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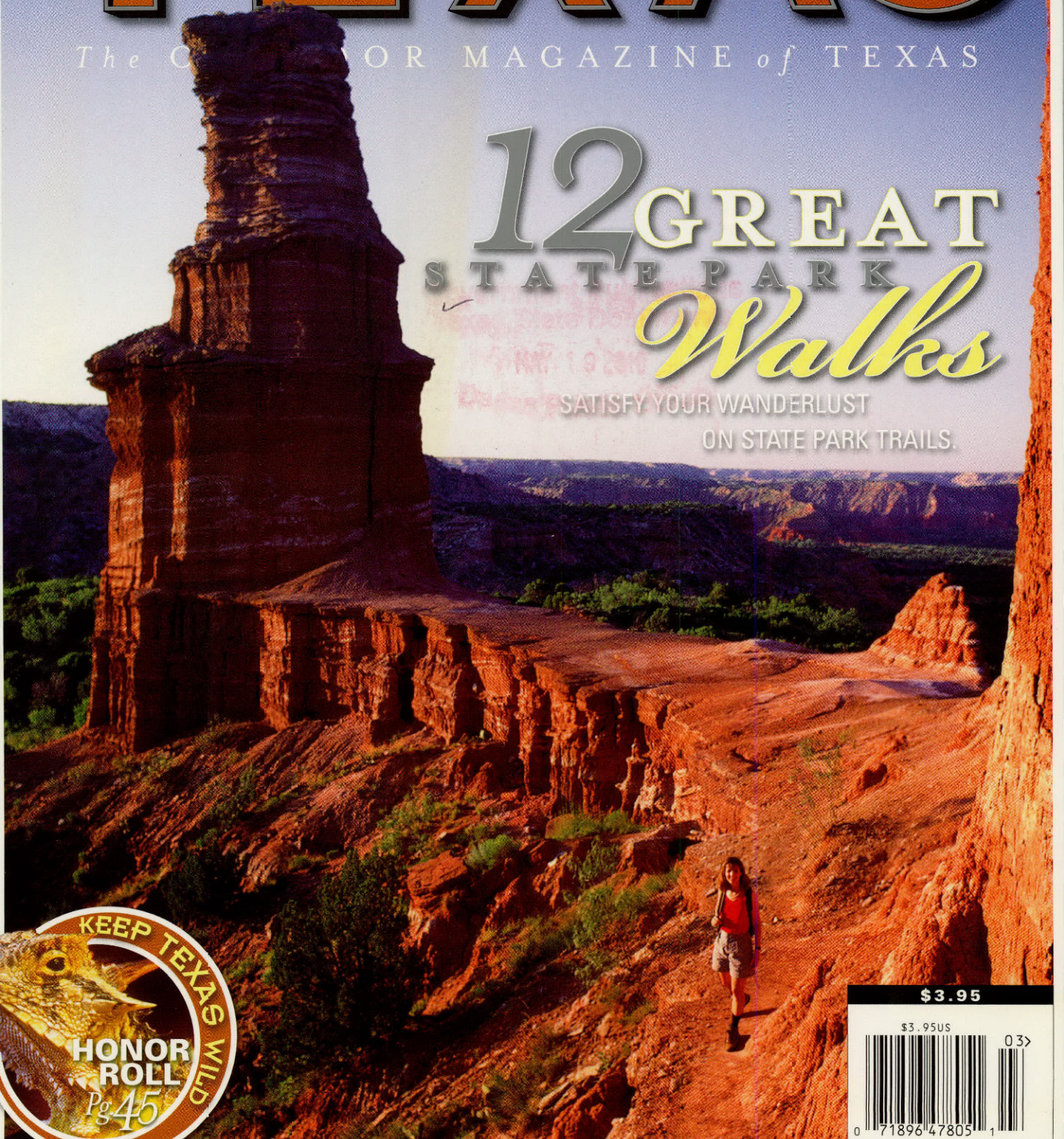
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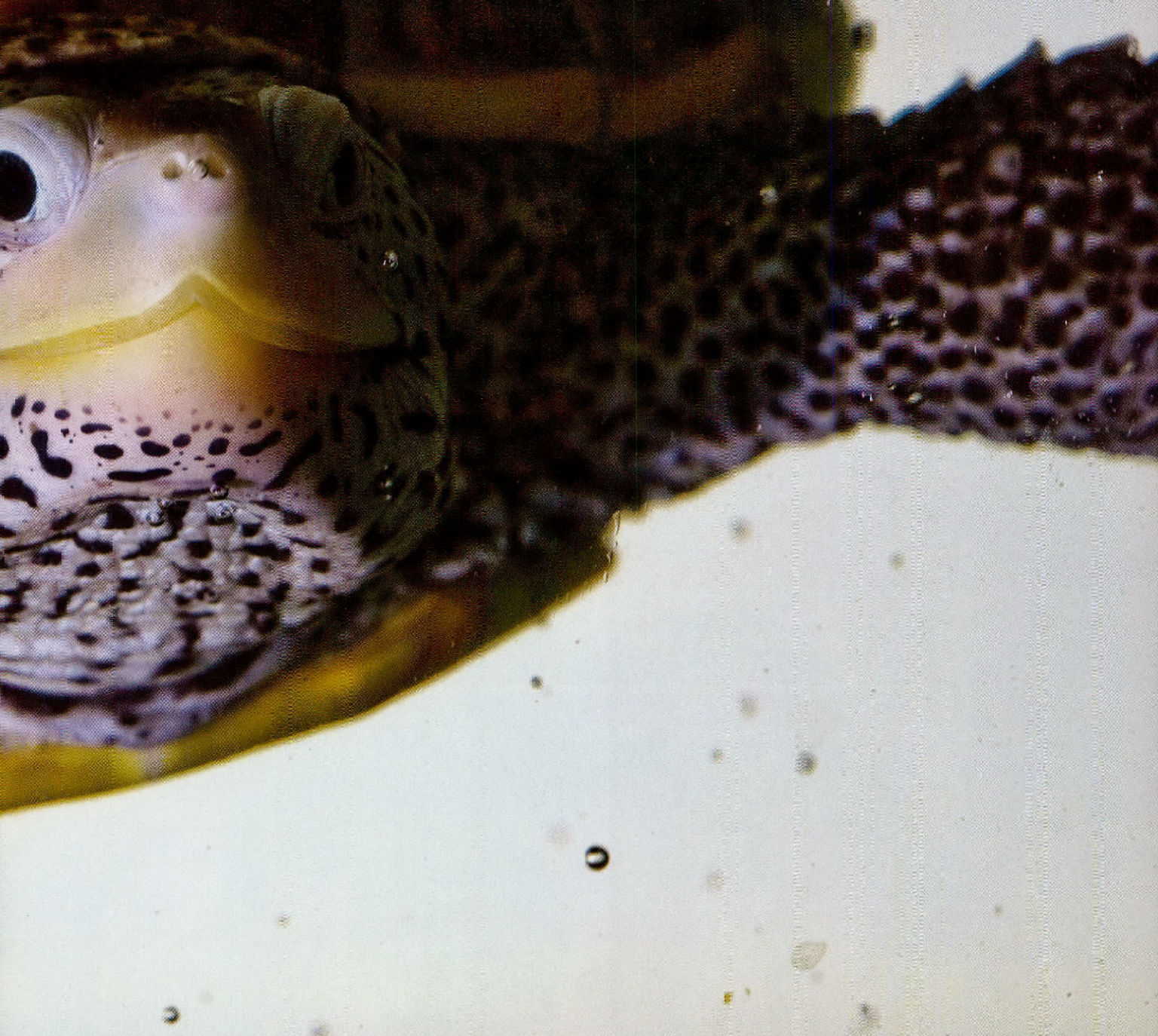
12 GREAT
STATE PARK
Walks

By Allan C. Kimball

Whether you're a tenderfoot or a trekker, state parks offer nature walks to soothe the soul.

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Photo © Laurence Parent

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PREVIOUS SPREAD: Diamondback terrapin.
Photo by Earl Nottingham/TPWD

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Photo © Bill Draker/rolfmp.com

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THE OUTDOOR MAGAZINE OF TEXAS

MARCH 2010, VOL. 68, NO. 3

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MAGAZINE STAFF:

Randy Brudnicki Publisher
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Mike Kelley Marketing & Web
Ana Kirk Business Manager
Cameron Dodd, Kathryn Hunter Editorial Interns
Shaun Doyle Photo Intern

CONTRIBUTING WRITERS:

Larry Bozka, Henry Chappell, Melissa Gaskill, Russell A. Graves, Larry D. Hodge
Wendee Holtcamp, E. Dan Klepper, Sheryl Smith-Rodgers

CONTRIBUTING PHOTOGRAPHERS:

Grady Allen, Chase A. Fountain, Russell A. Graves, Wyman Meinzer

EDITORIAL OFFICES:

4200 Smith School Road, Austin, Texas 78744
Phone: (512) 389-TPWD Fax: (512) 389-8397
E-mail: magazine@tpwd.state.tx.us

ADVERTISING SALES OFFICES:

STONEWALLACE COMMUNICATIONS, INC.
c/o TP&W magazine
4200 Smith School Road, Austin, Texas 78744
Fax: (512) 389-8397
Jim Stone, Advertising Director (512) 799-1045
E-mail: jim.stone@tpwd.state.tx.us

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In the Field

ALLAN C. KIMBALL

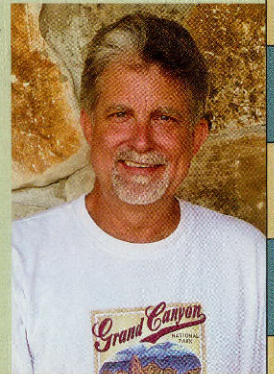
has traveled to every county in Texas and visited all of the state's parks, thanks to his work at daily newspapers and his research for his most recent books. For his latest book, *Texas: 107 Best Walks*, the award-winning writer and photographer says he put more than 3,500 miles on his car just to walk a few miles. He shares 12 great



state park walks in this month's cover story. Over the years Allan has interviewed several presidents and covered such diverse stories as chili cook-offs, prison boot camps, gubernatorial races and beer-drinking goats. Allan is also the author of *Who Is Mother Neff and Why Is She a State Park? The Story Behind the Names of the State Parks of Texas*, the *Big Bend Guide: Travel Tips and Suggested Itineraries* and the Western fiction trilogy *Rainbows Wait for Rain*.

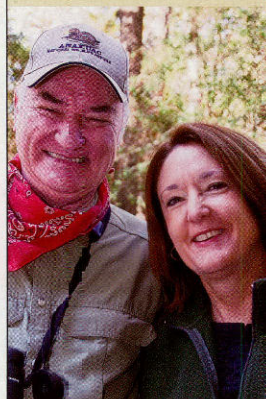
DALE WEISMAN

enjoys writing about natural history and offbeat places in Texas and the Southwest. An Austin-based freelance writer and a member of the Capital Area Chapter of Texas Master Naturalists, Dale contributed this month's article on Texas tarantulas and has contributed to *Texas Parks & Wildlife*, *Texas Highways* and other regional publications for nearly two decades. Over the years, Dale has written about longhorn cattle, rock collecting, armadillos, swimming holes and caves. Dale finds tarantulas and other spiders to be more fascinating than frightening, worthy of our respect and consideration as essential links in the chain of life.



GARY AND KATHY ADAMS CLARK

combined their talents for this month's Legend, Lore & Legacy. Gary is interim vice president of instruction at Lone Star College in Houston. He writes the weekly nature column for the *Houston Chronicle* and *San Antonio Express-News*. Kathy is a professional nature photographer who conducts national and international photography workshops. Together, Gary and Kathy have written four books and numerous state and national magazine articles. Both Gary and Kathy drew inspiration from naturalist and author John Tveten and counted him as a longtime friend and mentor. Their tribute to him includes a small sampling of the outpouring of praise for the champion of the outdoors who died last fall.



AT ISSUE

FROM THE PEN OF CARTER P. SMITH

The third time was the charm. After successive cancellations because of a nearly unprecedented flooding event along the Rio Grande and the swine flu border scare, the Big Bend Ranch Fiesta finally made its debut last November. Rest assured it was worth the wait.

Visitors from near and far made the trek out to Big Bend country to celebrate the opening of the state park's approximately 300,000 acres of new and improved campsites, hiking and biking trails, scenic loops, four-wheel-drive roads and other public amenities. They came, young and old, to see, experience and wander through Texas' only true wilderness-like state park, a former sheep and cattle ranch of Texas-size proportions.

And, for those who ventured out into the wilds of the Solitario, up into the Bofecillos range, down into Fresno Canyon, atop Guale Mesa or into the Saucedo Ranch headquarters complex, they were not disappointed.

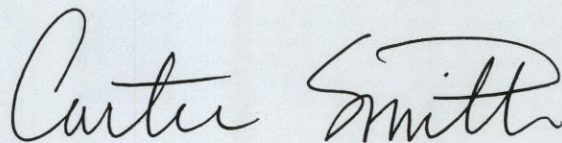
The fiesta had another purpose that weekend. Two native sons of considerable state and national conservation renown, Bob Armstrong and Andrew Sansom, were honored for their Herculean efforts to establish Big Bend Ranch State Park.

For both men, the decision to acquire the ranch for the use and enjoyment of all Texans was an easy one. Yet, as friends, colleagues and members of their respective families recounted over the course of the weekend, the journey to accomplish that aim was anything but. Over a nearly two-decade span, they persevered through several changes in ranch ownership, a host of local and state political minefields and significant funding constraints that would have dissuaded those of lesser fortitude.

I think you will be glad they did. Big Bend Ranch State Park is a natural jewel waiting to be discovered and explored by all those who cherish West Texas' wide open spaces, vast vistas and high country mesas. And, while you are out that way, plan to stay a little longer and visit the legendary spring-fed swimming pool at Balmorhea State Park and the cool, high-mountain country at Davis Mountains State Park.

