



Colonial Waterbirds A Texas Treasure

By Jennifer Wilson

Visitors to Brazoria and San Bernard quickly notice the feeding activity of wading birds such as egrets, herons, ibises, and spoonbills. These birds are referred to as colonial waterbirds and include a diversity of wading birds, pelicans, gulls and tern species that nest in large groups of individuals, known as colonies. These colonies are often located on bay islands surrounded by water but may use inland locations as well. Successful nesting locations are near food and water and have suitable surfaces for nest construction. Brazoria Refuge’s tour loop supports nesting white ibis at the adjacent Drum Bay colony by providing fresh water impoundments during the summer months. White ibis must feed their young freshwater invertebrates.

Successful nesting locations also protect nests from mammalian predators, such as raccoons. Deep pockets of mud discourage predators wading near the



Drum Bay colonies. West Bay (San Luis Pass) Bird Island is bound by a dangerous current running the island boundary. Big Boggy Refuge’s Dressing Point Island is about a mile from the mainland. Brazoria refuge’s Wolf Lake Skimmer colony is surrounded by an electric fence. Birds nesting in trees in deep water close to the shoreline at San Bernard’s Wolfweed Complex are often protected by alligators that feed below them in the water. These barriers are varied from one location to another, but the function is always the same.

Colonial waterbird colonies are also sensitive to human presence. Entry into active nesting sites causes nesting birds to leave eggs and chicks, exposing them to predation by gulls and even heat exposure. Fishermen parking their boats to fish from the shoreline on these islands can flush birds and prevent adults from returning to tend eggs or chicks. Boaters wanting to picnic on these islands disrupt nesting activity and can cause colony failure; this often happens in association with Memorial Day and the July

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Dates of Interest

- Migration Celebration April 15, 16 & 17
- Volunteer Work Day, May 14—Dow Woods -8 am to noon. Lunch at noon.
- Friends Meeting—June 12, 2:30—4:00 @ Hudson Woods.

Colonial Waterbirds—cont.

Fourth holidays. To discourage this disturbance, the refuge colonies are posted with signs prohibiting access.

Unfortunately, the number of nesting sites is a limiting factor to Texas colonial waterbirds. Existing sites are faced with physical threats such as habitat loss and degradation from sea level rise, wind-driven erosion, disturbance and development. In spite of this, Texas has an array of nesting birds the order of which is not matched by other Gulf Coast states. Our state hosts noteworthy rarities including the state-threatened Reddish Egret.

These birds and their nests are protected by the Migratory Bird Treaty Act. Harassing them during the nesting season is a punishable offense, and is easily avoided. Colonies will often tolerate boats fishing nearby. The birds do not flush and will continue trips to and from their nests; feeding and protecting their young. However, beaching a boat on a nesting island or

walking on it causes disturbance and nesting losses. To help protect these birds, you are encouraged to contact the U.S. Fish and Wildlife Service at 979-964-4011 if you observe a problem.



Denis Mudderman

Recognized as NWRS 2011 Volunteer of the Year

By Tom Schneider

Seasonal volunteer, Denis Mudderman combines his technological expertise with his enthusiasm for environmental education and public outreach to continually find new and creative ways to promote the conservation mission of Tamarac NWR in Minnesota and the Texas Mid-Coast Refuge Complex.

On March 17 he received the National Wildlife Refuge Systems 2011 Volunteer of the Year Award. Since 2005, he has contributed more than 7,000 volunteer hours at Tamarac NWR as a seasonal

volunteer. In addition he has spent the last 3 winters volunteering at Texas Mid-coast contributing more than 2800 hours - - resulting in a cumulative total of more than 10,000 volunteer hours!

At Texas Mid-Coast Refuge Complex, Denis helps with environmental education field trips. In 2010, he designed the curriculum for the very popular nature photography mini-course, which has been added to the Environmental Education program. Denis is also a board member of the Friends of Brazoria Wildlife Refuges and a member of the Texas Master Naturalists, and helps with outreach

events, write grants, and created a new Friends brochure. He helps plan and execute the Refuge Complex's Migration Celebration (MC) and coordinates the MC photo contest.



Volunteer Denis Mudderman presenting crab ecology to 4th grade class.

