



Brazoria NWR Celebrates 45 Years

On October 20, 1966, Brazoria NWR was established with the acquisition of 6,398 acres. This original acquisition includes the public use area today referred to as the Big Slough Recreation Area. Within five months, Ray Fleetwood was hired as the first manager, bringing with him 28 years of experience with the Bureau of Sport Fisheries and Wildlife. In the first Annual Narrative for the calendar year 1967, Ray recorded his observations and activities on the new refuge. The following are photographs and excerpts (in blue) from that first year.

Big Slough, ... contained a good supply (water) during the winter and spring months, but long stretches were dry by the middle of June; in fact only a few places contained water of any depth and the nutria, mottled ducks, and alligators were forced into these.

The ponds we know today within the Big Slough Auto Tour were constructed during that first year. A new

trail from the Club House to the Intracoastal Waterway created two fresh water impoundments where it crossed two swales (Olney and Crosstrail Ponds). The 4 mile trail is on Government owned land but it is narrow and too low in places. More work will have to be done before it will be an all weather trail (road). A dragline built 8 dikes (Big Slough crossings and Teal Pond). A shallow pond was formed by the construction of a 66 yard dike across a swale (Gatornest Pond). We had created fresh water impoundments of approximately 40 acres and these

may be the reason why there were more waterfowl on the refuge during the winter of 1967-68 than that of 1966-67.

Ray appreciated the need to get to know the refuge he managed. It is my feeling that a adequate survey of the flora of a new refuge should be made as soon as possible, preferably before much development. With this in mind, a survey was started soon after my arrival." Trees and shrubs are few and far between on the upland prairie. The only trees are the Hackberry and Saltcedar.



From a low mound, refuge manager Raymond J. Fleetwood, looks over the domain at the end of Big Slough. From such a vantage point, nearly all the refuge can be seen.

Inside this issue:

Photography Contest	2
On Assignment—West Texas Wildfires	2
Chinese tallow	3
Feeling the Drought	3
YCC 2011	5
Junior Naturalist—Crossword Puzzle	5
Friends Happenings	6
Species Profile—Coquina Clam	6

Dates of Interest

- Friends Meeting—November 4, 2:30—4:00 @ Hudson Woods— Topic: Impacts of Drought
- Christmas Bird Counts-San Bernard - Dec. 16, Freeport - Dec. 18
- Migration Celebration— Kickoff Dinner-April 13 with full day events at San Bernard April 21 & 22

Brazoria (continued)



Twelve dikes across the five mile course of Big Slough through the refuge creates pools for the storage of fresh water, which can be pumped from Bastrop Bayou following very heavy rains upstream. Individual pools may be pumped dry and planted to food producing crops for waterfowl, then flooded when waterfowl return.

Waterfowl was clearly the primary species for management. In addition to the construction of ponds, green browse (wheat) and several other food crops were planted. An irregular field containing approximately 62 acres lying north of Big Slough and between the "gut" and west boundary (woodland NE of Discovery Center) and covered with gulf Cordgrass and scattered Huisache bushes and Cacti was double disked ...and seeded to wheat... Natural fertility plus commercial fertilizers produced an excellent crop of green browse. Up to Dec. 13 only 4 Canada geese and 17 sandhill cranes had been seen in the wheat field... After the middle of the month geese must have gone there in hordes for when I returned

comes to selecting feeding sites. Last summer when the pools at the South end of Big Slough began to dry up, large flocks of Ibis, Roseate Spoonbill, Wood Ibis, American and Snowy Egrets, Little Blue Herons moved in to feed on the minnows and other

from vacation January 2, large flocks of snow geese had the wheat browsed short over large areas.

Ray observed and recorded his wildlife observations. The following are among his comments. Birds are pretty smart when it

most abundant fur bearer on the refuge, though naturally confined to Big Slough and Gatornest Pond. It is estimated that there are 50 per mile along Big Slough and since the Slough is 5 miles long on the refuge there must be 200 Nutria. A first impression of Brazoria refuge would be that Rattlesnakes should not be common, but a little walking or driving over the refuge will change this. The largest predator on the refuge is the Red Wolf and less than 6 individuals were observed during the year. The coyote occurs in Brazoria County and individuals un-



All wildlife refuges along the gulf coast are threatened by hurricanes. Until high levees are constructed along the coast, the only course is to endure. Dikes, if high enough, might protect certain areas. Here the waters of Hurricane Beulah pour over a road on the Brazoria Refuge.