Speaking of getting outside and enjoying the best of Texas this spring, I hope you will read through Allan C. Kimball's article on some of Texas' best hikes in your state parks. As he duly notes, there are ample ways to enjoy nature and realize your New Year's fitness resolution by visiting one of your many state parks. I think you will find that a trek up Enchanted Rock, a walk along the Cave Trail at Mother Neff State Park or a stroll through the Lost Pines at Bastrop and Buescher state parks will be good for the mind, body and spirit. Life is, after all, better outside!

Thanks for caring about and for Texas' wild things and wild places. They need you more than ever.



EXECUTIVE DIRECTOR

Texas Parks and Wildlife Department mission statement:

To manage and conserve the natural and cultural resources of Texas and to provide hunting, fishing and outdoor recreation opportunities for the use and enjoyment of present and future generations.

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PICKS, PANS AND PROBES FROM OUR READERS

FOREWORD

It's a fine time to visit Texas state parks. It always is.

I've been going to Texas parks my whole life, and I know what special places they are.

There's a lot to love: the grandeur of Enchanted Rock. The haunting mystery of Caddo Lake. The feel of the West at Palo Duro. The sublime beauty of the Frio River at Garner. The fantastic stonework buildings of the Civilian Conservation Corps at Longhorn Cavern. The striking contrast of arid desert and gushing springs at Devils River.

And now, as the new managing editor of *Texas Parks & Wildlife* magazine, I get to help spread the word about these great places. I couldn't be happier. I'm honored to be a part of this magazine and agency charged with preserving our wildlife and wild places for all Texans.

State parks make up a small fraction of land in Texas, but those pockets of land carry tremendous importance. They contain many of Texas' best treasures, and they bring us a shared connection to the land in ways we can't achieve on our own.

They're like our kids. They each have their own personality, and we love them all.

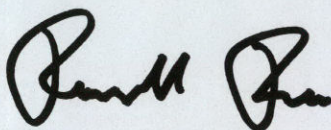
The national parks might have been America's best idea, as the Ken Burns PBS series says, but Texas has also exhibited some pretty fine thinking over the years with our state parks. (And is Mother Neff, the first Texas state park, our Yellowstone?)

In this issue, Allan C. Kimball offers up a dozen of the best hikes in state parks. He takes us by dinosaur tracks, waterfalls, granite domes and alligators. His list got me wanting to get out there and explore some more. I can't wait to check out the slot canyon he talks about at Big Bend Ranch or to get back to Colorado Bend.

The importance of state parks is driven home to me when I go on my almost-annual canoe trip on the upper Guadalupe River, above Canyon Lake. We generally see few people along the way — maybe some at a road crossing or private campground. But that changes when we get to the state park. All of a sudden, we have to paddle slowly as we dodge and weave our canoes through the obstacle course of people swimming, wading and relaxing in the river.

We're all there for the same reason: to enjoy the scenery and the cool waters of the river. Much of the land along the river is private, and there aren't many places for the public to get to the upper stretches of the Guadalupe. The state park gives us all a place to enjoy the river. And on a summer weekend afternoon, that adds up to a lot of enjoyment.

I hope you'll get out and enjoy our parks, too.



RUSSELL ROE
MANAGING EDITOR

LETTERS

HILDEBRAND'S LEGACY

I was pleased to see Henry Hildebrand featured in the Legend, Lore & Legacy article "Nutty Professor" in the December 2009 issue of your magazine. During the early 1970s I attended the University of Corpus Christi and had the good fortune

to be a Hildebrand student. Neither course required a textbook, as he had extensive notes he taught from.

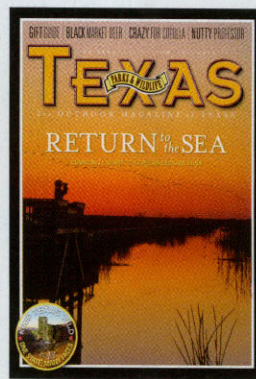
Students knew when he planned a field trip they had to be prepared for the unexpected. Once we were out on Malaquite Beach when a cold front blew in and we walked the beach picking up shells while it was sleeting. Another time we drove way down Padre Island for an overnight stay in a ranger cabin. On the way back to Corpus Christi the next day we ran out of gas twice. We always had a lot of fun, though. Each of his students probably has an interesting Hildebrand field trip story to tell.

He respected his students, and his students loved and respected him. Even though I chose to pursue clinical laboratory science as a profession, I know how he inspired many others to continue in marine science. He did leave a lasting legacy.

JUDITH GOODE
Austin

DISCOVERING 'FROST SPIRALS'

I live in Roanoke in Denton County. On the morning of Jan. 9, I was out exploring along Henrietta Creek (flows into Lake Grapevine) near my home and saw something fascinating that I've never seen before—strange-looking white twisting/spiraling growths coming up out of the



I live in Caldwell County and have not seen a jackrabbit in 10 years, so where have the hares gone?

Jimmie L. Moses
Luling

MAIL CALL

ground 5-6 inches high. When I first saw one, I thought it was some kind of strange fungal growth. Then I broke a piece off and it melted in my hand. It was frost!

"Frost spirals" formed around the stems of the plants. As the roots under the ground froze, expanding the water, it followed the path of least resistance, which was up through the dead stem, and just kept pushing up and up with the days of subfreezing temps and twisting into strange and beautiful patterns. Fascinating!

SHELLY BROOKS
Roanoke

TP&W RESPONDS: Jackie Poole, TPWD biologist, says: "One of the delights of the first hard freeze is finding ribbons of ice pushing out of plant stems. Several plants in Texas exhibit this phenomenon. Frostweed (Verbesina virginica, V. alternifolia) and marsh fleabane (Pluchea odorata) produce these ice crystals from sap in the stems as well as water pulled up through the roots. Thus, there will be more ice formation in wet years or areas than dry ones. The ice will form over several successive freezes provided there is sufficient moisture in the ground."

WHERE ARE THE JACKRABBITS?

In your December 2009 article "What's Up, Doc?" (jackrabbits), you mention the proliferation: six per litter, six times per year, etc.

I live in Caldwell County and have not seen a jackrabbit in 10 years, so where have the hares gone? What do you think was their demise?

I do enjoy your magazine very much.

JIMMIE L. MOSES
Luling

TP&W RESPONDS: John Young, TPWD mammalogist, says: "Black-tailed jackrabbits undergo periodic peaks and lows about every three to 10 years, so there are periods when jackrabbit populations are low because of natural causes. Jackrabbits can occupy a wide range of habitats as long as there is diversity in plant species and structure. With the invasion of non-native grasses that form dense monocultural stands of cover and general loss of grassland habitats, jackrabbit numbers have declined not just in Texas but in other states as well. They are still a common mammal that can be found throughout Texas; they're just going to be a little harder to find than in the past."

HOPE CAUGHT ON FILM

Loved your photography issue. However, I would like to add another reason for capturing a digital image: hope. Shortly after our resident deer chewed up our rusty blackhaw viburnum (*Viburnum rufidulum*), a young female swift setwing (*Dythemis velox*) dragonfly landed on it. Nature has a way of balancing things out, it seems, and giving us hope when all seems lost.

PHYLLIS DOLICH
Georgetown

Sound off for "Mail Call!"

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SCOUT

NEWS AND VIEWS IN THE TEXAS OUTDOORS

UNWELCOME VISITORS

Invasive zebra mussels can wreak havoc on ecosystems.

One of America's greatest menaces has arrived at Texas' doorstep. Texas Parks and Wildlife Department biologists confirmed that invasive zebra mussels (*Dreissena polymorpha*) have established themselves in Lake Texoma on the Oklahoma border as of April 2009, and fear they may soon spread through the Red River and Trinity River systems.

Native to lakes in western Russia, the fingernail-sized black-and-white-striped mussels first arrived in the United States via the Great Lakes in 1988. They have since spread throughout many of the river systems east of the Rockies and in recent years have headed west — often hitchhiking on recreational boats.

Named one of world's 100 worst invasive species by the Global Invasive Species Database, zebra mussels wreak havoc on ecosystems they invade, affecting native fish, mussels, invertebrates and vegetation. The prolific mussels completely coat rock surfaces, lake bottoms and even native mussels, not to mention pipes and intake valves for power plants, dams and other water management facilities.

Because they're so prolific, they suck up the lake or river's nutrients, leading to very clear water. That means more sunlight reaches the bottom, favoring rooted macrophytic plants, many of which are exotic themselves, like water hyacinth. Zebra mussel invasions turn the whole ecosystem topsy-turvy.

Over the past few years, game wardens and boat marina personnel have intercepted several infested boats, but one likely slipped past. In April, a houseboat owner living on Texoma called TPWD fisheries biologist Bruce Hysmith and reported a zebra mussel. They dangled PVC pipe devices in the water that mussels would attach to, if present. By July 30, mussels covered every single one. That was bad enough, but in August, TPWD found three live zebra mussels in Sister Grove Creek, which is a tributary of the Trinity River and is connected to Texoma by a water transfer pipe. The creek feeds Lake Lavon, and if the mussels make it to Lake Lavon, it's probably just a

matter of time before they make it to the Gulf of Mexico.

Once they are established, controlling them becomes costly and intensive. According to the Center for Invasive Species Research, power plants, hydroelectric facilities and water management districts where zebra mussels are established spend \$500 million a year fighting the pesky mussels, which can completely clog — or "biofoul" — intake valves, pipes, screens and other surfaces. Control methods include chemicals, high-pressure washing, electrical current, ultraviolet light and draining a water body. The U.S. Bureau of Reclamation found that a strain of the bacteria *Pseudomonas fluorescens* killed 90 percent of zebra mussels. Unfortunately, none of these methods completely eliminates infestations.

Has anyone anywhere been able to stop the spread of zebra mussels? "Let's just suffice it to say they have distributed themselves to the Gulf of Mexico from the Mississippi River," says Hysmith. "They were introduced to Great Lakes region in mid-'80s and had this many years to stop their spread downstream, and nobody's been able to do it. We're banking on education."

The best — and really only — way to slow their spread is for boaters to systematically power-wash their boats after visiting any infested water body, or even one not known to have zebra mussels, just to stay on the safe side. Though zebra mussels can hitchhike on the outside of boats, the microscopic larvae, called

veligers, can also come along for the ride in even tiny amounts of water. Completely drying out the boat is the only surefire bet.

So what's next for Texas? "Our plans are to implement an intensive awareness campaign," says recently retired TPWD Director of Inland Fisheries Phil Durocher. "Beyond that, we have no plans, but we are discussing the feasibility of boat inspection stations. The problem with Texoma is that it's in two states and is so large. I'm not sure how effective we could be with stations. We're evaluating all options." ★

—Wendee Holtcamp



Zebra mussels, named one of the world's worst invasive species, have made their way to Texas.

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- The South Texas Botanical Gardens & Nature Center is a must stop destination full of magnificent plants, beautiful flowers.




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A Toad Above the Rest

Texas toad garners top state honors, thanks to students.

Students at Danbury Elementary School south of Houston can claim a unique accomplishment: They helped craft legislation in 2009 that designated the chubby Texas toad as our state amphibian.

"We worked with the Texas Parks and Wildlife Department and legislators," explains librarian Ace Filipp. "First, fourth-graders researched five native amphibians and campaigned for their favorites. Then they held a campus election. The Texas toad won!"

Within a few months, the species — recognized as one of the state's most common and abundant toads — nabbed the thumb's-up from the 81st Legislature. No wonder why! Texas tough and highly adaptable, *Bufo speciosus* occurs across the western two-thirds of the state and into Mexico, New Mexico and Oklahoma.

Gray or brownish in color, darkly splotched and warty, Texas toads — which measure an average of 3 inches long — lack a back stripe found on similar species like the Gulf Coast toad. Avid burrowers, they prefer loose, sandy soils found in grasslands and open woods. To stay moist, Texas toads burrow into mud, slip under rocks or hide in animal dens. At night, they venture out to feed on beetles, flies and other insects.

Heavy showers also draw toads out of hiding and into the dat-



Congratulations, Mr. Toad. You're now an official state icon.

ing scene. From April through September, both sexes gather around rain puddles, ditches and pools, where breeding males trill their hearts out (the loudest guys get the girls). Females deposit eggs underwater around vegetation; tadpoles morph into toads anywhere from 18 to 60 days later.

What did Danbury students find most interesting about their new state amphibian? "If a dog or other animal tries to eat a Texas toad, it will secrete a bad-tasting mucus," Filipp says. "They thought that was pretty cool!" ★

—Sheryl Smith-Rodgers

New electronic lure may catch too many fish; one state bans it.

A bass every seven minutes.

by Mike Butler

YALESVILLE, CT — A new fishing technology that set a record for catching bass in Mexico is now showing its stuff in the U. S. It has out-fished shrimp bait in Washington State and beat top-selling U. S. lures three to one in Florida. The new technology is so effective one state, Wyoming, has banned its use.

The breakthrough is a tiny, battery-powered electrical system that flashes a blood-red light down a lure's tail when its moved in water. Fish think it's an injured prey and strike. Some fishing authorities, like those in Wyoming, think that gives fishermen too much of an advantage.

They may be right. Three fishermen using a flashing lure in Mexico caught 650 large-mouth bass in just 25 hours. That's a bass every seven minutes for each person, and a record for the lake they were fishing. They said the bass struck with such ferocity they hardly lost a strike.

In Florida two professionals fished for four hours from the same boat. One used a flashing-red lure; the other used some top-selling U. S. lures. The new, "bleeding" lure caught three times as many fish.

Before reporting this, I asked a veteran fisherman in my office for his opinion. Monday morning he charged into my office yelling "I caught six monster fish in an hour with this thing! Where did you get it?"

Then I phoned an ichthyologist (fish expert).

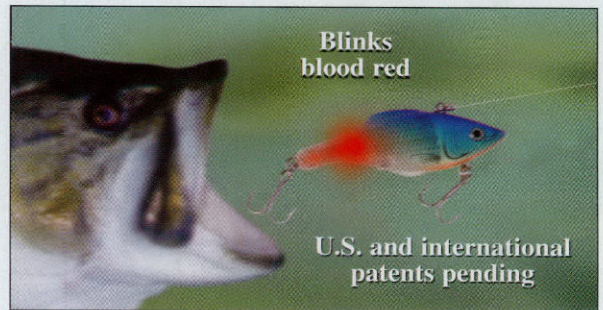
"Predators — lions, sharks," he said, "will always go for the most vulnerable prey. Fish are predators, so if a fish sees a smaller fish bleeding, it knows it's weakened and will strike."

