

The Midden

Photo by Diane Humes

Galveston Bay Area Chapter - Texas Master Naturalists

October 2010

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More Journeys by Diane Humes, President 2010

Although the temperature says summer, it is the “dog days of summer,” when the heat of Sirius (Dog Star) rising with the Sun was once thought to augment the torment of the final days of the season. But, we know fall will be upon us soon; birds and butterflies are already on the move, so keep a lookout.

It's also time - hard to believe - to form a nominating committee to select next year's chapter officers. Please volunteer for this important task - you meet the nicest people!

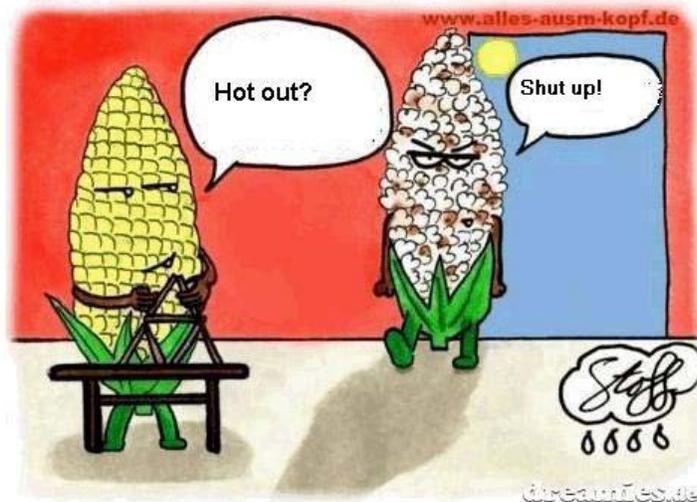
On August 21, our chapter was pleased and honored to accept the Honored Friends Award presented by the Friends of Galveston Island State Park for our “long-term leadership and support of restoration and educational activities at Galveston Island State Park.” (See photo on page 11). Thank you, FOGISP, very much.

I am sorry to announce that Sue Sutterby, who has been in ill health this year, passed away on August 18, 2010. Sue was very active at her church, at ABNC, where she cheerfully and ably served as interim director and on the Board of Trustees, and with our chapter of Texas Master Naturalists. We will miss her dearly; please join me in sending condolences to Sue's family.

Nelda Tuthill has agreed to assume Sue's duties of Treasurer and been duly appointed by the Board. Thank you very much, Nelda.

We do not ask for what useful purpose the birds do sing, for song is their pleasure since they were created for singing. Similarly, we

ought not to ask why the human mind troubles to fathom the secrets of the heavens....The diversity of the phenomena of Nature is so great, and the treasure hidden in the heavens so rich, precisely in order that the human mind shall never be lacking in fresh nourishment. Johannes Kepler (1571-1630) from Mysterium Cosmographicum.



October and November Activities

ADVANCED TRAINING OPPORTUNITIES

Chapter Meeting - October 7, 2010

Presenter: Scott Jones, Galveston Bay Foundation, will cover The State of the Bay
6:30 Social, 7:00 Presentation, 8:00 business meeting
Carbide Park 1 Hour AT

The Second Annual State of the Prairie Conference November 4 & 5

All Day Thursday at Houston Zoo - Cost \$50
All Day Friday Field Trips - Cost \$25 each
For more information, contact Jaime Gonzalez at jaimegonzalez72@gmail.com or www.coastalprairiepartnership.org

Ongoing

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

Heritage Book Study Group

First Monday of every month
Texas City Prairie Preserve
10am-Noon 2 hours AT
Contact: Elsie Smith (409)945-4731

STEWARDSHIP OPPORTUNITIES

Project of the Year:

Prairie and Wetland Restoration Horseshoe Marsh

The Project of the Year at Horseshoe Marsh will continue through out the year. We are restoring island habitats ravaged by Hurricane Ike. If you can attend please contact Dick Benoit rbenoittex@aol.com

Prairie Restoration Texas City Prairie Preserve

Tuesday October 12,
Saturday October 30
Tuesday November 16- seed harvest day
from 9 AM until Noon

Prairie Pandemonium
Armand Bayou Nature Center
Saturday, October 16 from 9 AM until Noon