In waterfowl management, emphasis is placed on the factory unit & the indispensable product. Depicted here, a brood of Mottled ducks, less than a week old, ponder their next move on Big Slough. Creation of breeding habitat, protection and good regulations are direct ways of insuring waterfowl production.

marine life. During the period that the Spoonbills were on the refuge, they appeared attached to one particular pool. To an observer other dried up pools looked just as attractive but not to the Spoonbill.

The nutria undoubtedly is the

doubtedly cross the refuge in search of food. It is easy to fall into the habit of calling them wolves since the ranchers seem to think they are red wolves.

The next time you drive the tour loop at Brazoria, take a moment to appreciate the conservation history of this refuge and the opportunities. Not over 50 visitors, including those that called at the office, for the year. Recreation was limited to offshore fishing in Nick's Lake which is not permitted while large concentrations of waterfowl were on the refuge. As far as visitors are concerned we are starting at the bottom.

Dow Woods Grand Opening Celebrating Partnerships and Hard Work



Wayne Muil (center), with Dow Texas Operations, does the honors of cutting the ribbon to officially open the Dow Woods Trails with (L to R) Texas Parks and Wildlife Departments Grants Coordinator Trey Cooksey; Brazoria Commissioner Dude Payne; Friends of Brazoria Wildlife Refuges President Ed Barrios; and San Bernard NWR Manager, Shane Kasson.

On October 15, 2011, a Grand Opening Celebration was held at the Dow Woods Unit of the San Bernard National Wildlife Refuge. The event officially opens two public use trails on the bottomland unit located in Lake Jackson, Texas.

Construction of the trails and associate facilities began nearly two years ago, when the Friends of Brazoria Wildlife Refuges received a \$200,000 Texas Recreational Trails grant from Texas Parks and Wildlife.

Following initial notification, the Refuge needed to prepare documents showing that the development of a public use program at Dow Woods would not result in significant adverse environmental or archeological impacts to resource. Once the National Environmental Policy Act and Archeological Resource Protection Act were completed, refuge staff and volunteers set to work.

Two contracts; construction of restrooms and construction of the .9 mile concrete loop trail, were the initial projects. The

restrooms were complete in Autumn 2010 followed by the trail in March 2011. Among the lessons learned: trying to place animal tracks in drying cement in the middle of the summer, is difficult and we will never spray stain on a concrete trail again.

With these two projects complete, we opened the Unit including access to the concrete loop trail dedicated to naturalists John and Gloria Tveten.

While visitors were able to enjoy forest and wildlife along this trail. Work continued on the southern, Bayou Loop Trail. The first task was the completion of the metal edging. After two volunteer and one staff work day, the Brazoria NWR Youth Conservation Corp took up the task. Although they spent nearly one half of their 8 week summer job carrying, laying, and pounding in the metal edging, they completed the task. The last task fell to Staff and particularly the five staff members of San Bernard. Throughout August and into September, staff worked three days a week hauling and spreading

crushed concrete. By mid September, there was light at the end of the tunnel and we transitioned to spreading crushed Granite. Volunteer assistance on the final task was gratefully accepted. When all was complete, the trail looked fantastic.

The dedication and ribbon cutting ceremonies began at 2 p.m., with refreshments served afterward. More that 100 folks attended the Celebration. An open house hosted by the Friends group included guided trail walks with staff and naturalist throughout the morning.

Dow Woods is located on Old Angleton Road, just three-quarters of a mile north of FM 2004. Its close proximity to several cities make it easily accessible for nature observation, birding, or quiet reflection. It is open daily from sunrise to sunset.