"If a lure could appear to be a live, bleeding fish, a few fishermen could probably empty a lake with it."

I told him three almost did.

Fishes top, middle and deep

There is a U.S. company that offers a kit of three blinking lures (one each for shallow, middle and deep water) called the Bite Light®. Each lure is a different color. They work in fresh or salt water, contain rattle attractants inside and last 100 hours in the water. The battery is replaceable.



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Friend or Foe?

Virginia creeper, poison ivy's look-alike, is both loved and hated.



Online gardening discussions go both ways when the topic turns to Virginia creeper — a native Texas vine that's often mistaken for poison ivy. Some folks praise the vine's vivid fall colors, the food value of its berries for wildlife and its hardy growth. Others malign the plant for triggering blistering, itchy rashes and vow revenge by means of swift eradication.

Who's got it right? Both sides!

Parthenocissus quinquefolia occurs across the state in well-drained soils found along streams and in shaded woods and brushy areas. It can climb as high as 40 feet or more and may sometimes trail across the ground, creating a thick cover. As a Virginia creeper vine grows, tendrils anchor to tree bark, fences and walls by means of adhesive pads. Rootlets form where tendrils and stems touch the ground.

Squirrels and many species of birds — such as mockingbirds, robins and pileated woodpeckers — dine on the blackish-blue berries of Virginia creeper. (Warning: They're extremely toxic to humans!) Leaves provide larval food for several moth species, including the vine's namesake — the Virginia creeper sphinx.

In the fall, Virginia creeper's serrated



↑ Virginia creeper's leaves have five leaflets and produce vivid fall color.

leaves — similar in shape to those of poison ivy — turn crimson and orange-red. How to tell what's what? The old adage on poison ivy still applies: Leaves of three, leave them be (Virginia creeper's leaflets number five or more). As for allergic reactions, urushiol's the culprit in poison ivy, whereas Virginia creeper contains oxalate crystals. Per online gardeners in the know: Always wear gloves, long sleeves and pants when pruning or handling Virginia creeper! ★

— Sheryl Smith-Rodgers

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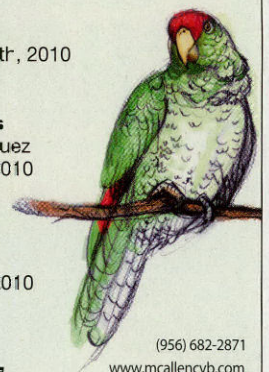
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Walking the Tracks

Hikers follow an abandoned railway at Lake Mineral Wells State Park and Trailway.



Problem knees? Bad hips? “Nope,” replies Don Price, shaking his head, “and no arthritis either.” Not bad for a guy who recently turned 80. What’s his secret? Simple. “I’ve walked all my life,” says the retired business owner from Mineral Wells.

Since 1947, Price has trekked for hours through the woods and rolling hills now known as Lake Mineral Wells State Park. The popular getaway — 40 miles west of Fort Worth — encircles a 646-acre reservoir, completed in 1922 as a public water supply. Then and now, many areas of the 3,282-acre park remain untouched, and for that he’s grateful.

“It made me feel good when tree specialists from the University of Arkansas told me that the state’s oldest stands of post oaks live on slopes around the lake,” Price says. “Because the sandstone boulders there are as large as a house, the land was never plowed or cleared. So the slopes are pristine, and the oaks are believed to be 300 to 400 years old.”

As often as he can, Price takes early morning walks along the Lake Mineral Wells State Trailway, which follows an abandoned railroad line between



Weatherford and Mineral Wells, once a health resort with “healing waters.” Around the turn of the 20th century, people traveled long distances to soak in the town’s famous mineral baths.

“Most railroads run fairly straight so trains don’t have to slow down,” Price says. “But the Texas & Pacific Railway was built to take passengers to Mineral Wells. I’ve counted 57 curves between Weatherford and Mineral Wells. They thought by making the railway a scenic route, that’d put people in a good frame of mind before they arrived.”

Modern visitors can hike and bike the 20-mile path, which offers four trailheads outfitted with parking, water and restrooms. Equestrians may ride 14 miles of the trail between the park and

TOP AND OPPOSITE BY CHASE FOUNTAIN/TWMD. ABOVE BY EARL NOTTINGHAM/TWMD.

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The state park offers scenery, swimming and rock climbing in addition to the nearby trailway.

Weatherford. The park also has 11 miles of backcountry trails, accessible from the Cross Timbers parking area, that are designated for hiking, biking and equestrian use.

In the spring and summer, campsites in the park book up quickly, so visitors should make reservations at least a month in advance. Besides camping and hiking, the park offers a multitude of other activities. Many people come to climb and rappel marked routes along the cliffs (safety equipment required). Others spend time at the lake fishing, canoeing, kayaking and swimming. On weekends, interpretive programs range from cowboy poetry and music around a campfire to spider walks and wildflower bike tours.

Lake Mineral Wells State Park is four miles east of Mineral Wells and 14 miles west of Weatherford on U.S. Highway 180. The trailway runs between the two cities.

For more information, call 940-328-1171 or visit www.tpwd.state.tx.us/lakemineralwells. ★

—Sheryl Smith-Rodgers

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March 14-21:

Laser mapping the Devil's Sinkhole; Possum Kingdom State Park; Fort Worth's nature center; the art of the warden; Dolan Falls

March 21-28:

All gator research near Houston; safe fish handling and fishing safety; Cleburne State Park; dune life.

March 28-April 4:

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The Family That Hikes Together

Tips on how to make a family hike fun for all.

In our now 12-plus years of parenting

we have discovered that parenting outside is easier than parenting inside. When things start to get too crazy, our mantra is “go outside!” And sometimes that means us, the parents, as well.

Outside, the noise level is definitely less of an issue. If there is food being eaten, there is no sweeping to be done, and cleaning up the table means merely brushing the crumbs off. Outside, there is no crowding, either — we can all find enough space.

For this reason, some of our best family outings are hikes. We have a few different regular hiking locations, all within different proximities to the house. One of the closer ones we call “church” for its grand climb to the top of a rocky hillside that feels very cathedral-like indeed. No matter where we go, though, there are a few essentials to keeping a family hike a friendly hike and making it pleasing for all.

1. **START SMALL.** If you are just beginning your foray into family hiking, be sure to start small. Take all your kids’ ages into consideration. Stay close to home. Set out on a short hike to ensure maximum happiness.

2. **BRING SNACKS.** If we are heading out on the trail with kids, no matter how far we are going, we always bring lots and lots of good snacks. High-protein snacks such as nuts are our staples. We like to pack fruit and something crunchy as well. In addition to the healthy snacks, we like to tuck away a little sweet treat for a reward at the end of a particularly arduous trail. It is not uncommon for one of us parents to call out a desired endpoint and announce the existence of the cookies/chocolate/lollipops hiding in our bag. “Let’s just get to the top of this steep hill and then we’ll pause and have a little treat.” has gotten us through the final steps to many a destination.

3. **ALLOW TIME.** No matter the distance or the location, allowing ourselves ample time to reach our destination is key.



With four kids in tow, we need to leave a lot of time for looking at bugs, walking on logs, tiny footsteps and tired legs. In addition to a feeling of peace, we are amazed at what we see when we take the time to look at the trail through our children’s eyes. Our toddler will certainly see a lot more bugs than we will. Our tree climbers will see shapes and patterns and wildlife that we would never see from our vantage point. The luxury of time allows all of us to get what we need from a day on the trail.

4. **B.Y.O.B. (Bring Your Own Backpack).** Parents often feel like Himalayan Sherpas, but as kids get older, there’s no need. Give each kid a small daypack with his or her own snack supply and water, and maybe a small sketchbook and pencil as well. Giving children some autonomy in this area provides them with a sense of ownership of the experience and lightens your load, too.

5. **GC OFTEN.** The more you go out on family hikes, the more you will want to continue the habit. And the more you hike, the more you will become willing and able hikers.

6. TURN OFF ALL ELECTRONICS.

This includes your phone. Who really needs to contact you anyway? Leave all other electronics behind as well — yours and the kids’. Turning off the electronics and tuning in to nature and each other will provide a family connection you’ve never experienced before.

Family hikes can truly be some of the most connected, contented times that families can spend together. Everyone is present and outside in the fresh air, experiencing the flora and fauna. What more can any family ask for? ★

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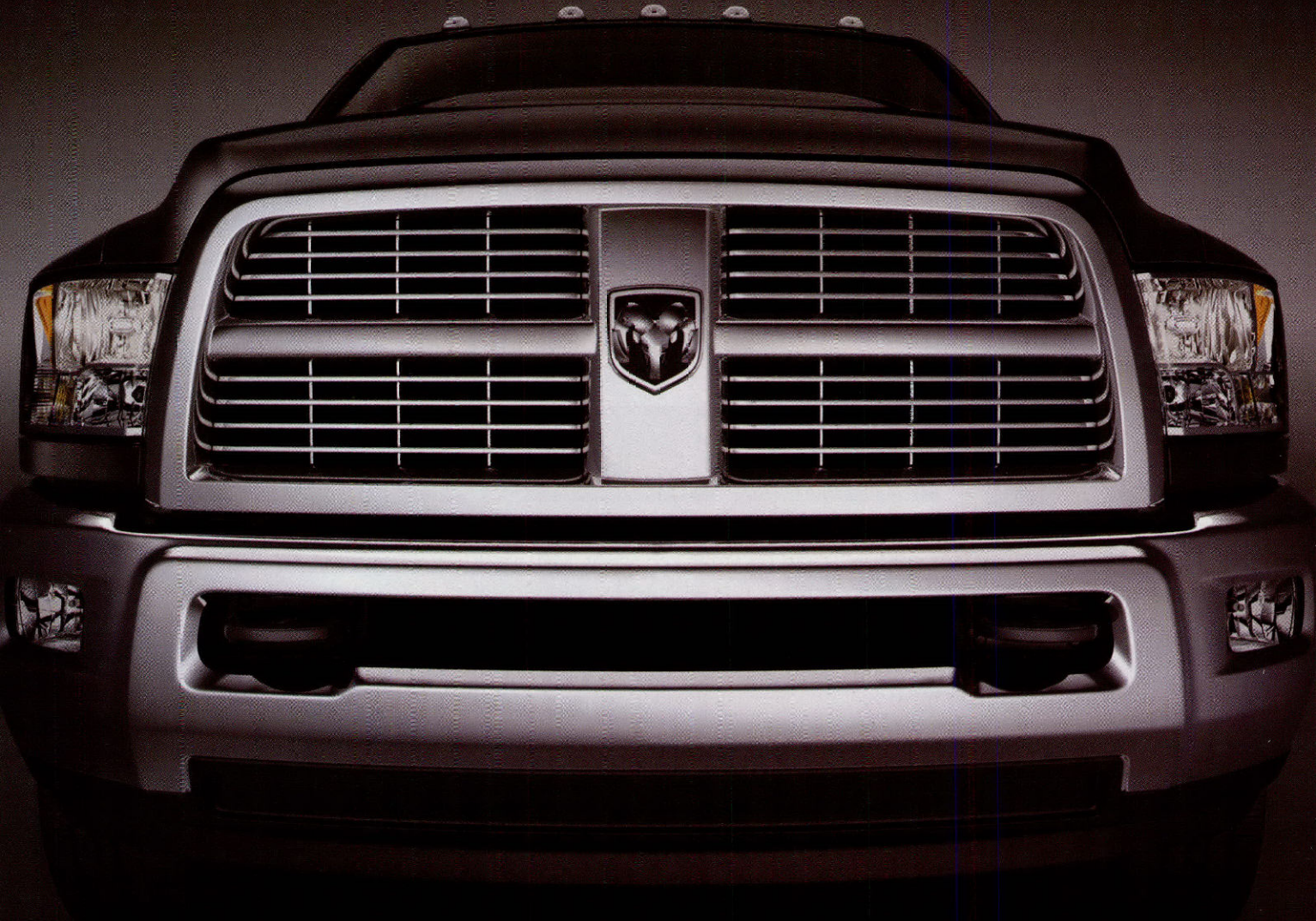
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3 Days in the Field / By Cynthia Walker Pickens

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Healing Waters

Mineral Wells' trails, wildlife and history prove as restorative as its famous water.

People have been journeying to Mineral Wells for more than 100 years, seeking to repair and rejuvenate body and soul. Originally a resort destination for partaking of the mineral waters, now the town offers outdoor activities and colorful history to those seeking a restorative weekend.

My friend and I arrive in Mineral Wells on a Friday afternoon, driving directly to the Lake Mineral Wells State Park and Trailway. The park encompasses more than 3,000 acres, with a 646-acre lake. Within park boundaries, visitors can fish, boat, hike, mountain bike, horseback ride, climb, swim, camp or picnic. Kayaks and canoes can be rented at the on-site store, but you must bring your own horse!

The park has one of the few climbing areas available in North Texas, Penitentiary Hollow. The hollow provides climbing opportunities for every skill level, with the longest ascent being 35 to 40 feet. Climbers must sign in at the office, agree to park rules and pay a small fee before hitting the ropes.

Visitors can also enjoy a wide variety of interpretive programs, many of which are led by David Owens, the park's assistant superintendent. Programs include a cowboy campfire (during which Owens uses poetry and music to tell the history of the area), a kids' wilderness survival program (complete with survival kit), nature programs, star parties and storytelling. Many of the programs take place at the park's outdoor Lone Star Amphitheater.

After a rain, some of the park facilities may be closed to prevent damage. The day before we arrive, the park received a 3-inch gully-washer, so Penitentiary Hollow is closed to climbers, and the backcountry



The 646-acre Lake Mineral Wells gives park visitors a chance to fish, boat or swim.

trails are off-limits, too. However, Owens directs us to the Lake Front Trail, which wanders through what he calls "ancient cross-timber woodlands." He explains that because this area is on a slope, it was unsuitable for agriculture and today is in pristine condition, looking the same as it did for early settlers.