Sheldon Prairie Plant-a-thon
Sheldon Lakes State Park
Saturday, November 13th

Brazos Bend Heritage Days Prairie Planting Event Brazos Bend State Park

Saturday, November 6th
10 AM - 4 PM

Ongoing Activities:

Mondays - Reitan Point, second and fourth, Contact: Liz Gimmler gimmler@consolidated.net
Tuesdays -

- Sheldon Lakes State Park, Contact: Tom Solomon crandtr@sbcglobal.net
- Texas City Prairie Preserve, Contact: Marybeth Arnold mbarnold@aol.com

Wednesdays - Wetland Restoration Team, Contact: Marissa Sipocz m-sipocz@tamu.edu

Fridays-

- Prairie Friday, ABNC, 9 - Noon Contact: Dick Benoit RBenoitTEX@aol.com

EDUCATION-OUTREACH VOLUNTEER OPPORTUNITIES

Bay & Island Adventures - Volunteers teach 6 in-class hands-on modules on a once a month basis in Dickinson and Galveston Schools. Presenters and helpers are needed for eleven 4th and 5th grade classes. Contact: Sara Snell snellsw@verizon.net.

Jr. Master Naturalist Club - Volunteers guide 25 fifth graders of Galveston's Austin Magnet School as they conduct experiments, build models and do activities to gain a deeper understanding of the topics taught in the Bay & Island Adventures program. The club meets Wednesdays after school and takes 6 Friday fieldtrips. If you have an interest in guiding the kids through the activity or observing what goes on, contact Sara Snell snellsw@verizon.net.

Education and Outreach Committee - We can use your help developing a speakers bureau; responding to requests for exhibit booths, fieldtrip guides and presenters, planning Camp Wild and Treasures of the Bay; and developing a library of education-outreach materials. Contact Sara Snell snellsw@verizon.net.

Partner and Associate Programs - Many organizations sponsor guided walks and education programs or need volunteers to man their nature center. Go to www.gbamasternaturalist.org click on "Volunteer Opportunities," then click on "Partners, Sponsors and Associates" for the list, then click on their website for information and contact.

Prairie Ponderings by Dick Benoit

How to Identify Native Prairie Remnants

During August we had a workshop by Pat Merkford of the Native Prairies Association of Texas on Identification Process for Native Prairie Remnants. This was a simple four step process of identifying potential sites from existing records, contacts, images and drive-bys. Also using Google Earth to look for brown areas with some texture and zooming in to check contour lines, and identify potential polygons was a higher tech method of finding remnants. If you think you have found a remnant, there is a check list to determine the quality of the site.

Indian Plantain *Arnoglossum plantagineum*



Prairie Indicator Species

Indian Plantain (Groovestem Indian Plantain)

Family: Asteraceae (Aster)
 Longevity: Perennial
 Season: Cool
 Origin: Native
 Height: 40 – 150 cm
 Flowers: May - August
 Description: Towering high above most wildflowers, the Indian Plantain features large umbrellas of white flowers. This rare species thrives in wet meadows, glades, rocky open woods, thickets, and roadsides, and is loved by birds, bees, and butterflies alike. A must-have for those wishing to replant an authentic prairie habitat!

How can you identify a native prairie remnant of one of the most endangered ecosystems, even though up to 99.5 percent of the prairie has been destroyed in just the last 125-150 years? There still are patches of this ecosystem in existence to the trained eye.

The best clues are the indicator plants that grow in these prairie remnants. At different times of the year these plants are in bloom, but taller plants and mowing may thwart this method. Currently, driving down Space Center Boulevard, NASA's field abounds with flowering Indian Plantain, a number 10 of 10 of indicator plants for prairies. Seems that the tractor that mows this area is not working!

Large areas along Highway 96 are also flourishing with this plant as well as many roadsides, right of ways, and railroad tracks in the area. Also currently blooming are Texas Coneflower, Rattlesnake Master, Narrowleaf Boneset, Missouri Ironweed and Kansas Gayfeather all indicator plants of a prairie remnant. Earlier in the spring Spider Lilies and Spring Ladies' Tresses bloomed in the wetter areas and Plains Wild Indigo and Nodding Wild Indigo bloomed in drier areas of the prairie.