The Dow Woods Unit was donated by Dow Texas Operations in 2008. The trails and other improvements are the result of generous donations of money and time by the Texas Parks & Wildlife Texas Recreational Trail Fund, the U.S. Fish & Wildlife Service, The Dow Chemical Company Foundation, Katherine McGovern and numerous volunteers.

The celebration is hosted by Friends of Brazoria Wildlife Refuges, The Dow Chemical Company Texas Operations, and U.S. Fish and Wildlife Service.

VOLUNTEERS NEEDED

To Assist at the Discovery Center during winter months.

Monday thru Friday from 8:00 - 12:00
Saturday and Sunday from 8:00 - 4:00

Contact: Tom Schneider at 979-964-4011 or Tom_Schneider@fws.gov

Austin's Woods Additions—2011

Approaching the cap

By Mike Lange

Since September 1, 2010 the U.S. Fish and Wildlife Service has acquired 14 additional important tracts totaling approximately 2,000 acres as Austin's Woods additions in the Columbia Bottomlands, to the San Bernard NWR. On September 3, 2010 the Service acquired the Wisch Tract containing 288 acres along the San Bernard River. This beautiful tract has old growth cypress trees along the San Bernard River. Some of these trees may be over 800 years old. This tract is located at the intersection of FM 1301 and FM 1459. On October 20, 2010 the Service acquired the 170 acre Buchanan Tract which is part of the Old Ocean Swamp near Sweeny. On December 15th the 110 acre Waterstone Conser-

vation Easement was donated to the refuge. This easement donation is adjacent to the Buffalo Creek Unit. On March 11, 2011 a small but important 1.8 acre tract was added to the refuge on Cedar Lake Creek at the end of CR 318 and will be used for a parking area for access to the creek. This complicated purchase required a lot of time and the expert help from Tom Smith with the National Fish and Wildlife Foundation. On May 4, 2011 the Service completed the purchase of the Media Luna Ranch. This 1,315 acre tract is located on Cedar Lake Creek adjacent to Texas Parks and Wildlife's Stringfellow Wildlife Management Area. It was acquired through a partnership with the Natural Resources Conservation Service which provided most of the funds