We take an hour to explore that short (less than a mile) trail, with frequent stops to identify plants, admire vistas both large and small, and take photos. The campsites across the lake are tucked out of sight, and we are the only hikers. We can envision early settlers traipsing through these woods; however, the lake, created in 1922, is a more recent addition to the landscape.

We also peek into Penitentiary Hollow, on this day quiet and bereft of its climbers. The hollow is narrow, surrounded by tall cliffs, with a few trees eagerly reaching skyward. I am reminded of countless Western movies in which unwary travelers are ambushed in canyons by bad guys. I am ambushed by a red wasp, but it is not feel-

ing too ferocious and flies away when freed from my hair.

On Saturday, our first stop is the Old Jail Museum complex, a short drive west of Mineral Wells in its smaller, quieter neighbor, Palo Pinto. To get there, we take a lovely drive through the Palo Pinto Mountains, crossing the Brazos River and the John Graves Scenic Riverway. Graves is the author of *Goodbye to a River*, a nonfiction account of his 1957 canoe journey down the Brazos.

The museum entralls us with its well-kept collection of memorabilia from the county's early days. The centerpiece of the complex is the Old Jail, built on this site in 1880 to house inmates upstairs and the sheriff and his family downstairs. Docent Freeda Hose escorts us through the complex, regaling us with stories from the county's history and the creation of the museum. Fixated on a mountain lion mount, I obliviously brush past the jail's noose and trap door. A shiver of uneasiness passes through me when I turn

and see my companions — through the noose! Other exhibits include three cabins and an old fort, all of which had been dismantled at original sites, then reassembled at the complex.

Two hours later, we return to Mineral Wells for a quick lunch and move on to the endurance portion of our trip: bicycling on the trailway.

First, we drop by the Famous Mineral Water Co. In the late 1800s, local residents discovered the curative powers of the mineral water that lay underground. As word spread, many people traveled to Mineral Wells to drink that water. Entrepreneurs soon followed. Mineral Wells became a resort destination, and people (some of them famous) spent summers here, drinking and bathing in the healing waters.

The Famous Mineral Water Co. was founded in 1904 by Ed Dismuke, a druggist from Waco. After doctors told him he would die from his stomach ailment, he traveled to Mineral Wells to drink the water, and was cured. He sold his pharmacy in Waco and opened the new company in Mineral Wells, devoted to dispensing the healing waters. We buy a few bottles to take home and taste.

Time to ride!

The trailway is a converted rail line, the same line people had used to travel to Mineral Wells. In 1998, the rail line was converted to the trailway, a 20-mile path from downtown Mineral Wells to Cartwright Park near Weatherford. Open for hiking and equestrian and bicycle use, the trail wanders from an urban setting, through rural neighborhoods and on into ranch country, with gentle grades and curves.

We choose to begin at the state park trailhead. To get to the trailway, visitors must first negotiate a 2/3-mile downhill trail. On bicycle, *wheel!* Upon reaching the trailway, we see that the trail to Mineral Wells, six miles to the west, is closed because of water damage. As it happens, we have planned to head east. The trail parallels a small road for much of the 3.4-mile distance to the Garner Trailhead. We pass a few groups of hikers, but have the trail mostly to ourselves.

Wildlife-friendly vegetation edges the trail, such as blackberries, snailseed and an unidentified small thorny tree that forms a dense thicket in places. Impassive cows watch us go by, but horses seem uninterested. We cross several small

creeks, including one named Dry Creek that is not at all dry. The trail also traverses some driveways and roads, requiring caution.

After a leisurely ride, we reach the Garner Trailhead. We stop for a short celebration of our achievement (the trailhead has parking, a restroom and drinking water), then decide to push on. From there, the trailway diverges from the county road — and enters a more remote section that we are eager to experience. We are glad we did.

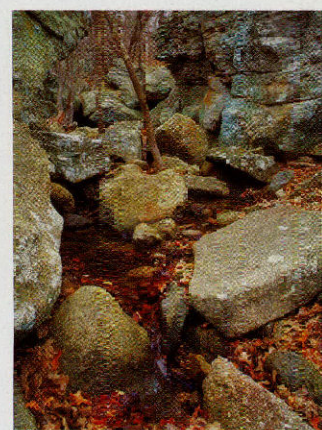
Without road noise, this part of the trail is more peaceful. A gusty wind blows the trees, hedges of cowpen daisies grow close by, and hayfields and pastures surround us. In the distance, we see farmhouses and ranch buildings, but no people or cars. After riding about 1.5 miles, my friend dismounts near a cluster of ranch buildings, pulls out her binoculars and adds some birds to her trip list: the eastern bluebird, eastern meadowlark, northern mockingbird, mourning dove and northern harrier.

Our legs and the sun dictate it is time to turn around. The trail is wide enough to

(continued on page 55)



From top: Washing Machine Museum; a park stream; helicopter at National Vietnam War Museum.



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12 Great STATE PARK Walks

*Whether you're a tenderfoot or a trekker,
state parks offer nature walks to soothe the soul.*

BY ALLAN C. KIMBALL

EVERYBODY WANTS AN ADVENTURE, and you can have one today. It's an adventure for young or old and will cost you next to nothing: Go for a walk. The state parks of Texas are full of them, from easy strolls to rugged ramblings to strenuous hikes. Whichever you choose, every walk is an adventure. Even if you walk the same path every day, it's never exactly the same. You encounter different weather, different people; you notice different things; you have different thoughts; your body reacts differently. Your walk can be the adventure of your day.

We humans walk upright on two legs.

We don't run everywhere we go, we don't amble on four legs like most mammals, and we don't use our knuckles on the ground for balance like other primates. We don't have a tail to aid in jumping like a kangaroo, we don't swim like a dolphin, and we don't crawl around on our bellies like a reptile. We walk at a leisurely pace, around 2 to 3 miles per hour.

We may spend the majority of our week bound to a desk at work or school and much of our leisure time in sedentary pursuits like surfing the Internet or watching TV. We can pull our weight, climb every mountain or paddle our own canoe. But none of

that is what we're made for. We are made for walking.

Walking is good for you. Research has shown that walkers live longer, are stronger, feel better, sleep better and remember more than nonwalkers.

Unlike nearly everything else in our society, walking costs nothing. Considering all of the benefits you will reap from a nice walk, it's the biggest bargain you will ever have in your life. No amount of wealth can buy the freedom, health, independence and clarity of mind that walking provides.

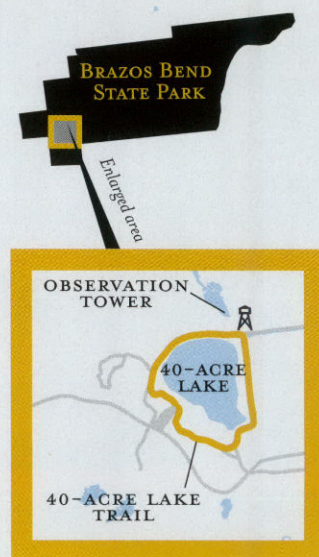
Here are some of the best walks in our state parks.

PHOTO © LARRY DITTO



BRAZOS BEND STATE PARK
» 40-Acre Lake Trail

ONLY 28 MILES SOUTHWEST OF HOUSTON, Brazos Bend State Park is a nature lover's dream. It's isolated from the big city, and you can spy many types of wildlife, including a large number of alligators and many species of birds. You can also take a peek at the heavens at the park's observatory. The 1.25-mile 40-Acre Lake Trail is a perfect place to take children — it is nearly impossible to be bored here. The trail follows the banks of a shallow, marshy lake and offers views of different aquatic habitats. At the southern end of the trail, near the parking area, is an observation deck that juts out over the lake. At the northern end of the loop is a four-story observation tower that offers commanding views. Almost any time you stroll around here, you'll see wildlife, whether it's egrets posing, ducks swimming, bobcats scooting or alligators out for their own walk. The gators are so abundant, the park has signs up with instructions on how to coexist happily with them. If you're intrigued by the alligators, go in the morning, because this is when they're basking and easy to see. That low thrumming you hear in the spring and early summer on your walk? Those are the gators.



DINOSAUR VALLEY STATE PARK

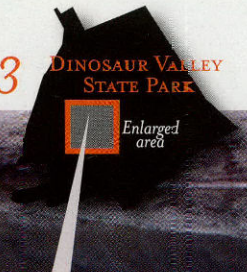
» *River Ecology Trail and Track Sites 2 and 3*

DINOSAUR VALLEY
STATE PARK

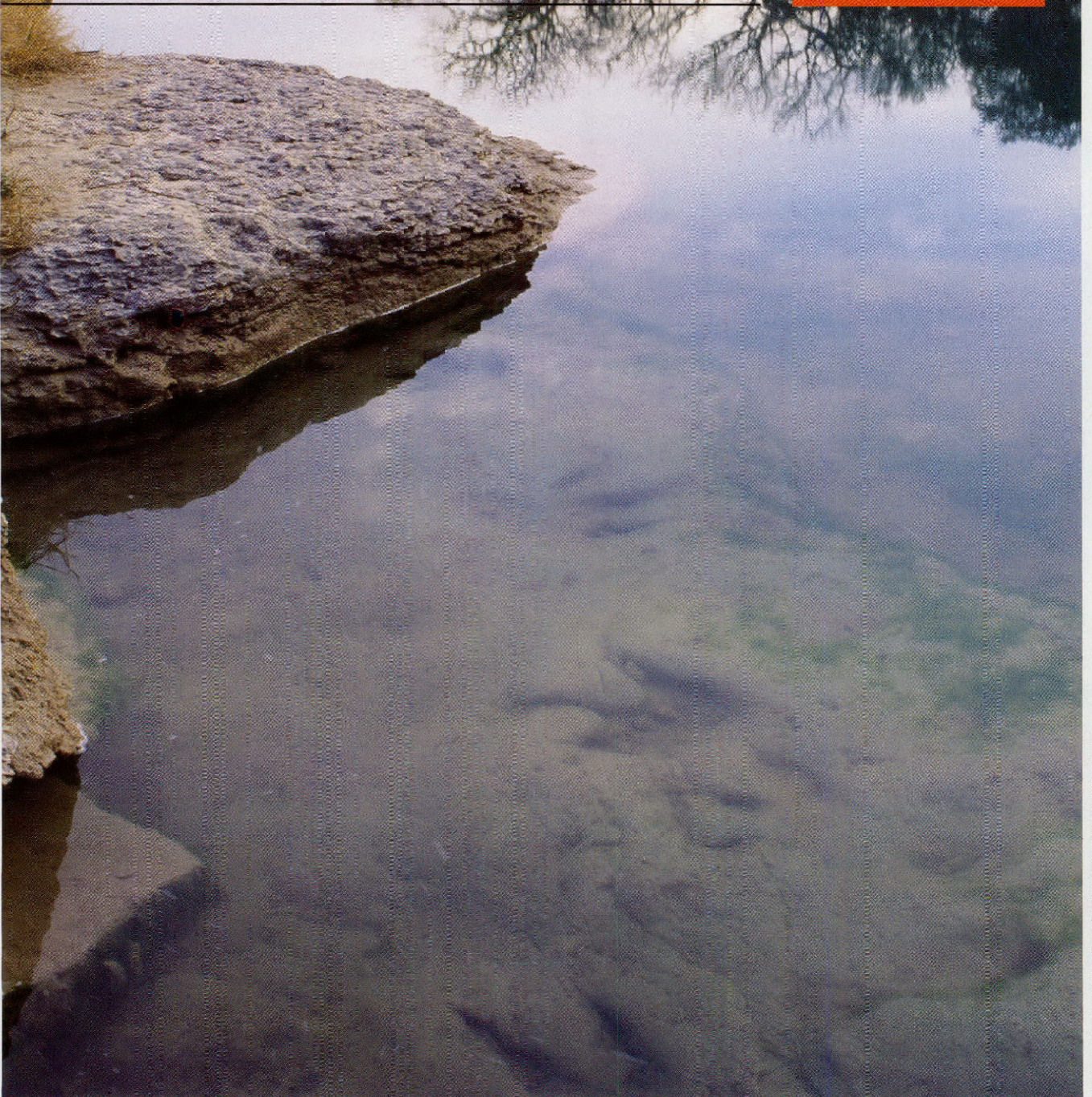
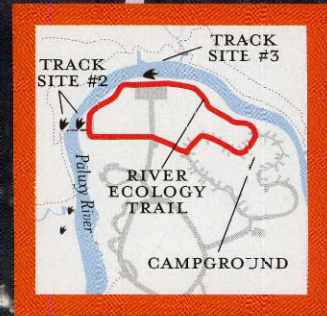


WHO DOESN'T like dinosaurs? The first thing you'll see at Dinosaur Valley near the town of Glen Rose are two huge ones — a 70-foot apatosaurus and a 45-foot Tyrannosaurus rex. While these may be fiberglass replicas, the real things left their footprints in the mud some 113 million years ago in what is now bedrock in the Paluxy River. To a scientist, the tracks even tell a story. A carnivorous dinosaur is stalking a much larger

plant-eating dinosaur, just like the replicas by the park gift shop. The park provides illustrations at the track sites to help you pick the footprints out. Along this 1.5-mile walk you'll amble along the same path as those dinosaurs did long ago. The River Ecology Trail begins at Track Site 2 and follows the bank of the river to a park campground. The trail is paved and is open in some places and winds through thick stands of cedar and oak in others. When you get to the campground, return to the Site 2 parking lot by taking the short trail at campsite 35 by the amphitheater.