Friends Receive NAWCA Grant

By Ron Bisbee

The Friends has been approved for another grant from the US Fish & Wildlife Service under the North American Wetland Conservation Act in the amount of \$32,000. The project entitled, "Gulf Coast Mottled Duck Conservation Plan – Phase 4" will continue work that was begun by Texas Rice Industry Coalition for the Environment (Texas RICE). The work includes herbicide treatment of

2,000 acres of prairie and fresh marshes to eliminate Chinese tallow at Brazoria NWR and the creation of 85 acres of wetlands in the rice farming unit similar to the project completed last year under Phase 3. The water delivery system will also be refurbished to better be able to flood these wetlands in time of drought. At San Bernard NWR, the project will rehabilitate eroded levees in the Pentagon Marsh to enhance 65 acres of wetlands.

Previous work in this area has improved mottled duck brood and molting habitat.

The match for this grant was provided by Texas RICE in the amount of \$87,000. The work at Brazoria NWR has already begun with Bill Stransky providing on site co-ordination. The work at the Pentagon Marsh will require some permitting before work can commence.

From Ashes Comes New Life

By Thomas Adams

During the first week of March, Mid-coast fire-fighters gathered at the Buffalo Creek Unit to conduct the second prescribed burn on 800 acres of prairie since the property was acquired six years ago. Located about one hour north of the San Bernard Refuge on CR 442 outside of Needeville, the refuge has begun to restore native prairie. This unit is the most significant acquisition of prairie habitat on San Bernard to date. However at the time of purchase, the quality of the prairie was in serious decline due to cattle overgrazing and lack of natural wildfires.



For a prairie to maintain a balance of productive grasses and wildflowers it must from time to time experience a wildfire to burn off old, suffocating vegetation,

replenish the soil with nutritious ash and curtail the introduction of woody plants. Na-



tive prairie plants have evolved to regrow after wildfires because their growing structures originate under the soil layer which serves as a barrier to heat. Young woody plants do not and therefore are susceptible to damage or death by a wildfire in their seedling and sapling stages. A healthy prairie contains a very small percentage of shrubs and trees. If not for wildfires these woody species would out-compete grasses and in less than a decade the prairie would become a young forest or shrubland. The fire program of the Texas Mid-coast seeks to mimic this natural fire event on all of its grassland units.

A Refuge Adventure

By Bryan Adams

Avery Watkins, a fourth grader at Brazosport ISD's O.M. Roberts Elementary. She recently wrote a paper which had to be on the topic "The best adventure ever". Of all the possibilities, she chose her recent trip to Brazoria National Wildlife Refuge with her class.

Below is her letter without any alterations.

"I bet this is going to be the best adventure ever!" said Avery. "Me too! Catch ya later then!" Katie said quickly.

Going to the refuge was as long as a trail ride, but very fun. We saw lots of bulls, alligators and muddy marshes! There were also tons of beautiful cattails.

The first thing we did was we rode on the bus! We all go a pair of cool binoculars! We also saw lots of interesting animals such as alligators, birds, and other amazing creatures.

Next, we quickly walked to the next station to catch bugs and other cool stuff like that! It also smelled as bad as a garbage truck! Yuck! But it was very fun! I caught a nymph, a water

boatman beetle, and some other awesome stuff! I'd remark I probly caught the most bugs yet!

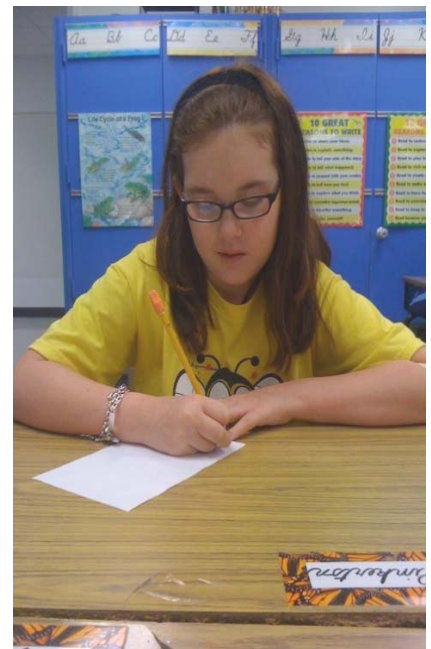
Finally, we slowly skipped to the lab! I'm telling you this guy had tons of awesome stuff to look at! He had butterfly wings, bees, and fire ants! The fire ants were out of this world amazing! He also had some familiar water creatures too! This was my favorite station! We even got to walk around and look at other peoples bugs!

