Dinophysis spp*. This causes gastrointestinal symptoms. Long-term exposure may predispose an individual to growing gastrointestinal tumors.

Paralytic Shellfish Poisoning (PSP) is caused by saxitoxin from *Alexandrium spp*., a dinoflagellate. With low exposure, symptoms include tingling, numbness, rash, headache, and dizziness along with gastrointestinal symptoms. Heavy exposure can result in muscle paralysis and respiratory failure.

Jeff Paternoster, PMN Outreach Specialist, provided training for phytoplankton monitoring. He has made the trek to Texas many times to train volunteers around the state. Jeff is an Environmental Biologist with a decade of experience as a public school science educator before joining NOAA's Marine Biotoxins Program. His buoyant, effervescent teaching style convinced me that phytoplankton were among the coolest things ever.

During the training class we learned how to identify and pronounce the names of the target organisms. After collecting samples with a plankton net, we looked at them under the microscope. Jeff also taught us how to enter data online.

After you receive training, you need a testing location and equipment. You select your own testing site: a body of water with an average of 15% salinity. Most of the equipment needed is provided by PMN to the volunteer. The PMN loans the use of plankton net, refractometer, thermometer, gridded slides, and collection bottles. You provide cover slips for the slides. The essential item not provided is a microscope. A good, student-quality scope with a moveable stage, 4x / 20x / 40x objectives, and a 10x eyepiece (up to 400x total magnification) will do the job.

This is a good way to earn your volunteer hours. Ideally, you would collect a sample and submit data at least once every two weeks. Allow time to go collect the sample, time to read two slides of your sample, and time to enter the data. At your site, check air and water temperatures and do a three-minute plankton tow. At home you can check salinity. All that takes is about 20 minutes. Entering data online takes 10 - 15 minutes. Reading the slides takes hours. I spend at least two hours per slide. You can easily spend longer if you enjoy identifying the zooplankton or you start watching the tiny dramas happening in the live sample under the cover slip. We naturalists enjoy observing life at all levels.

There are three members of the GBAC- TMN who are part of the PMN: Shane Ferguson, Kathryn Dawson, and myself. Shane's sampling location is in Seabrook's Pine Gully Park, Kathryn plans to test in a location on Bolivar, and my sampling location is Moses Lake on the Texas City Prairie Preserve. For more information, photos, articles and links, please visit the Phytoplankton Monitoring Network Website: http://www.chbr.noaa.gov/pmn/

Photos by Steve Morton and used with his permission
Sources for new microscopes:
www.sciencekit.com
www.hometrainingtools.com

"Tenner" Test
Ridley's Believe It or Not: Sea Turtles of the Gulf of Mexico

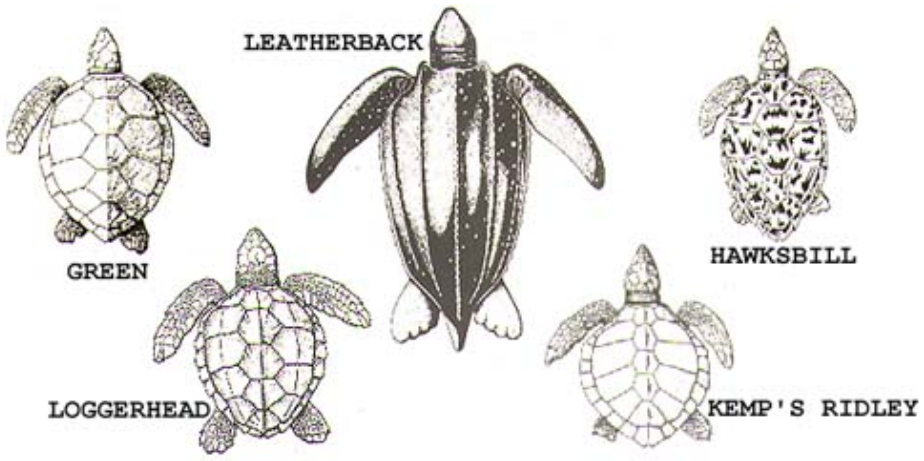
by Steve Alexander

1. _____Primary food sea grasses and algae
2. _____Females return to sandy shores to nest
3. _____Adults found exclusively in Gulf of Mexico
4. _____Only one pair of prefrontal scales
5. _____Most endangered
6. _____Largest and fastest
7. _____laid 195 nests on the Texas coast in 2008
8. _____Source of tortoiseshell jewelry
9. _____Large head, brownish color, heart-shaped carapace
10. ____Appendages modified as flippers

a. Leatherback
b. Green
c. Loggerhead
d. Kemp's ridley
e. Hawksbill
f. All five

(Answers may be used multiple times)

The key will be published in the next *Midden*



Ten birds that everyone should know!

1._____

2._____

3._____

4._____

5._____

6._____

7._____

8._____

9._____

10._____

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

Impressions of the Prairie

On April 2, the Spring 2009 Master Naturalist's class visited the Carbide Park prairie and recorded their impressions in their Coastal Tallgrass Prairies Journal. Excerpts from some of those journals:

The prairie and the woods are cool
So many names…
My head is FULL.

Wind, wind, wind, wind, wind
blue skies,
grasses, sedges, vines, shrubs, trees , birds, mosquitoes.
What could be better.

The wind blowing across the beautiful plain
Refreshed after this mornings rain
Grasses, flowers and trees galore
After today's outing, I want to learn more! 

Glorious day
Instruction held us captive
Familiar plants seen again
Birds flying, breeze blowing
Plants, trees, flowers all a sway
Glorious, fun day.

Dick took us on a walk
We saw an Egret
We saw one hawk
I'll never forget.
The flowers were blooming
The great thistle was white.
Weather was looming.
To our great delight.

Beautiful windy day
Primrose and various grasses blowing away,
Laughing Gulls and Swallows, Swifts circling above

It's the type of day that I love.

A fence holds back mother nature
With a wall of trees and plants.

Guppies from Julie

by Julie Massey

Summer is upon us and that means Camp Wild! If you have not had the opportunity to volunteer with Camp Wild, don't miss out this year!! Camp Wild is held from June 8 to 12, 2009 at Galveston Island State Park!

Camp Wild is a blast and there are all sorts of volunteer opportunities! If you would like to be a Camp Wild volunteer, please contact Mary Jean Hayden at bean1219@earthlink.net! See you at camp!

June is also the month for the Treasures of the Bay Educators Workshop! This mini-Master Naturalist course for teachers is a great way to help teachers bring the wonders of our area to their classrooms and their students! The workshop will be held from June 16-19, 2009. The cost for the educators is $50. Help us spread the word to the teachers you may know!

Plan to join us at the Treasures Workshop – bring a potluck dish to share with the teachers, greet the teachers or help the instructors! We may have as many as 24 teachers sign up for the workshop so plan to volunteer and introduce the teachers to the Master Naturalists "Food, Fun and Friendship" way of learning! If you would like to volunteer, please contact Bill Ashby at 281-482-1526 or jashby@comcast.net.

Julie

AgriLIFE EXTENSION
Texas A&M System

Improving Lives. Improving Texas.

The Midden

This newsletter is published by **Galveston Bay Area Chapter – Texas Master Naturalists.**
Texas AgriLife Extension Service
5115 Highway 3
Dickinson, TX 77539-6831

For comments on this issue or to suggest content for future issues, please contact **Nathan Veatch at 281-480-6985** or by e-mail at nveatch@swbell.net

Editorial Staff:
Nathan Veatch, editor
Carolyn Miles
Diane Humes
Steve Alexander

Master Naturalist ™