Enlarged
area



OPPOSITE © ANDREW SLATON; THIS PAGE © LANCE VARNELL



BENTSEN-RIO GRANDE STATE PARK

» *Hawk Tower and Rio Grande Trail*

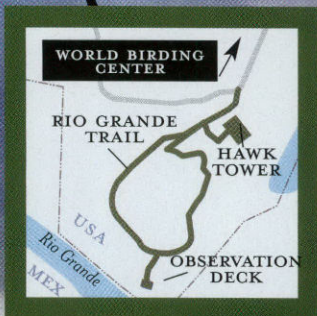
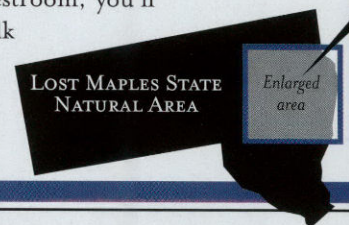
YOU WON'T FORGET this park near the city of Mission in the Rio Grande Valley. It has become the headquarters of the World Birding Center and is now closed to vehicular traffic, so to get to the trails you must walk about two miles from park headquarters, take the tram or rent a bicycle. The Hawk Tower is not really a tower; it's an elevated walkway with panoramic views of the surrounding brush country and the adjacent resaca. Many species of hawk migrate through this area, so at the right time of year you might see thousands in a single half-hour from the tower. Show up between the last week in March and the first week in April for the best show. The moderate two-mile trail is a wide walkway through thick colima, mesquite and tepeguaje brush that give you shade and protection from the winds. Along the trail you'll see many birds, including the noisy chachalaca and beautiful kiskadee. If you catch a glimpse of black fur darting through the brush, you might be one of the lucky few to spot a rare jaguarundi in the wild. The trail also has an observation deck surrounded by river cane that overlooks the Rio Grande and Mexico.



LOST MAPLES STATE NATURAL AREA

» *Maple Trail and Portion of East Trail*

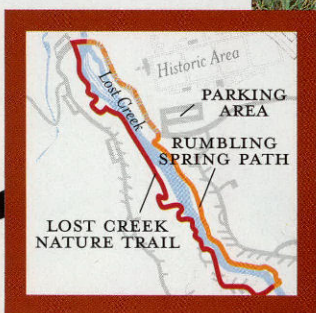
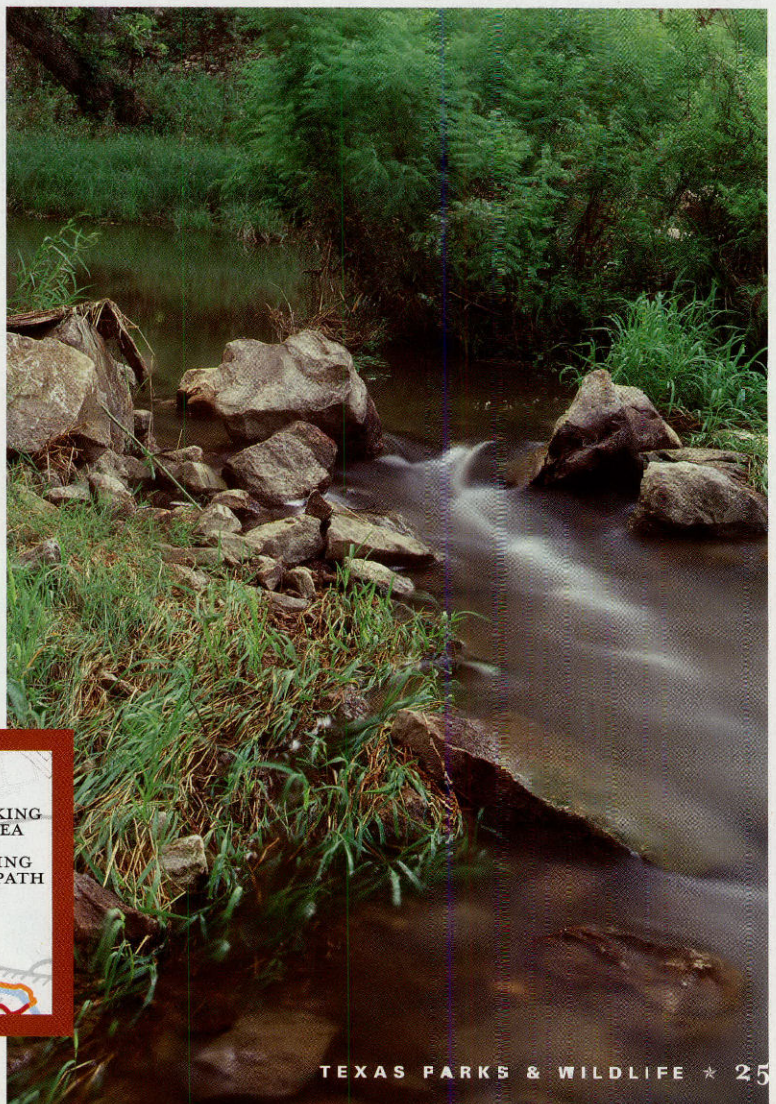
LEAF PEEPERS and bird watchers love the Maple Trail in the fall, but this is a great walk any time of the year thanks to its remote location five miles north of Vanderpool, out in the far western edge of the Hill Country. The Maple Trail follows along one bank of the Sabinal River, while the East Trail follows the other. The Maple Trail cuts through thick stands of maples and is secluded, with varied terrain, large boulders and hand-hewn rustic steps and railings. Don't be in a rush — take a break at a bench under the tall maples and listen to the birds singing, the river bubbling over rocks and the rushing of the wind. When the Maple Trail ends, continue north to follow the East Trail to the first restroom area, then come back along the opposite riverbank for a very nice walk that's out in the open. If you continue along the East Trail from the restroom, you'll have a moderately strenuous walk of about five miles instead of a leisurely two miles, so unless you're in the mood for some real exercise, make the turnaround.





FORT RICHARDSON STATE PARK
» Lost Creek Nature Trail and Rumbling Spring Path

THE LANDSCAPE around Jacksboro is typical of the eastern edge of the Panhandle: relatively flat and unexceptional. But Fort Richardson is gorgeous. It has a small lake near park headquarters and several nice walks. The easy half-mile trails that take you alongside the creek are a delight. The Lost Creek Nature Trail is beautiful, with carefully carved stone steps. It goes through thick stands of oak, punctuated with prickly pear cactus. You're only a stone's throw from the creek, though it is sometimes lost in the dense oaks. If the weather is warm, step over and soak your feet and look for the critter tracks of rabbits and raccoons that have done the same thing before you. You can make this a loop, adding about another half-mile, if you return along the Rumbling Spring Path that follows the opposite shore of the creek; you'll have to walk along the paved park road for the last quarter-mile. The Rumbling Spring Path is more rustic than the Lost Creek trail, rewarding you with a different perspective.



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BIG BEND RANCH STATE PARK
» Closed Canyon Trail

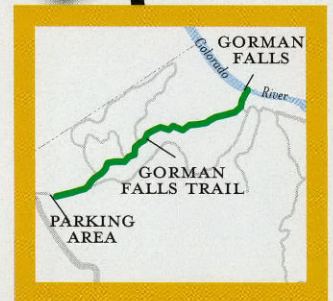
CLOSED CANYON is a fascinating place that will draw you back because it's different every time you visit. One of the few slot canyons in Texas, it's located just off the River Road about 20 miles west of Lajitas. The trail follows a dry creek bed from the head of the canyon to the Rio Grande. After parking, look for the big crack in the cliff wall and head for it. The first quarter-mile or so in the canyon is easy going, but then you encounter rocky drops that get steeper the farther in you go. At about 1.5 miles, you cannot continue without climbing equipment. You don't have to go that far, though, to enjoy the unusual formations — steep cliffs on each side that seem to close in on you as you walk in, large veins of calcite in the cliff faces, cactus growing sideways from solid rock high above you. It's all quite breathtaking. And remember that the trail is a dry creek bed, so if it starts to rain, get out of the canyon quickly or you might be swept away — those cliffs are high and sheer.



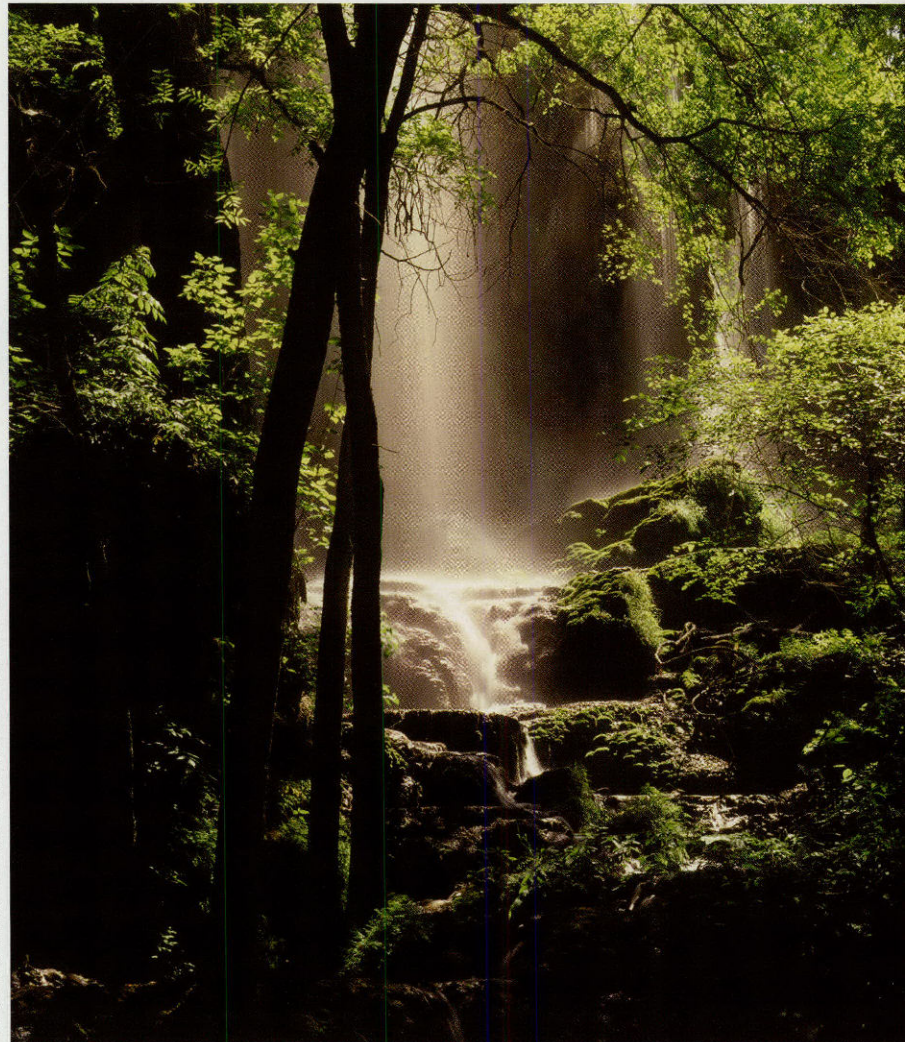


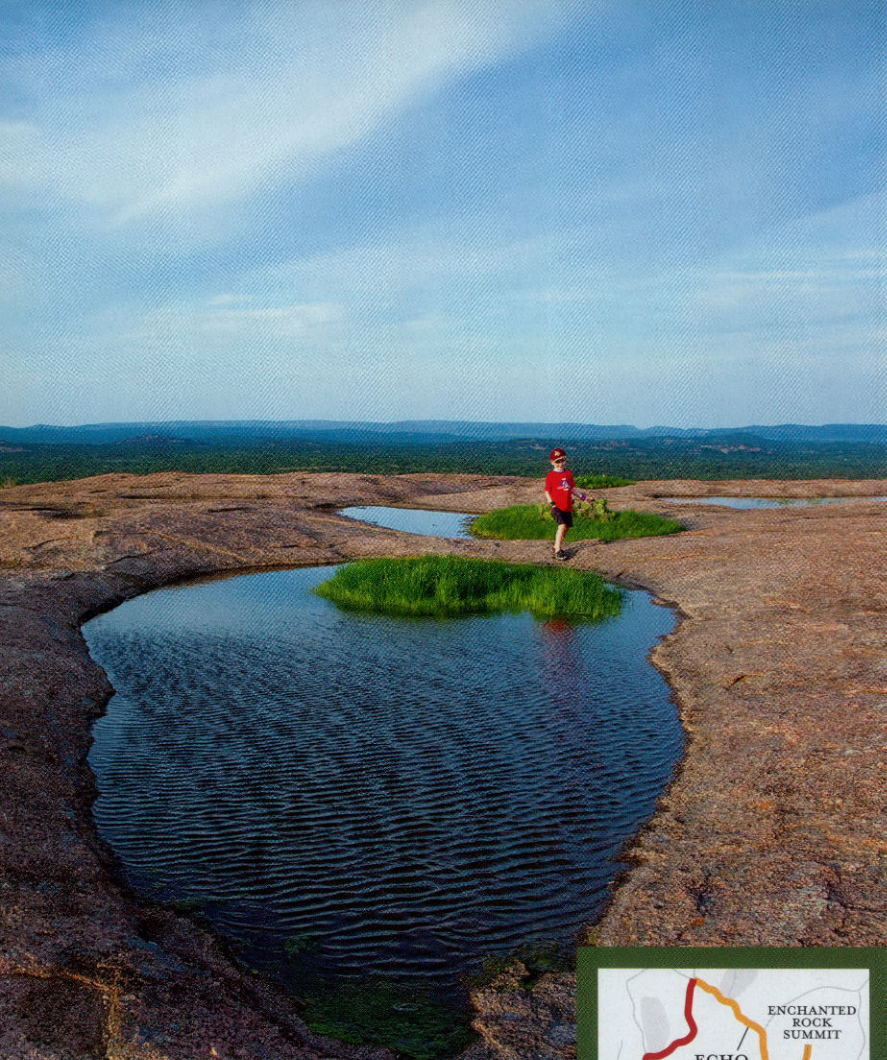
COLORADO BEND STATE PARK » *Gorman Falls Trail*

THIS IS A REMOTE PARK, 28 miles west of Lampasas, with a great payoff: a 60-foot travertine waterfall surrounded by lush vegetation. It's a beautiful sight. In fact, it's the single prettiest spot in the Hill Country — one of the best in all of Texas. Be alert along the three-mile round trip and you may spot several endangered bird species that call Colorado Bend home, including the black-capped vireo and golden-cheeked warbler. Look to the sky in cooler months when bald eagles soar. The gravel trail is rocky in many places, wandering up and down small hills, through oak and cedar brakes, and alongside lots of cactus until you get to the base of the falls, where nearly constant moisture has created a chaotic jungle of trees, vines, grasses, ferns, moss and other vegetation. The walk is easy going down until you reach the falls area, where you have to scramble over slick rocks. The park has cable guides strung up to keep you from falling — use them. What makes the walk moderately strenuous in hot weather is the return, when you have to regain all that elevation you lost going down to the river.