I had learned lots of very interesting and strange things, but had fun in all the activities and stations! This was definitely the best adventure ever!

In addition to Avery's writing, here are a few other comments from students who have visited the Refuge:

"Dear Wildlife Refuge Volunteers, I had a great learning experience, so here's to you. Thank you! I had fun fishing, learning about birds, catching water critters, looking at ants and snake skin under the microscopes, looking at animals like alligators and snakes. I love animals a lot!!"

"But the volunteers, man, y'all just lighted my day!"



Fourth Grader, Avery Watkins

And from a teacher: "Thank you for all you and the volunteers do. It would be awesome if there were more people on the earth like you guys."

Migration Celebration Celebrates its 17th Year

By David Plunkett, Migration Celebration Chairman

Thanks to numerous volunteers over the years, the annual Migration Celebration celebrates its 17th year in April. Over the years it has grown and changed but it all started back in 1994 with a idea to build ecotourism in Brazoria County and capture the San Jacinto Day Holiday for the event. The initial planning meeting was in a vehicle as the Refuge Manager Ron Bisbee, Outdoor Rec. Planner Tom Schneider and Volunteers Dick Hickner and Phil Huxford made their way home from attending an ecotourism conference in the Valley. The focus was easy; the spring migration of songbirds. The audience; birders near and far.

The early events were held at offsite facilities including motels, Gulf Coast Bird Observatory and The Center for Arts and

Sciences. The event focused on presentations and bus tours to birding destinations; including the refuges. Attendance at the early events was between 300 and 400. One of the most popular keynote presentations was by Dr. Sidney Gauthreaux, Clemson University, speaking on tracking bird migrations with weather radar. His talk brought attention to the value of the Columbia Bottomlands.

Over time we learned that serious birders tend to be interested in time in the field on their own terms rather than attending big events. However, we discovered local residents were excited to learn about the refuges and enjoy such a great resource in their own backyard. Thus, the event became more of a public outreach and education event for families from the local area.

Having been one of those local folks in

the late 1990s, I remember the tours, the talks, the t-shirts and now recognize how little I knew back then. But it was a lot of fun even if we were paying for tours and talks.

In 2003, we started hosting the event at the San Bernard NWR. A Friday night fundraising event for the Friends of Brazoria Wildlife Refuges has been added and all our Saturday/Sunday events are now free. Last year, over 1000 people attended the Saturday session of Migration Celebration with many, many kids involved. Over 140 volunteers worked to make this a fun and informative event for all our visitors. Plans are bigger/better and even more family oriented this year while still keeping key birding elements.

Dick, Phil, Ron and Tom never realized just how far that drive from the Valley would take them.

NOW OPEN

Dow Woods is now open. On March 14, the unit along with the .9 mile accessible Tveten Trail was opened. The public use area is open from sunrise to sunset. The unit is located .8 miles north of the intersection of FM 2004 and CR228. Join us May 14 for a trail work day on the southern trail. Bring rakes for spreading pre-placed crushed concrete. Lunch is provided.

Refuge Law Enforcement—An Essential Tool for Protecting Refuge Resources

Law Enforcement is an integral part of managing the Texas Mid-Coast Refuges. With over 90,000 acres of public lands to protect, our law enforcement officers patrol the refuges in vehicles, boats, and ATV's ensuring that wildlife and habitat are protected and ensuring public safety. Although they check for violations of both Federal and State Law, most contacts with the public are non-enforcement contacts. The majority of the refuge lands are closed to the public, ensuring that wildlife has a sanctuary where they are not disturbed and are able to sustain current populations. Entry into these

closed areas is by Special Use Permits (SUP) only, where the use has been evaluated and deemed both appropriate and compatible with the purposes of the refuge. SUP's are primarily issued for research purposes.



The public use areas provide an opportunity for visitors to observe and photograph wildlife in a natural setting as well as participate in traditional wildlife-oriented recreation including fishing and waterfowl hunting during State seasons. We want visitors to come and enjoy their refuges, but to act in ways that help protect the wildlife and habitat as well as other visitors. This includes the posted speed limits. Please keep in mind that the speed limits on the refuge are set for the protection of visitors and wildlife and are strictly enforced.