The fall has the warm season grasses, such as Big Bluestem, Switch Grass, Little Bluestem, and Yellow Indian Grass coming into bloom. These can be more challenging but great indicators of prairie remnants. Sometimes an absence of a fence, as the southeast exit at Hughes Road and I-45, which has a hay meadow that is mowed and hayed often, reveals that it is a prairie remnant as indicator plants bloom around the signs and post remain standing where the tractors cannot reach.

To become familiar with these plants, observe larger tracts such as Armand Bayou Nature Center, U of H Coastal Center, Sheldon Lake State Park, and Texas City Prairie Preserve. Many remnants may be as small as the area around an obstruction, which cannot be mowed easily or as large as a field that fails to get mowed. There are still prairie seed banks under foundation, areas overshadowed by woody plants such as Chinese Tallow trees, areas grazed to the roots by animals, or mowed continuously before they can flower and be identified.

What surprises would we have if there was a moratorium on mowing for one year or woody plants were removed from old prairie remnants! Keep your eyes alert to blooming plants as you travel and a whole new prairie world will come alive to you.

Wetland Wanderings by Diane Humes

Located around the world are 1896 wetlands so special as to be listed by the Convention on Wetlands of International Significance, or the Ramsar Convention. One such wetland is Horicon Marsh, a vast chunk of central Wisconsin encompassing more than 32,000 acres of (mostly) cattail marsh, with upland areas of woods, and prairie, on the Mississippi Flyway. Horicon Marsh hosts tremendous numbers of waterfowl - 250,000 Canada geese, 100,000 ducks, shorebirds in abundance - especially in fall migration. A great place for birds and birdwatchers; during the course of a year, more than 300 bird species may visit the marsh, with 100 species viewable on any given day. Horicon Marsh is home to snapping turtles, garter snakes, white-tailed deer, red fox, river otter, and muskrat and significant breeding populations of least and American bitterns, black-crowned night herons, American white pelicans, great blue herons, and redhead ducks.



Horicon Marsh formed within the last 12,000 years by glacial scouring of the land to form a shallow lake bed. Rich in vegetation, it became a peat-filled marsh, used by wildlife and American Indians. Its more recent history began when European settlers arrived; the last 160 years tell an interesting and cautionary tale. In 1846 a dam was

built in the town of Horicon to provide hydro-power for a sawmill. This drowned the marsh and created a lake. After 23 years of disputes (neighbors objected to flooding), the dam was breached by order of the Wisconsin State Supreme Court, and the marsh returned. Duck hunting was good from the 1870's until the 1900's, but when the ducks were gone, the land was considered worthless. People began draining the marsh for farms, then from 1910 - 1914 the main ditch was dug to drain the entire marsh.

Farming proved a disaster. Worse yet, the dried peat caught fire and burned and smoldered and smoked. The only way to put out the fires was to re-flood the marsh. Aldo Leopold decried the initial draining of Horicon Marsh in A Sand County Almanac, "Man and beast, plant and soil lived on and with each other in mutual toleration, to the mutual benefit of all. The marsh might have kept on producing hay and prairie chickens, deer and muskrat, crane-music and cranberries forever."

Since 1941, Horicon Marsh has been owned and administered by U.S. Fish and Wildlife and Wisconsin DNR. It is the original example of an outstanding wetland restoration success, but requires human management to manipulate water levels, using the original ditches, to maximize the value of wetlands for wildlife. It is a beautiful place, with 34 miles of trails, boardwalks, and viewing platforms, and visitor centers. Fall migration is not really started, but on a recent visit we saw teal, pelicans, egrets and herons, warblers, geese, bald eagles, monarchs, a painted turtle, muskrat, and swallows filling the sky.

Stay tuned for more wetland news; November 14 - 19 the RAE (Restoring America's Estuaries) Conference will be held in Galveston and we can hear about all the latest!

Glimpse of planets, stars and meteors in August by Emily K. Morris

I don't know whether the moon was in the 7th house, and Jupiter didn't actually align with Mars, but peace seemed to guide the planets, and a love for the outdoors steered some Texas Master Naturalists to want to view the stars on a Thursday night in mid-August.