OPPOSITE © LAURENCE PARENT; THIS PAGE © LANCE VARNELL





ENCHANTED ROCK STATE NATURAL AREA
 » Loop Trail and Echo Canyon Trail

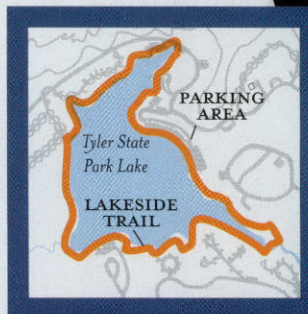
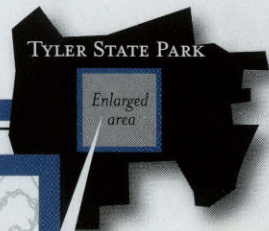


ABOUT 18 MILES NORTH of Fredericksburg, Enchanted Rock is a pink granite dome 425 feet high and covering 640 acres. The most popular trail at Enchanted Rock SNA goes straight up the face of it — but for some people that's more of a chore than a walk. A more relaxed and more scenic — but longer — journey to the top starts with the Loop Trail at the end of the campground. Along the way you'll pass through a couple of different ecosystems — through woods and brush, by a pond, over exposed rock — and you'll see several unusual rock formations that those who do climb the face of Enchanted Rock never get to see. Follow the Loop Trail to the back side of the main dome, and then walk along the Echo Canyon Trail. Once you're well into Echo Canyon, it's a short and steep hike to the top of the dome. Tonkawa Indians gave the rock its name because they believed ghost fires flickered at the top, and they heard strange moaning sounds emanating from the stone. Those sounds can still be heard today at certain times of the night, caused by the rock's heating by day and contracting in the cool of the evening.

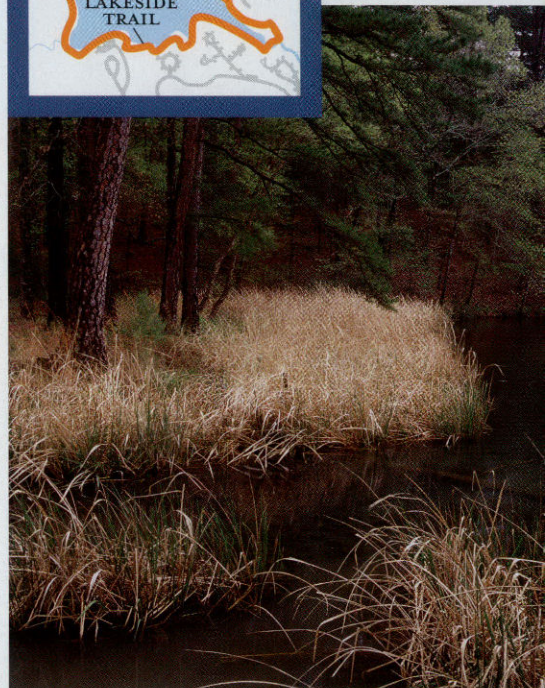


TYLER STATE PARK
 » Lakeside Trail

THE 2.5-MILE Lakeside Trail is one fine walk. This isn't just any walk through the woods — it's a *perfect* walk through the woods. The path is smooth and wide with tall trees surrounding it, and while on it, you will feel like you are a part of nature. The moderately hilly trail is mostly a dirt walkway through the piney woods encircling the park's lake, with boardwalks over some marshy areas. The vegetation and shade are much thicker on the western portion of the walk because the eastern end follows the lake's beach area. You'll find benches and picnic tables on the trail, with one particular bench, under the pines overlooking the lake at a strategic point on the western edge, that can offer up blazing views of the setting sun reflecting over the lake. A small portion of the trail follows the park road, so be careful there. You'll see fish jumping from the lake in the early morning mists, and you can enjoy maple, ash and birch trees turning crimson in the fall. In the summer, go jump in the lake.



LEFT AND OPPOSITE © LAURENCE PARENT; RIGHT © LANCE VARNELL

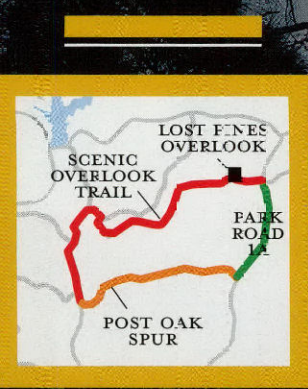




BASTROP STATE PARK

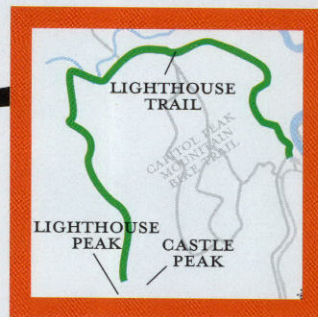
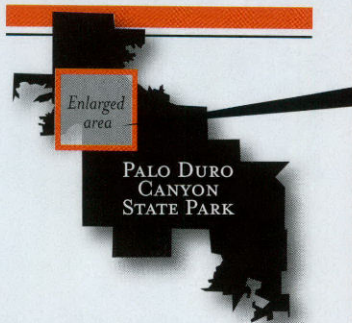
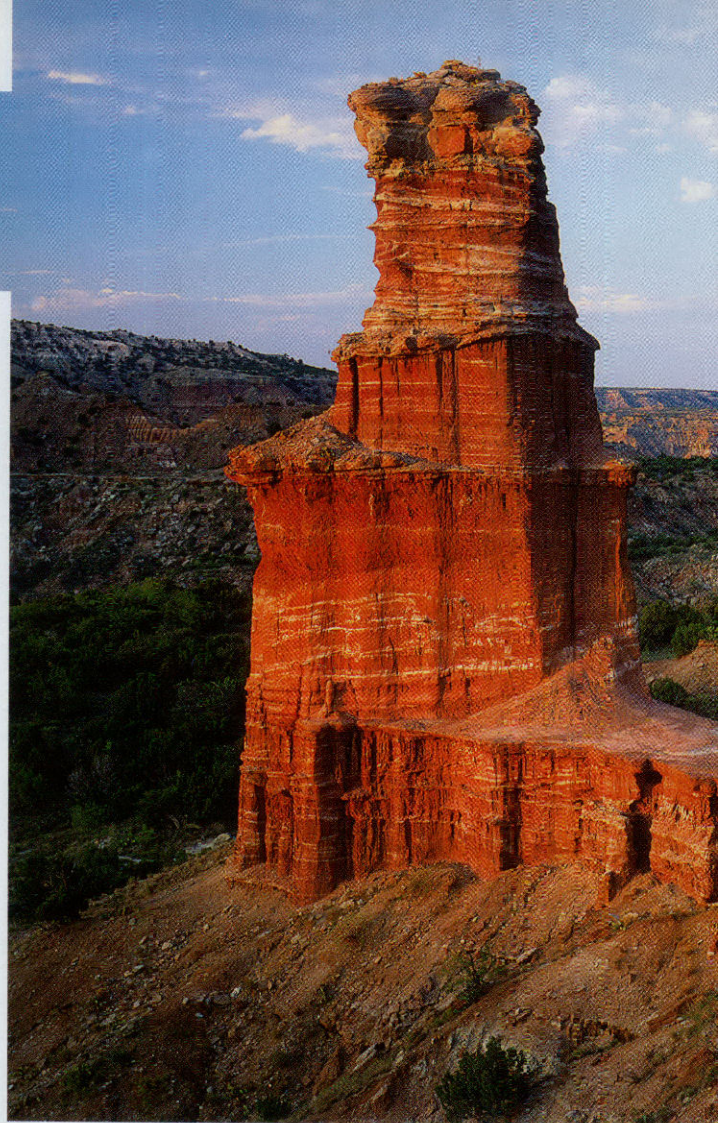
» Scenic Overlook Trail and Post Oak Spur

TAKE A WALK Into the heart of the Lost Pines of Texas, just a mile from Bastrop. Begin your two-mile trek at the massive stone gazebo on a hilltop that presents you with breathtaking views of the loblolly pine forest. Then descend the trail into the forest itself. Tall pines dominate the landscape all around, at times giving the feeling of being in a natural cathedral. This is nature at its best. The trail is dirt carpeted with pine needles but is crisscrossed with tree roots, so take care when you're walking. Several trails cross each other in this area, but the park has provided numerous, color-coded metal blazes on the trees and trail markers to guide you (the Scenic Overlook Trail is red; the Post Oak Spur is gray). The trail is in nearly total shade for its entire length, and a couple of benches allow you to rest during your up-and-down journey. You'll discover a wildlife viewing blind at one point—a great idea for early mornings and at dusk. These two trails make a loop, with a small portion along Park Road 1A returning you to the parking area.



PALO DURO CANYON STATE PARK » *Lighthouse Trail*

AS THEY SAY LOCALLY, "Welcome to the Grand Canyon of Texas." Now, that's a slight Texas exaggeration because Palo Duro doesn't have the drama of Arizona's most famous canyon, but its nearly 30,000 acres are unusual and interesting in their own right. And downright impressive. The Palo Duro canyon system is more than 120 miles long, 20 miles wide and 800 feet deep, located south of Amarillo at the edge of the Llano Estacado. Make sure to take in the scenery at the historic visitors center before heading on down the trail. This strenuous 5.75-mile round-trip walk is worth every drop of sweat since it takes you to the Lighthouse, an extraordinary formation of multihued rock towering over the middle of nowhere. Play peek-a-boo with a lizard sunning on a rock or be startled by a roadrunner zipping by. There's history here, too, from prehistoric Native Americans to Spanish conquistadors to famous Texas pioneers and soldiers. This is a grand old walk that will take you back in time, figuratively and literally. Some of the rocks you'll see in the canyon are 250 million years old.





TOP © LAURENCE PARENT; BOTTOM TPWD

MOTHER NEFF STATE PARK » *Cave Trail*

THIS PARK IS WELL OFF the beaten path near the small town of Moody. This gem of nature was the very first state park in Texas, named for the woman who donated the land, the mother of a

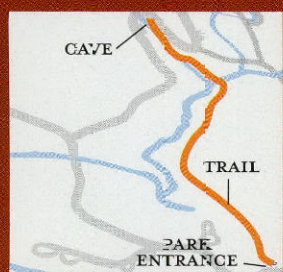
Texas governor who helped create our entire Texas park system. What is so nice about this moderately strenuous two-mile walk is that it is almost completely secluded, going through a thick forest and negotiating steep ravines. Start and end this hike at park headquarters, following a series of interconnected trails. Stop for a moment in a ravine and soak in the isolation in this forest: primeval. Just when you begin thinking this area historically must have been one of the most primitive and unfrequented areas in Texas, you

come upon signs that people have enjoyed it for hundreds and hundreds of years. One indication, in a 40-foot ravine, is the Tonkawa Indian cave that once provided shelter and a burial site. Another is a pond used by pioneer women to wash clothing and used by the Neff family as a swimming hole back in the 19th century. Walk here just once and you'll be back again and again, just as people have been doing for a thousand years.



MOTHER
NEFF
STATE PARK

Enlarged
area



DETAILS

- Bastrop State Park, 512-321-2101, www.tpwd.state.tx.us/bastrop
- Bentsen-Rio Grande Valley State Park, 956-584-9156, www.worldbirdingcenter.org
- Big Bend Ranch State Park, 432-358-4444, www.tpwd.state.tx.us/bigbendbranch
- Brazos Bend State Park, 979-553-5102, www.tpwd.state.tx.us/brazosbend
- Colorado Bend State Park, 325-628-3240, www.tpwd.state.tx.us/colocabend
- Dinosaur Valley State Park, 254-897-4588, www.tpwd.state.tx.us/dinosaurvalley
- Enchanted Rock State Natural Area, 830-685-3636, www.tpwd.state.tx.us/enchantedrock
- Fort Richardson State Park, 940-567-3506, www.tpwd.state.tx.us/fertrichardson
- Palo Duro Canyon State Park, 806-488-2227, www.tpwd.state.tx.us/palodurocanyon
- Lost Maples State Natural Area, 830-966-3413, www.tpwd.state.tx.us/lostmaples
- Mother Neff State Park, 254-853-2389, www.tpwd.state.tx.us/motherneff
- Tyler State Park, 903-597-5338, www.tpwd.state.tx.us/tyler





JEWEL *of the* MARSH

THE LEGENDARY
DIAMONDBACK
TERRAPIN'S SURVIVAL
DEPENDS ON A LITTLE
HELP FROM ITS FRIENDS.

BY Artussee D. Morris

PHOTOS BY Earl Nottingham

WAY BACK

in a coastal marsh's upper reaches lurks a creature that few encounter, and whose mysterious existence is seldom documented. Treasured by epicureans — nearly to extinction — the diamondback terrapin (*Malaclemys terrapin ssp*) is considered to be an indicator of a healthy ecosystem. While these terrapins are creatures of legend, their mere presence often eludes us.

Diamondback terrapins get their name from the concentric, diamond-shaped scutes (plates) on their carapace, ranging in color from light brown to gray or black. Their skin usually is a pale gray, flecked with dark spots, blotches and/or stripes. Each color pattern is unique and can be used to identify individual terrapins.

There are seven subspecies of diamondback terrapin, found from Cape Cod to South Texas. The Texas subspecies (*M. t. littoralis*) inhabits the back marshes from western Louisiana to Nueces Bay near Corpus Christi. The diamondback terrapin is the only “sea turtle” that spends its life in brackish coastal marshes, tidal flats, lagoons and creeks.

Myths about the diamondback terrapin predate Columbus in the Americas. Native Americans regarded them either as sacred animals or often as “tricksters.” In a series of late 1800s African American Uncle Remus folk tales, Br'er Fox tricks longtime nemesis Br'er Tarrypin (Brother Terrapin) into letting him see his tail, only to grab it and shake Br'er Tarrypin back and forth. To break free, Br'er Tarrypin tricks Br'er Fox into throwing him into a pond by telling him he'll drown. Another tale has Br'er Tarrypin beating Br'er Bear in a game of tug-of-war by slipping into the water and tying his end of the rope to a sunken branch. However, not everyone thought of terrapins lightheartedly. Early New England fishermen considered them to be bad luck, calling them “wind turtles” bringing ill fortune.