Eradicating Salt Cedars

By Thomas Adams

Salt Cedar (*Tamarix gallica*) is a species of tree from Asia and was brought to Texas by homesteaders for windbreaks at the turn of the 20th century. In the western United States it is a major pest along waterways with the potential for each mature tree to take up 300 gallons of water each day. The tree is highly invasive; releasing thousands of fluffy seeds into the wind each year. At the Mid-coast Refuges, salt cedars spread is inhibited due to the clay nature of soil where it is established. Nevertheless for a hundred years or more it has establish itself on the refuges along sloughs and the spoil sites along the Intracoastal Waterway.

Three years ago the refuge began controlling the spread of salt cedar. The ap-

proach to eradicating salt cedar is systematic and often labor intensive. Currently the refuge is using crews to cut the trees



Chainsaw operator entering a dog-hair stand of salt cedar to expose the stump.

proach to eradicating salt cedar is systematic and often labor intensive. Currently the refuge is using crews to cut the trees down with chainsaws and spraying the exposed stump with a blue dye and herbicide. It is hardly an easy task to say the least. Old growth salt cedar trees have



The stumps are sprayed with herbicide which is carried down to the roots and kills the tree.

Junior Birders

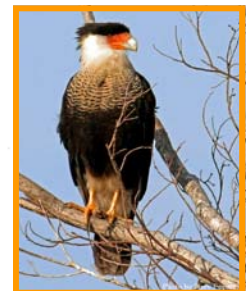
Below is a list of birds commonly seen on the Refuges. Can you find them in the word search? Now try and find them on the Refuges!

Feathered Friends

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

BLACKBIRD
 CARACARA
 CORMORANT
 CUCKOO
 DOVE
 EAGLE
 EGRET
 FLYCATCHER
 GRACKLE
 GULL
 HUMMINGBIRD
 IBIS
 KITE
 MEADOWLARK
 ORIOLE
 OWL
 QUAIL
 RAIL
 SANDPIPER
 SPARROW

SWALLOW
 WARBLER
 WOODPECKER
 WREN



Do you know what this bird is?



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 meeting of the Friends will be held on June 12 at 2:30 pm at the Hudson Woods Unit, Discovery Outpost. Jennifer Sanchez will preview the Draft CCP.
- With the completion of the Tveten Trail and restroom facilities, remaining Texas Trail Grant funds will be utilized for the concrete and rock material on the Bayou Loop Trail at Dow Woods. A volunteer work day has been scheduled for May 14 from 8:00 to 12:00. Volunteers will use rakes to spread the crushed concrete within the metal edging. Also, the 48' octagon pavilion and concrete foundation will be contracted this spring as well.
- Contracted by the Friends, Rosene Creative Services (RCS) continues to work on the three interpretive panels for the Discovery Center. Preliminary artwork and text have been approved and we are awaiting final artwork prior to production. The Freshwater, Prairie and Saltwater habitat panels are scheduled for installation early summer.
- Planning for the 2011 Migration Celebration continues. This annual outreach event is scheduled for April 15th at RiverPlace in Freeport and April 16 - 17th at the San Bernard NWR. Over 100 volunteers assisted with this event in 2010 as over 1000 visitors enjoyed numerous activities. For more information, contact David Plunkett, Migration Celebration Chairman, visit the website (www.migrationcelebration.org), or find us on Facebook.

Species Profile

Entireleaf Indian Paintbrush (*Castilleja indivisa*)



The showy Indian paintbrush, also called prairiefire, is a common wildflower not only in Texas but across the country. The local species, entireleaf Indian paintbrush is found in Texas, Louisiana and Arkansas. It is one of 200 paintbrush species found across North America and Asia. Indian paintbrush attracts both hummingbirds and insects, including butterflies, feeding on the nectar.

As a member of the figwort or snapdragon family, called Scrophulariaceae. This family includes many species with known medicinal properties. The Indian paintbrush is no exception. The "flowers" are edible and Native Americans consumed small quantities of flowers to treat rheumatism, boost their immune system, and create silky hair. CAUTION: The stem and roots are not edible and become toxic.

Unlike most of the species in the Scrophulariaceae family, the bright yellow, orange and red colors are not flower petals but bracts, below the flower. The flowers are small and relatively inconspicuous. The seeds are formed in capsules at the base of each flower. Seeds can be collected in April and May when the capsules have dried.

Indian paintbrush are hemiparasitic, primarily on grasses. The paintbrush seedling's roots will grow until they touch the roots of another plant; penetrating these host roots, the paintbrush will obtain a portion of their nutrients from the host plant. For this reason, it cannot be easily transplanted.



Indian paintbrush in front of Complex Office.