With Tropical Depression 5 bearing down on the upper Gulf Coast and threatening to cloud up the Aug. 12 sky, TMN 2010 President Diane Humes and husband Dr. Allan Treiman kept their fingers crossed as they

presented fascinating facts about celestial bodies in the August sky to about 40 Master Naturalists gathered at Walter Hall Park in League City for 2½ hours of advanced training.

Equipped with a slide show, handouts and the Lunar and Planetary Institute's portable planetarium, Humes explained the basics of stars and star charts, the source of the Perseid meteor shower, and described the significance of the alignment of Venus, Mars and Saturn on this particular night.

A day after the thinnest sliver of a waxing crescent, the moon cast very little light on the night sky as these three planets aligned just after sunset, giving a spectacular display in the western sky. No telescope was required. A very bright Jupiter, Humes said, would rise just before the sun in the eastern sky.

The best time to view the Perseid meteor shower, she said, was from 10 p.m. until dawn. The Perseids streak through the atmosphere at 140,000 mph every August as Earth passes through the dusty debris left behind by the Swift-Tuttle comet, which loops through the inner solar system once every 133 years, according to Dr. Tony Phillips on the Web site Physorg.com. "Swift-Tuttle's debris zone is so wide, Earth spends weeks inside it," Phillips wrote.

Humes explained that the moon is in the same phase on the same date every three years, making August 2010 (as well as August 2007, 2013, 2016, etc.) one of the best times to view the Perseids. The meteors are best seen in the northern part of the sky or the darkest, Humes said. Some observers have reported seeing up to 50 meteors an hour, but the optimum viewing is far away from light pollution, she added.

As Humes wrapped up her discussion about stars and planets, the group took a break to enjoy cosmos-themed snacks. Milky Way bars, Mars bars, star-shaped cookies and "moon rocks," among others, added a delicious continuity to the evening.

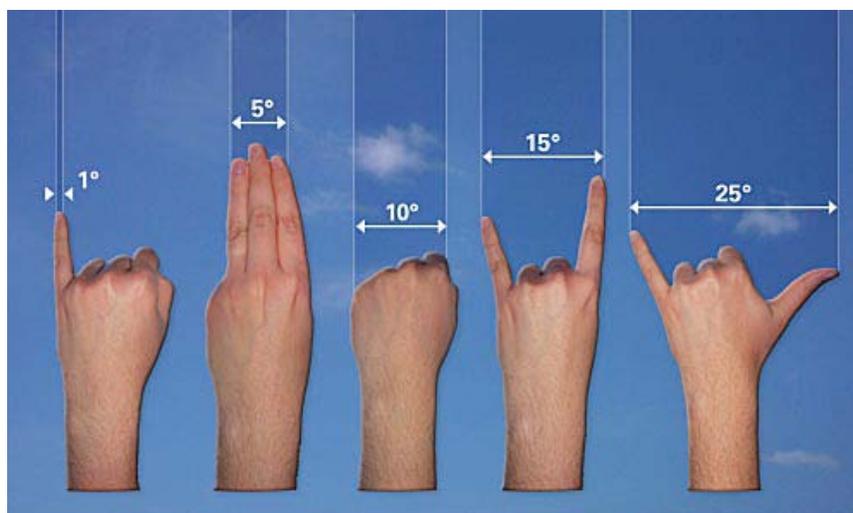
Half of the group then stayed with Treiman as he spoke about meteorites - the chunks of debris that actually make it to Earth's surface. The other half of the group joined Humes in the portable planetarium, on loan from the Lunar and Planetary Institute, where she pointed out constellations and their locations during various times throughout the year.

Treiman has a unique perspective on meteorites. As associate director of science and senior staff scientist with Houston's LPI, he spends much of his time studying the space rocks that actually make it to the surface of

Earth. Meteorites hit Earth more often than most people realize, Treiman said. One reason meteorites appear to be an anomaly is that they often fall in remote areas, and when they fall in more populated areas, the meteorites tend to blend in with Earth rocks.

More meteorites have been found in the Arctic Circle and Antarctica because they are easy to see against a snowy background, he said. The space rocks found in these colder climes also are better preserved than meteorites found in more temperate areas.

As Treiman passed around several space-rock samples, he explained that meteorites are debris from comets or asteroids, or are from planets or moons that have been hit by those celestial space travelers. It takes a very large chunk of debris to traverse the cosmos and actually impact Earth, Treiman said. When it comes to meteorites, size does matter.