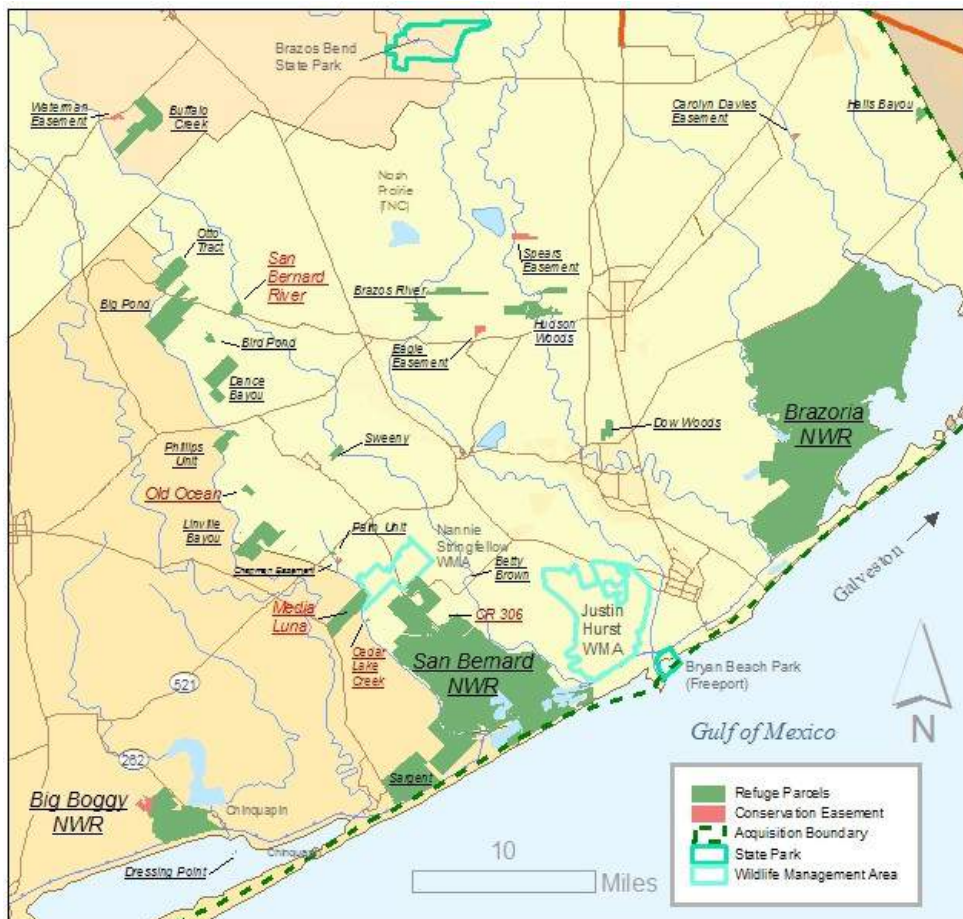


Mike Lange among cypress knees along the San Bernard river on the Wisch tract.

required for acquisition through the Wetlands Reserve Program. On June 2, the Service closed on 7 additional lots on CR 306 and FM 2918 totaling approximately 56 acres. On September 18, 2011 the Service closed on the Vickery Tract on Cedar Lake Creek below FM 2611. This tract is approximately 48 acres in size across from the core San Bernard Refuge.

The Service has purchase contracts for an additional 6,000 acres (including Eagle Nest Lake) which should close by the end of the calendar year. More than 4,000 acres are also being actively worked on by Mike Lange, Service Realty Staff and partners, which if acquired in 2012, will enable the Service to reach the 28,000 acre cap originally set in the 1997 Austin's Woods Conservation Plan.

Special thanks go to the many individual partners and donors and partner organizations which continue to support the conservation of the Columbia Bottomlands, especially Tom Smith with the National Fish and Wildlife Foundation, the Natural Resources Conservation Service, the Community Foundation of Brazoria County, Houston Audubon, the Gulf Coast Bird Observatory, The Trust for Public Land, the Conservation Fund, and the Friends of Brazoria Wildlife Refuges.



Discovery Center—Complete!

It seemed like it would never happen, what with the planning and waiting going on for years. In 2009, the Friends utilized a challenge cost-share grant from the Service along with donations from Union Pacific and Kathryn McGovern to contract the construction of the interpretive wall and diorama panels. On October 11, events unfolded rapidly and in just two days Scott Clarke, from Rosene Creations in Atlanta, Georgia, brought the project to completion. The new exhibits in the visitor contact area of the Discovery Center at Brazoria NWR were installed!

These exhibits use magnificent original art work, photography, tactile elements, and sounds to introduce visitors to some of the plants and animals that compose

the habitats at Brazoria. Upon entering the Discovery Center, visitors are greeted with a listing of the four major habitats of the area: the coastal woodlands, freshwater marsh, saltwater marsh, and prairie.



Panels surrounding the central woodlands diorama provide insights to the plants and

animals of that environment, while the corner diorama of a freshwater marsh is adjacent to a large wall panel illustrating that habitat in more detail. That panel is followed by another on the coastal prairie, and then still another on the saltwater marsh.

The first educational use of these exhibits was with 65 seventh graders from Freeport Intermediate and it was exciting watching environmental education in action! Docents conducting the session were enthusiastic and commented at the end of the day that the new exhibits were ideal for a variety of presentation techniques and self-discovery. On your next visit, we hope you will get a chance to check it out.

Junior Naturalist

Keeping Texas Clean—Celebrating 25 Years



K E U L Y U M O C T P Z
 D N D A E B Z F O O O A
 O V G N W U J G M G P F
 J I E D G L P V M A A L
 C R C F I B O S U R P O
 L O F I F S A I N B E R
 E N Y L V X O F I A R E
 A M F L E I Q D T G T S
 N E O T H R C X Y E A C
 T N A L U M I N U M V E
 N T G O P L A S T I C N
 B O W R E C Y C L E Z T

Word List

- ALUMINUM
- BULBS
- CIVIC
- CLEAN
- COMMUNITY
- ENVIRONMENT
- FLORESCENT
- GARBAGE
- LANDFILL
- OUR
- PAPER
- PLASTIC
- RECYCLE
- TEXAS

The Don't Mess with Texas champagne is celebrating 25 years. The successful outreach effort has been educating Texans about litter prevention since 1986. Texas Departments of Transportation's litter prevention program includes Adopt-a-Highway and a grassroots partnership with Keep Texas Beautiful. Don't Mess with Texas activities also include a spring "Trash-Off," community outreach, a scholarship, a corporate partner program, and a photo album where Texans can share their iconic Texas images. For more information, visit www.DontMessWithTexas.org.