Diamondback terrapins played an important role in the culinary history of early America. In the 1700s, diamondback terrapins were an important food source for the Continental Army and later became a major food source for slaves on coastal plantations. Stories from the Chesapeake Bay region in the 1800s refer to indentured servants complaining about the frequency of terrapins in their diets, leading to a Maryland law stating that slaves should not be fed terrapin more than three times a week. Somewhere

along the line, terrapins went from slave food to one of the most celebrated dishes of the time.

Around the turn of the 20th century, in the mid-Atlantic and New England states, diamondback terrapins were the main ingredient in a gourmet turtle soup craze. Only the affluent could afford the sherry-laden dish. At the time, diamondback terrapins were so plentiful that fishermen considered them a nuisance because they sometimes were unable to haul in their fishing nets due to the weight of the creatures. The terrapins were sold live for \$90 a dozen or \$1 per inch of plastron length — big bucks back then — and fishermen landed as much as 400,000 pounds of them annually from the East Coast.

Unfortunately, larger females were targeted, and it was not long before populations began to crash. Because of the high demand, populations were locally extirpated near large cities. An attempt was made to create culture farms with some success, but by the end of World War I, markets declined because of lack of product. Finally, during Prohibition (when sherry was not available), the fad fell off, and the Great Depression made the dish too expensive for many people to purchase. This offered the diamondback terrapin a reprieve of sorts, and Atlantic populations gradually began to recover. It is thought that the food craze never got started in the Gulf of Mex-





ABOVE: HAVING RESCUED SEVERAL DIAMONDBACK TERRAPIN HATCHLINGS AFTER HURRICANE IKE, TONY AMOS, LEFT, WITH THE ANIMAL REHABILITATION KEEP IN PORT ARANSAS, RELEASED THEM BACK INTO THE WILD.

LEFT: THE RESCUED TERRAPINS WERE CARED FOR AT THE ARK OVER THE WINTER BY GERRY GAGE AND OTHERS BEFORE BEING TAKEN TO MARSHES NEAR GALVESTON, MATAGORDA ISLAND AND PORT ARANSAS LAST SPRING.

ico region because the southern populations were said to be not as flavorful as the northern variety, with the Delaware Bay variety being the best of all.

Today, wild-caught diamondback terrapins are harvested in some states for the same dietary purpose, the pet trade and other uses. In East Asia, turtle, tortoise and terrapin parts are thought to contain medicinal properties and increase longevity. Turtles there are consumed in large quantities, leading to dramatic decreases in turtle populations. Experts suggest that 75 percent of Asia's roughly 90 species of tortoises and freshwater turtles are threatened. Now, imports are filling the void. Again the fate of the diamond-

back terrapin is threatened, with offers to buy them "live by the ton" uncovered on the Internet.

Diamondback terrapins exhibit a unique life history. They are the only turtle species whose habitat is limited to brackish/saltwater estuaries. It is thought that while they live in salty waters, they drink fresh water. Often after rains, they will rise to the surface to drink fresh water riding on the surface of the salty water. Females can store sperm up to four years and lay four to 18 eggs in the spring. They can have up to three clutches per year, and they have high nest-site fidelity, going back to the same nesting area for each event.

The clutch incubates from 60 to 100 days, and nest temperatures determine the sex of the clutch. Warmer temperatures will produce an all-female clutch. The sexes mature at different rates, with males reaching sexual maturity at 3.5 inches and 3 years of age, while females mature at 4 inches and 6 years of age. Living up to 50 years, they feed along the marsh edge on crabs, shrimp, bivalves and fish. Marsh periwinkles are a favorite prey item.

Diamondback terrapins are often

CLOCKWISE FROM TOP LEFT: TONY AMOS WHEELS TWO RESCUED TERRAPINS ACROSS MUDDY FLATS TO A SUITABLE RELEASE LOCATION NEAR PORT ARANSAS; TERRAPIN READY FOR RELEASE; TERRAPIN IN ITS NEW HOME; AMOS WATCHES OVER HIS YOUNG CHARGES; TERRAPIN AT THE ARK IN PORT ARANSAS.

observed at low tide basking on exposed oyster reefs. They have a tendency to bury up in the mud when cold and brumate — the reptilian equivalent of hibernating — in thick marsh mud during the winter. They have few natural predators as adults, but as juveniles, raccoons, birds and alligators may take them when the opportunity arises. Nevertheless, their biggest threats are still humans.

Although not so much of a problem here in Texas, roadway mortality is a significant threat to females in search of nesting areas on the Atlantic coast. Additionally, raccoons have been introduced to nesting islands, where they prey on the incubating nests. Boat propellers and loss of habitat from coastal development have been listed as threats. Arguably, the key threat to Atlantic coast and Gulf of Mexico populations is the wire crab trap.

Each February since 2002, the Texas Parks and Wildlife Department has hosted the annual Abandoned Crab Trap Removal Program. Concerned with the ghost fishing effects of these derelict traps, coastal biologists examine each trap brought in for any evidence of diamondback terrapin mortality. Unfortunately, they find it.

All told, since the trap removal program began, 31 terrapins have been found in derelict traps from Sabine Lake to San Antonio Bay. In 2005, 22 diamondback terrapins were found in four traps (20 in two traps) in Galveston Bay. All had drowned. Four more were found in one trap the following year. All were alive and released unharmed. This may not sound like a lot when you consider the nearly 26,000 traps removed coastwide since the program began, but it does illustrate the trouble crab traps may cause for diamondback terrapins in Texas. Other states share similar concerns.

Environmental Institute of Houston (EIH) Executive Director George Guillen works with his students to conduct mark-recapture population estimates and radio and acoustic telemetry research on diamondback terrapins in Galveston Bay. “Terrapins are considered the only truly



estuarine species of turtle,” he notes, “and their health is directly indicative of the overall health of the estuary.” Unfortunately, very little is known about diamondback terrapins in Texas.

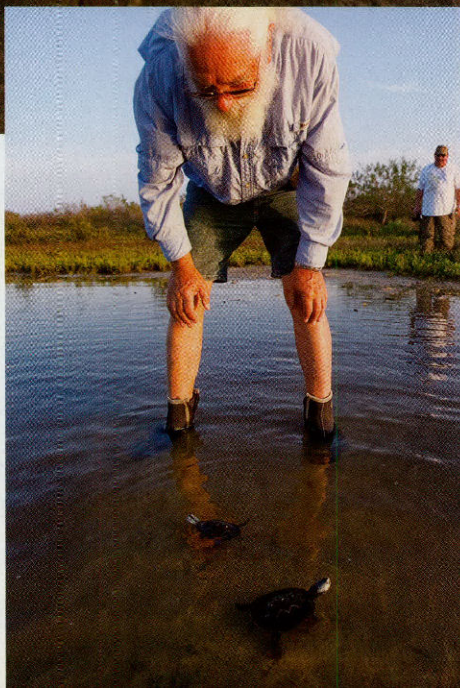
Historical records of diamondback terrapins reviewed by the staff of the EIH date back to the 1880s. These records show that terrapins were common in Galveston Bay and nested on shell islands now under water. The Texas Memorial Museum in Austin houses specimens dating back to the late 1940s. Wildlife biologists with TPWD surveyed crab trap fishermen, other coastal fishermen and game wardens in the early 1980s to determine sightings of terrapins in Texas. About 40 percent of the respondents said that terrapin populations appeared to have decreased over the previous 10 years.

The most extensive study on diamondback terrapins in Texas was conducted from 2001 to 2002 by U.S. Geological Survey researcher Jennifer Hogan. Through monthly surveys, she documented a sub-population of diamondback terrapins in

Galveston Bay using modified crab traps, lagoon surveys and nesting and basking surveys. She captured 135 terrapins and scientifically described for the first time a diamondback terrapin nest in Texas.

Throughout the diamondback terrapin’s range, they are protected to varying degrees — with measures such as closed seasons for harvest, size and bag limits and full protected status with no collection of wild specimens. However, before 2007, there were few protective measures in place in Texas. In light of a possible export trade opening up, and considering that available information indicates that the species could not withstand an increase in harvesting, the TPWD Coastal Fisheries Division proposed a regulation that prohibited the possession of wild-caught diamondback terrapins.

While it might seem odd that the Coastal Fisheries Division would be involved with diamondback terrapins, where they are found (coastal marshes) and the gear by which they would likely be taken (crab traps) do fall under the division’s supervision. The regulation went



into effect Sept. 1, 2007.

Other folks are getting into protecting Texas terrapins as well. In October 2008, noted naturalist Tony Amos with the Animal Rehabilitation Keep at the University of Texas Marine Science Institute in Port Aransas discovered 14 hatchlings roughly the size of quarters washed up on the Mustang Island beach a few weeks after Hurricane Ike ravaged the upper coast.

Thinking of them as refugees, Amos and staff took care of them over the winter with intentions of releasing them back to the wild the following spring. Twelve survived the winter holiday and were released in the spring. Speculating that they were originally washed out from the Galveston Bay area by the big storm, George Guillen of EIH took eight of the now coffee-cup-sized terrapins and gave them a resurrection of sorts back in the Galveston Bay marsh. The others were released near Matagorda Island and Port Aransas.

When asked why efforts should be made to rehabilitate diamondback terrapins, Amos responds: "For terrapin society, it's a matter of survival. We benefit from this being just one of the whole variety of interesting animals that make this planet a desirable place for us to inhabit."

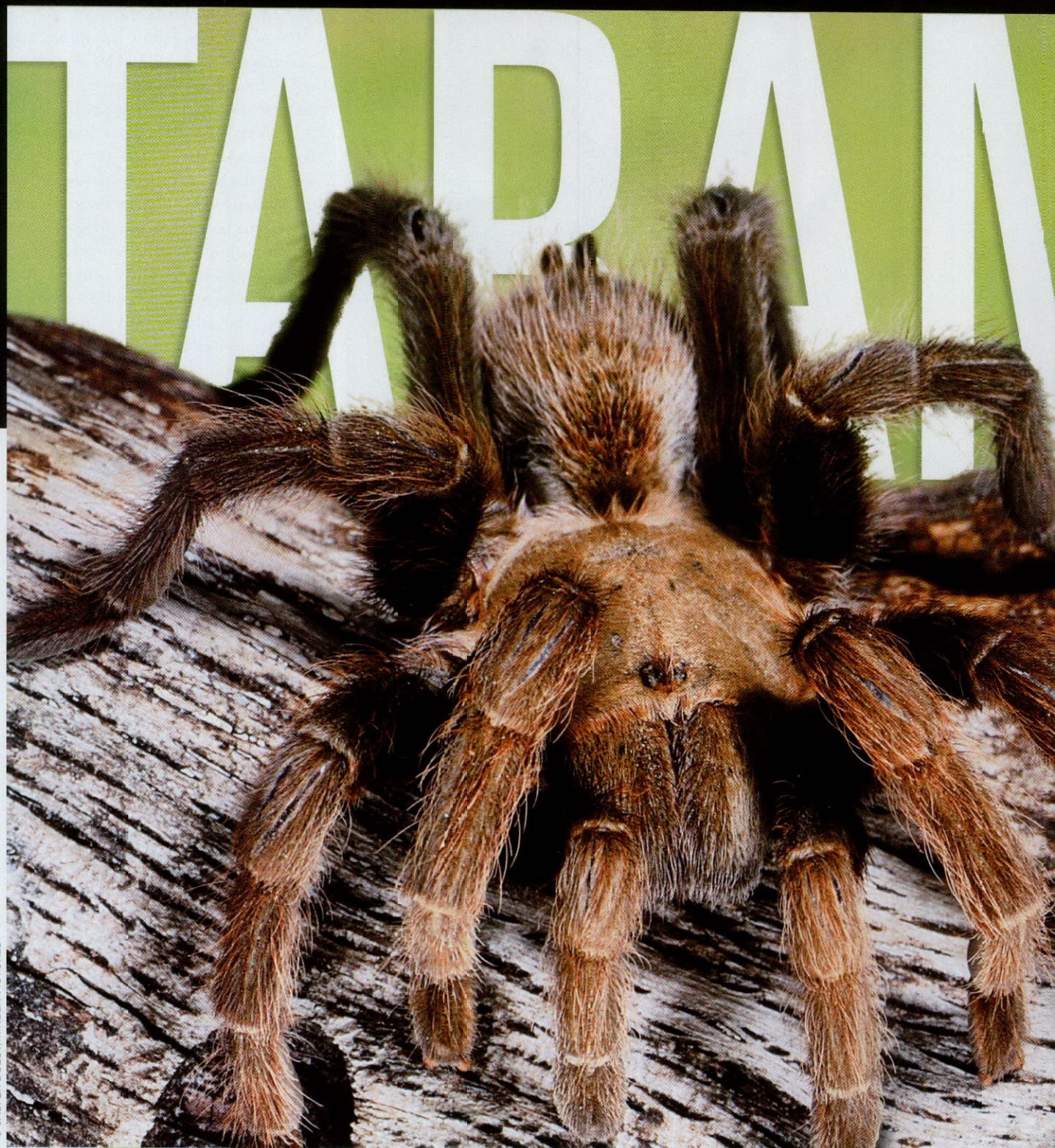
Currently, diamondback terrapins are a species of special concern to Texans. While we may not know much about this shy and elusive creature, research currently being conducted by Guillen and his graduate students may shed some light into the terrapin world. As public sentiment grows to assist the terrapins — like the Blackhawk helicopter pilot who asked permission to exit the craft to remove a hatchling terrapin from the tarmac in Corpus Christi last spring — there is optimism. Threats still exist, but with a little bit of help from its friends, the diamondback terrapin has a radiant future as the jewel of the marsh. ★

HOW TO HELP

FULLY DEDUCTIBLE CONTRIBUTIONS TO HELP SUSTAIN THE ANIMAL REHABILITATION KEEP CAN BE SENT TO:

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MISUNDERSTOOD AND MALIGNED BY MANY, tarantulas — like bats, scorpions and snakes — often get a bum rap. After all, they're big, hairy, creepy-crawly spiders that are stealthy nocturnal predators. For arachnophobes, they're bug-eyed monsters from our worst Halloween nightmares.