Evidence of large meteorites hitting Earth includes the Barringer Crater, near Winslow, Arizona, which was formed by an iron meteorite, measuring 33 to 55 yards in diameter, leaving a crater that is more than half a mile in diameter, Treiman said. TMN's Verva Densmore shared her own sample of

an iron meteorite from Arizona. Other samples, from West Texas and Africa, were chondrites, the most common type of meteorite, Treiman said. Many Master Naturalists commented on how dense and heavy these rocks are compared to a similar-size rock found on Earth.

By the time the planetarium and meteorite discussions were finished, the clouds had dissipated, revealing a clear night sky, complete with the planets and constellations we all had hoped to see. Despite our somewhat-remote location, light pollution blocked out a good 95 percent of the stars, but the brightest were still recognizable and spectacular.

It was still too early and too bright to see the Perseids, but a brilliant Venus was flanked by a pale-yellow Saturn to its upper-right, and an orange-tinted Mars to its upper-left. The three planets came into view just after sunset over the treetops in the western sky, with a sliver of moon below, wrapping up another successful TMN event.

An Introduction to Kayak - Level 1 by Vic Madamba

The Introduction to Kayak Course is designed as a short program emphasizing safety, enjoyment and skill acquisition. The course was held Aug. 28 at Pasadena Lake/Mud Lake and attended by several GBAC-TMN. Those who completed the workshop received five hours of advance training and will be presented an American Canoe Association participation card. Participants



accomplished eight phases of the workshop, which included Introduction and Logistics, Safety, Equipment, Getting Started, Rescue, Strokes, Maneuvers and Wrap Up. Weather-wise, the day was perfect: not very hot with a slight breeze, making the workshop enjoyable onshore and on the water. With four dedicated participants, Alonzo McQueen, Chris Morris, Emily Morris and Mel

Measeles, as well as three great instructors, Allen White,



Mike Hunt and Vic Madamba, what could be expected but fun, fun with a personal touch. After the land portion and a short lunch break, we launched and spent the afternoon on the water. Several who signed up could not make it.

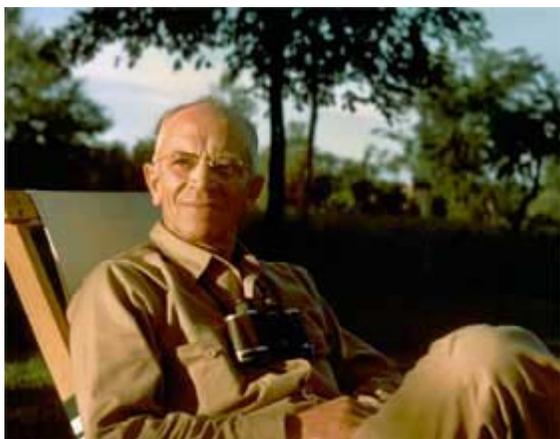
The water portion included such paddle strokes as forward, back draw (stopping), sculling draw/brace, sweep/stern draw, reverse sweep, rudder and rescues. Even though the workshop covered a lot of information, paddling techniques and rescues (demanding), all participants gave the workshop a thumbs up with comments such as: "I've never paddled before, but this course gave me confidence and helped me feel competent in the water," and "Glad I came." If anyone is interested in a follow-up workshop, contact the Advance Training Team. Kayaking in cooler weather is even more enjoyable. Thanks to Mike Hunt for the photos.



Following the Footsteps of Aldo Leopold by Diane Humes

"There are some who can live without wild things and some who cannot."

I recently visited Madison, WI and during my stay decided to follow the footsteps of Aldo Leopold and *A Sand County Almanac*. Traces of him abound in Madison, including his home at 2222 Van Hise St., looking just like 1935 photographs, but with a bronze plaque denoting the home's significance. I was also able to journey to the sand farm along the Wisconsin River where "the shack" still stands. The results of his efforts of 60+ years ago can be seen in the health of the land today.



"We shall never achieve harmony with the land, anymore than we shall achieve absolute justice or liberty for people. In these higher aspirations the important thing is not to achieve but to strive."