Friends Happenings



Texas Mid-coast National Wildlife Refuge Complex

2547 CR 316
Brazoria, Texas 77422

Phone: 979-964-4011
Fax: 979-964-4012

Preserving and protecting the wildlife and habitat within the Texas Mid-coast region and providing opportunities for visitors to enjoy these unique lands.

On the Web

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

<http://www.refugefriends.org>

The Friends of Brazoria Wildlife Refuges supports the Mid-coast Refuges through partnering on public use, outreach, and habitat projects.

- The next general meeting of the Friends will be held on November 4, from 2:30 pm till 4:00 pm at the Hudson Woods Discovery Outpost. This will be a group discussion by refuge biologist, botanists, and staff on how they are dealing with the drought. Also measures to be taken in light of the tens-of-thousands of migratory birds due to arrive.
- Cathy Standard donated \$3,000. for a memorial shelter for her late dad Al Clarke. This shelter will be constructed across from the Discovery Center, and used for the fish casting activity during the field trips.
- On September 26, the Friends was awarded a \$ 5,000 birding initiative grant from the National Fish and Wildlife Foundation. This birding initiative will improve, support and increase public birding at the Brazoria National Wildlife Refuge through birding facilities, updated resources, events and publicity. The Friends is committed to a \$ 2,000 labor and \$200 cash match.
- The Friends received a \$300,000 grant from the Houston Endowment Inc. for pre-acquisition cost like appraisals, surveys, land consulting and closing costs of the Columbia Bottomland.
- Planning for the 2012 Migration Celebration has begun. This annual outreach event is scheduled for April 20 and 21 at the San Bernard NWR. The annual kick-off dinner is scheduled for April 13 at River Place in Freeport, Texas. For more information, contact David Plunkett, visit the website (www.migrationcelebration.org) or on Facebook.

Species Profile Speckled Worm Eel *Myrophis punctatus*

By Jennifer Wilson

Labor Day Sunday; Sue Heath and I searched for banded American oyster-catchers on Surfside Beach. As we traveled up the beach we noticed that the gulls were in an uproar over a highly abundant, snake-like prey item they were picking off the ground. We watched curiously until one of the gulls dropped its meal, and it attempted to crawl away. A quick glimpse before it was carried off by another gull identified it as an eel. The spectacle of gulls feuding over these creatures was common all along the beach. Groups of laughing gulls were engrossed in attempting to steal eels from each other. A lesser black-backed gull was able to swallow a 2-foot eel uninterrupted by the smaller gulls, but it had to repeatedly cough up the eel to reposition

it in its crop. Further observation revealed that the eels were actually partially buried in the exposed sand on the beach-how did they get there? Eventually one juvenile laughing gull gave up and left it's eel half-buried in the sand, which I took home for identification.



Lesser black-backed gull swallowing a 2ft. speckled worm eel.

According to Hoese and Moore's Fishes of the Gulf of Mexico, our eel was the

speckled worm eel. It is a common yet rarely observed inhabitant of muddy bottoms on the Texas Gulf Coast. They use their tails to create burrows they use for concealment. Much of its life cycle is spent in bay habitat but it may also range into fresh water. It must return to the ocean to spawn. All of our eels were at the 2-foot maximum length for this species, suggesting they were mature. Several days earlier, high tides had reached the dune line. A front followed, quickly pushing the water away from the shore. Our guess was that these eels were present in the surf when the tide surged and pushed water to the dune line. They likely then settled down to burrow into the beach, which was covered by water. When the front pushed the tide back out, the eels were trapped and became food for the gulls.