Aldo Leopold was born in Burlington, Iowa, January 11, 1887, at the home of his grandparents, Charles and Marie Runge Starker. He was the first of four children born to Carl and Clara Starker Leopold. The families were close-knit, wealthy, German immigrants, fanatical gardeners and outdoorsmen. Young Aldo, whose first language was German, spent his early years running through the woods and bottomlands, hunting, fishing, observing and sketching wildlife and plants, and helping with his grandparents' garden.

Aldo chose to study forestry because of his intense conviction that he must "do something" to conserve wildlife and preserve the health of the land. He graduated from the new Yale Forestry School with an eye for a career in the newly formed U.S. Forest Service. He began as an assistant forester in the Apache National Forest in Arizona Territory - the wildest land there was - and rose rapidly to become Assistant Director for District 3, living in Albuquerque, NM. He met Estella Bergere,

from Santa Fe, NM and they married in 1912. Their family grew to include five children, all of whom became naturalists/conservationists/scientists; three were selected to the National Academy of Sciences.

After thirteen years in the Southwest, working, studying, advocating wilderness preservation, and making a name for himself, Aldo Leopold transferred to the Forest Products Laboratory at the University of Wisconsin in Madison. The family adapted to life in the city and the northwoods and Aldo eventually was hired as the first Professor of Game Management at the University - the first such teaching position in the U.S.

Throughout his career, Aldo Leopold was a prolific writer and served on endless committees to further wildlife conservation. He helped found the Wilderness Society, was instrumental in establishing the Gila Wilderness Area - the first in the U.S. - and the system of National Wildlife Refuges. He planned and directed the first public land restoration project in the U.S. - the University of Wisconsin Arboretum.

"The last word in ignorance is the man who says of an animal or plant, "What good is it?" If the land mechanism as a whole is good, then every part is good, whether we understand it or not. If the biota, in the course of aeons, has built something we like but do not understand, then who but a fool would discard seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering."



Aldo Leopold dedicated the Arboretum in 1934, "The time has come for science to busy itself with the earth itself.

The first step is to reconstruct a sample of what we had to start with. That, in a nutshell, is the Arboretum." The faculty Arboretum Committee had purchased a 245-acre run-down farm, with a plan to reconstruct a sample of Wisconsin's lands pre-settlement and show visitors "what ought to be."

So, during a time of drought, Depression, and Dust Bowl, the dedicated planners and CCC crews took the cleared, plowed, and drained land and rebuilt it. They rescued as many native plant and animal species as possible from around the state where they could be found - along railroad tracks, old cemeteries, hidden patches on farmers' lots.

Today the Arboretum encompasses 1260 acres, plus another 400 acres off-site, of prairies, marshes, hardwood forests, and pine woods (planted by Leopold), a stormwater treatment marsh, horticultural gardens and a visitor center, all open to the public and widely studied by researchers and students. It also publishes the journal *Ecological Restoration*, the first publication describing hands-on methods and scientific underpinnings of land restoration for communities and scientists.

"What avail are forty freedoms without a blank spot on the map?"

The Leopold family enjoyed archery and the outdoors and purchased 120 acres in a rural area along the Wisconsin River near Baraboo - about 30 miles from Madison - for \$8.00 an acre in 1935. It was an abandoned farm with only the foundation of a house, a chicken coop filled with manure, and endless blowing sand. They cleaned out the manure, built a fireplace, raised the roof, and came to love "the shack."



The family spent weekends and vacations at "the shack" for 13 years, taking with them only absolute essentials and using their own labor and what they could scavenge for building tables, benches for their needs. They all worked hard, had fun, and chronicled the plants and

animals on the land - even banded birds - while putting Aldo's ideas about land restoration into practice planting thousands of trees and prairie plants. As he wrote in *Game Management*, "game can be restored by the creative use of the same tools which have heretofore destroyed it - axe, plow, cow, fire, and gun."

"If the individual has a warm personal understanding of land, he will perceive of his own accord that it is something more than a breadbasket. He will see land as a community of which he is only a member, albeit now the dominant one. He will see the beauty, as well as the utility of the whole, and know the two cannot be separated. We love (and make intelligent use of) what we have learned to understand."

Aldo Leopold died of a heart attack in 1948. He was fighting a grass fire at the property adjoining "the shack." Many of the family's experiences at "the shack" are chronicled in *A Sand County Almanac*, which was accepted for publication just one week before his death. It is still in publication and highly prescient after sixty years.

Today the land adjoining "the shack" is held by the Leopold Memorial Conservancy and the Aldo Leopold Foundation, which has opened an educational center to promote sustainability and Leopold's land ethic and allows visits to "the shack." Big bluestem is head high and thick in the former sand fields and the pine trees tower. The Wisconsin River is now dammed upstream, so no longer floods, and travel is certainly easier. The woods are not so quiet, because of the roar of the interstate, but it is still the end of the road. Wildlife is abundant - eagles, herons, turkeys, bluebirds, ground squirrels - lots of mosquitoes! The work continues.

"I realize, that every time I turn on an electric light...I am 'selling out' to the enemies of conservation. When I submit these thoughts to a printing press, I am helping to cut down the woods. When I pour cream in my coffee, I am helping to drain a marsh for cows to graze, and to exterminate the birds of Brazil.... What to do? I see only two courses open to the likes of us. One is to go live on locusts in the wilderness, if there is any wilderness left.... The other is to help businesses and consumers become conservation-minded so they find ways to enjoy some comforts of modern life without ruining the land."

Sources:

- Flader, Susan L. and J. Baird Callicott, eds. *The River of the Mother of God and Other Essays by Aldo Leopold*. The University of Wisconsin Press, 1991.
- Leopold, Aldo. *A Sand County Almanac and Sketches Here and There*. Oxford University Press, 1949.
- Lorbiecki, Marybeth. *Aldo Leopold, A Fierce Green Fire*. Falcon Publishing, Inc., 2005.

Fascinating Jellyfish

Reprinted from the 2010 summer edition of *The Nautilus*, the newsletter of the Southeastern New England Marine Educators Association Inc. (SENEME)

At the 1993 Fall SENEME conference, keynote speaker Barbara Sullivan, an associate marine scientist at the University of Rhode Island, brought a wealth of information and ideas about the subject of her research - jellyfish. Here are a few facts that she presented about these fascinating animals:

Non-stinging - or comb jellies, Phylum Ctenophora (pronounced teenofora)



Comb jellies are common in Galveston Bay and other coastal waters of the Gulf of Mexico every year during the summer in low salinity bays and another species is more common in the winter. They often go unnoticed because they are so clear they can be hard to see, and because they do not sting.

- They are found all over the world's oceans, from the North Pole to the South Pole.
- They swim by beating many little "combs" whose teeth are flexible paddles. These teeth are cilia, the largest cilia in the animal kingdom.
- They are bioluminescent. This means they light up at night (or in the dark) like fireflies giving off a blue-green light if disturbed or touched.
- They do not sting their prey - instead, they use sticky surfaces (much like flypaper) to trap prey. Their prey are mostly copepods (tiny shrimp-like animals).

- They reproduce by laying eggs formed underneath the combs. The same individual is both male and female. -Most live for less than one year, but some live through the winter. -They are the food for some fish we like to eat, such as butterfish.

Stinging jellyfish, Phylum Cnidaria

- The phylum Cnidaria is the group of all animals that have stinging cells (nematocysts) and includes corals, anemones, hydra, etc. The largest jellyfish are in the polar seas, where they can grow to be seven feet in diameter, with 120-foot long tentacles, and they can have as many as 800 tentacles. With about 250 stinging cells per 0.625 square millimeters, this makes a great math problem for counting total number of stingers! The most poisonous jellyfish is the Australian box jelly (a cubomedusa) - responsible for more deaths than sharks. -Many jellyfish "glow in the dark" (are bioluminescent). No one knows why jellyfish do this. There are many hypotheses, but none has yet been proven correct by experiments.
- There are separate male and female jellyfish - unlike comb jellies. -What is a jellyfish made of? Jello is a really good analogy (polysaccharide + protein fibers) - they really are like sugarless Jello - 96 percent water, plus a little carbon and nitrogen (1 percent). Then add salt - 3 percent!
- Over 150 years ago, scientists debated about whether the polyp stage of the jellyfish life cycle was a plant or an animal. No one knew it became a jellyfish.



and they can have as many as 800 tentacles. With about 250 stinging cells per 0.625 square millimeters, this makes a great math problem for counting total number of stingers! The most poisonous jellyfish is the Australian box jelly (a cubomedusa) - responsible for more deaths than

sharks. -Many jellyfish "glow in the dark" (are bioluminescent). No one knows why jellyfish do this. There are many hypotheses, but none has yet been proven correct by experiments.



c) Vinegar & meat tenderizer may help d) If allergic, carry a bee sting kit

Need A Jellyfish Resource? by Nathan Veatch

A wonderful resource is available from the Gulf Coast Research Laboratory, The University of Southern Mississippi. *Sea Jellies of the Mississippi Sound* by Kirsten Larsen and Harriet Perry has great photos and covers the sea jellies (comb jellies and Cnidarians) most of which are also found in our Texas waters. The cannonball or cabbage head is our most common true jellyfish (although they appear white instead of the beautiful pink in the brochure.) The colonial jellyfishes, the Portuguese man-o-war and the by-the-wind sailor jellyfish *Velella* have been coming up this past spring. The latter may look like a piece of plastic after the jellyfish dies. Also listed is the Crystal jelly, *Aequorea*, that I have collected only once on a Galveston beach.

For a good resource on jellyfish, I recommend downloading a PDF file at <http://www.usm.edu/gcrl/publications/GCRL%20invasive%20jellyfish%20brochure.pdf>

- Portuguese men-of-war belong to the phylum Cnidaria, but are not typical jellyfish because they are colonies of animals with so many stinging cells they can kill a human. The cells are also larger than those on other jellyfish.-Jelly Fish Sting treatments:
a) Flush with salt water b) Rub with baking soda

FOGIPS Award Photos



Jerry Mohn, right, presented Mary Jean Hayden an Honored Friend Award at the August 21st Annual Meeting of the Friends of Galveston Island State Park. Mary Jean was recognized for her extraordinary contribution to the educational programs at Galveston Island State Park.



Tawy Muehe, left, presented Diane Humes, an Honored Friend Award at the August 21st Annual Meeting of the Friends of Galveston Island State Park. Diane accepted the award on behalf of the Galveston Bay Area TMN Chapter for their long term leadership and support of restoration and educational activities at Galveston Island State Park.



GBA Chapter- Texas Master Naturalists were well represented at the August 21st Annual Meeting of the Friends of Galveston Island State Park where the chapter received an Honored Friend Award.

Way to go GBA Master Naturalists!

Guppies from Julie

Chapter Honored!

The Friends of Galveston Island State Park presented the Galveston Bay Area Master Naturalists with the "Honored Friend" Award at their Annual Meeting at the Galveston County Club on August 21! The award was in recognition of the Master Naturalists' long term leadership and support of the restoration and educational activities at the park!



It was a great evening with representatives from Texas Parks and Wildlife Department on hand for the ceremony! Congratulations!

Plan to Attend the State Master Naturalist Conference

Fall is a busy time with lots on the books! Plan to attend the State Texas Master Naturalist meeting in New Braunfels on October 22- 24, 2010. The conference is a lot of fun, a great way to meet Master Naturalists from across the state, get new ideas and earn Advanced Training hours!

To learn about the conference and to register, go to <http://txmn.org/2010-state-meeting/> . Hope to see you in New Braunfels!

What can You do for the Spring 2011 Training Class?

Have you seen the posters from World War II? Do you remember JFK's famous line - Ask not what your country.... Well, we need you! The new class will start on February 17, 2011 and the Training Class Steering Committee is gearing up!

The 2011 training will be different - field trips back to the Texas City Dike and much more! Join the Training Class Steering Committee and help plan the spring class!

To volunteer, please give Julie a call at 281-309-5063 or drop an email to jmassey@ag.tamu.edu. Answer the call and have fun!

Enjoy the fall! See you in the field and classroom!

Julie



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Texas AgriLife Extension Service programs serve people of all ages regardless of socioeconomic level, race, color, sex, religion, disability, or national origin. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Court of Texas cooperating.

The Midden

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

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Dickinson, TX 77539-6831

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The Midden Deadline For the December Issue

November 1

If you have Advanced Training or Volunteer Opportunities, please submit information to Diane Humes treimanhumes@earthlink.net