From Texas to Timbuktu, tarantulas suffer from bad press. Blame it in part on sensational movies like the 1955 sci-fi flick *Tarantula*, in which Clint



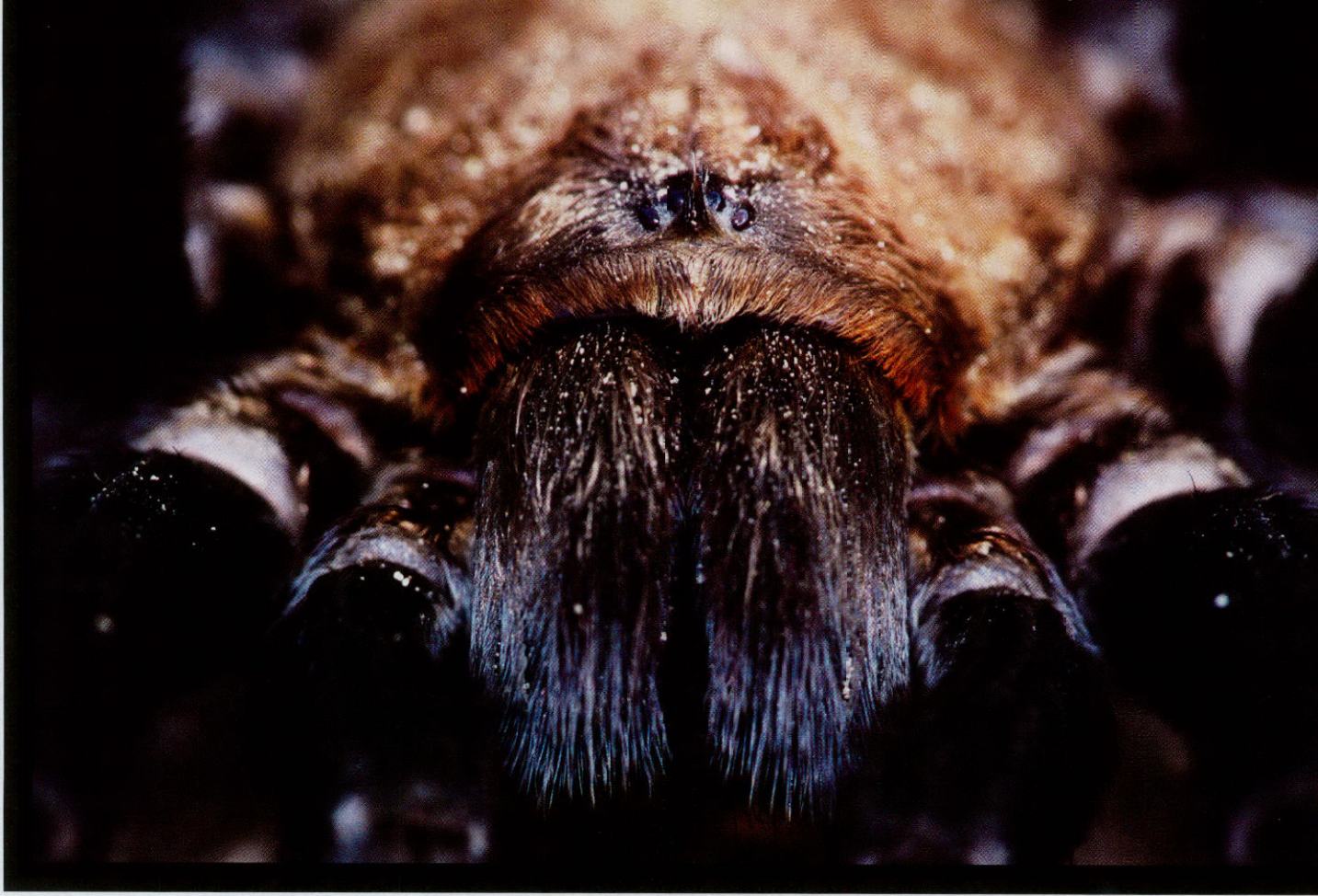
Texas' most fearsome-looking spider is actually a gentle giant.

By Dale Weisman

Texas brown tarantula on a tree trunk.

Eastwood, playing a fighter pilot, napalms a giant, rampaging mutant spider, or the mega-hit *Raiders of the Lost Ark*, in which menacing tarantulas crawl across Indiana Jones' back in the opening scene.

Real-life tarantulas, of course, bear no resemblance to the malevolent creatures portrayed by Hollywood. Despite their fearsome looks, tarantulas are gentle giants, reclusive by nature, harmless to humans and an essential part of our ecosystem.



“Tarantulas are not as dangerous as many believe,” says Rick West, a freelance scientific consultant from Canada and one of the world’s leading authorities on tarantulas. Having spent 45 years studying tarantulas in their natural habitats in 27 countries, West knows from experience. “To date there has never been a proven human fatality directly resulting from the bite of a tarantula,” he says.

Tarantulas abound in Texas, from the Rio Grande Valley and coastal plains to the prairies and Pineywoods to the Hill Country and Trans-Pecos. Texans frequently encounter tarantulas around the yard and in the wild. Yet bite incidents are rare (and no more painful than a bee sting) and occur only when someone is harassing or mishandling them.

Despite their undeserved bad reputation, I believe tarantulas have more fans than foes. When I posted my interest in tarantulas on Facebook, I received only one “ewww, spiders!” reaction amid several favorable comments (“cool, aren’t they?”) and interesting anecdotes.

Tarantula societies, such as the American Tarantula Society (www.atshq.org), add to our enlightenment and spring to the defense of these fascinating arachnids. Many tarantulaphiles, from curious

kids to serious arachnologists, keep tarantulas as terrarium-dwelling pets, as beloved as Fido in some households. For nature lovers in general, tarantulas hold a special mystique as the largest, heaviest spiders on the planet and “megafauna” of the bug world.

Tarantulas are ancient arachnids, as old as dinosaurs. According to West, fossil records show that tarantulas have been crawling around, virtually unchanged, for more than 20 million years. The oldest known ancestral tarantula-like fossils date back 235 million to 240 million years.

“Tarantulas have figured in indigenous creation stories and fanciful myths throughout the world,” says West. The Nahua peoples of central Mexico, for example, called tarantulas *Taiueuetl*. “Tlal” comes from the word *tlalte*, which means “owner of a big piece of land,” and “ueuetl” means old. Think of tarantulas as “the old owners of a big piece of land.”

In a few countries, such as Cambodia,

ABOVE: Tarantulas have eight eyes and two mouth appendages called chelicerae, which cover the fangs.

OPPOSITE, clockwise from top left: Tarantula on a cactus; at the entrance to a silk-covered burrow; in a defensive pose, with legs raised and fangs bared; crossing a road; trying to escape from a tarantula hawk, a wasp that preys on the arachnid; having its venom milked.

tarantulas provide a nutritional food source (approximately 63 percent protein by body weight). Tarantula venom also has shown promise as a cure for heart arrhythmia and Parkinson’s and Alzheimer’s diseases, as well as for use in natural pesticides.

Tarantulas are not considered to be true spiders by biologists. Rather, these spiders belong to a smaller, more primitive group called mygalomorphs. A big difference between the two groups is that mygalomorphs do not produce elaborate webs composed of sticky silk for prey cap-

Tarantulas hold a special mystique as the largest, heaviest spiders on the planet and “megafauna” of the bug world.



TOP LEFT, MIDDLE RIGHT © ROLF NUSSBAUMER/ROLFNP.COM; BOTTOM RIGHT BY TTWD; OTHERS © MARK MOFFETT/MINDEN PICTURES



When threatened, they use their back legs to flick a cloud of urticating (irritating) hairs from their abdomen.

ture. Mygalomorphs account for only about 7 percent of the world's spider species. Other notable mygalomorphs include purseweb and trapdoor spiders.

The word "tarantula" stems from an Old Italian word *tarantola*, derived from the southern Italian town of Taranto, home to the European wolf spider (*Lycosa tarentula*).

During the Renaissance, local peasants believed that *Lycosa* bites caused a disease called tarantism, cured only by a frenzied dance, the tarantella — a good excuse for wild abandonmen: during an age of religious repression.

When European explorers encountered mygalomorphs in the New World, they called them *tarantolas*, and over time the familiar name "tarantula" stuck. Tarantulas also came to be called "bird-eating spiders" when naturalists and scientists exploring South American jungles reported seeing enormous mygalomorphs

feeding on small birds. (The world's largest tarantula — the Goliath birdeater [*Theraphosa blondi*] — has a nearly 12-inch leg span.)

Found in the tropical and subtropical regions of the world, tarantulas range from North, Central and South America and the Caribbean to Africa and the Middle East to southern Asia, the Indo-Pacific and Australia. In the United States, they flourish west of the Mississippi River and as far north as parts of Missouri, Utah and central California.

Tarantulas live in diverse terrestrial and arboreal habitats: deserts, prairies, scrub forest, jungles and rain forests. Terrestrial tarantulas reside in burrows (often of their own making, though sometimes borrowed from rodents), in crevices and deeply cracked soil, and under rocks and logs, while arboreal species in the tropics live in trees.

The 2009 World Spider Catalog

(from the American Museum of Natural History) lists 920 known tarantula species. The online catalog also tallies 40,998 known spider species, so tarantulas account for almost one out of every 40 species of spiders. As arachnologists discover new tarantulas and other spiders, the species list will continue to grow each year.

Tarantulas are quintessential Texas natives. The latest published research identifies 14 species in Texas. Dave Moellendorf, an Austin native and noted authority on Texas tarantulas who has studied them for more than 30 years, believes that the number of Texas tarantula species may be considerably smaller — perhaps only eight species. According to Moellendorf, morphological features may mean little in identifying tarantula species, and several species actually may be members of the same species with varied morphology.

"My favorite Texas species is the Rio Grande gold," says Moellendorf. "It's one of the most beautiful species native to the United States, and I am proud that it is a Texas spider."

Tarantulas of the genus *Aphonopelma* flourish not only in Texas but also in



neighboring states and parts of Mexico. Commonly found in grassland burrows and under logs or stones, they can attain 6-inch leg spans and weigh more than 3 ounces. The hefty, dark-brown tarantulas have been popular as low-maintenance pets because of their docile, easy-to-handle behavior (see Page 44).

Like all arthropods, tarantulas are invertebrates with exoskeletons. A tarantula's two-part body, consisting of a prosoma (cephalothorax) connected by a narrow stalk called the pedicel to an opisthosoma (abdomen), is similar to those of other spiders, but larger and hairier. In addition to eight legs, a tarantula prosoma has additional appendages: two chelicerae (mouth parts) with large fangs to inject venom and a pair of pedipalps that aid in sensing, digging and food handling. The pedipalps of male tarantulas contain specialized bulbs (visualize tiny turkey basters) used to hold semen for reproduction.

Similar to other spiders, tarantulas periodically shed their exoskeletons through a molting process as they grow and mature. Young tarantulas molt several times a year, while adults molt about once yearly. Amazingly, tarantulas can regenerate lost limbs through successive molts.

Tarantulas prey on nearly any creature small enough to overpower. After their injected venom and digestive juices liquefy their prey, they suck up dinner with a straw-like mouth and sucking stomach.

Insects make up the majority of their prey. Texas tarantulas feed primarily on crickets, June beetles, ground beetles, grasshoppers, cicadas and caterpillars. Some large tarantulas feed on small rodents, lizards, snakes — and yes, small birds. Opportunistic cannibals, tarantulas even eat each other.

Lacking keen eyesight, tarantulas detect prey and threats through sensitive hairs covering their bodies. Most New World tarantulas (those dwelling in the Americas) have an unusual defense mechanism. When threatened, they use their back legs to flick a cloud of urticating (irritating) hairs from their abdomen. The hairs can cause painful skin rashes and excruciating lung and eye injuries. (Urticating tarantula hair once served as an ingredient in itching powder sold in novelty stores, although current formulas use pepper and fiberglass as irritants.)

Old World tarantula species (those from Africa and Asia) lack urticating hairs; however, they compensate with more

OPPOSITE, clockwise from left: A female tarantula with her silken egg sac, which may contain 100 to 300 eggs; baby tarantulas hatching from their egg sac; a tarantula on the sand at sunrise.

ABOVE: A tarantula crawls on a deer skull in South Texas. Tarantulas live throughout Texas, from the Rio Grande Valley to the Pineywoods to the Trans-Pecos.

OTHER TEXAS TARANTULAS



The *Tarantula* was a 19th-century Republic of Texas newspaper favoring Sam Houston. First published at Washington-on-the-Brazos in early 1841, it went out of print in January 1842 because the town's residents couldn't afford to buy it.

A vintage tourist train, nicknamed the Tarantula Train, makes excursions between Grapevine and Fort Worth Stockyards National Historic District. The Grapevine Vintage Railroad's nickname came about because an early map of the train tracks brought to mind the spreading legs of a giant tarantula.

potent venom and defensive behavior. When threatened, most tarantulas rear up in an impressive display, lifting their front legs and spreading their fangs. Some large tropical species can produce a loud hissing noise by rubbing together modified hairs found between the base of their legs, a behavior called stridulating.

Tarantulas have few enemies in the bug world. In Texas and the Southwest, their foremost predator is the tarantula hawk, a large, dark-blue wasp with rust-red wings. After stinging a tarantula, the wasp drags its paralyzed prey into a burrow and lays an egg on its body, and the emerging larva feasts on the spider.

Tarantula species have varying life spans in the wild. According to Moellendorf, the life span of *Aphonopelma anax* (a South Texas species) extends up to 25 years for females, but only six to eight years for males. Destined to mature, reproduce and die young, male tarantulas typically live about one-third as long as females.

Tarantulas, like other spiders, spin silk. Some terrestrial tarantulas line their burrows with silk and, during the

day, cover the entrances with a silken veil. Some jungle-dwelling arboreal tarantulas build their nests entirely of silk. Female tarantulas produce silk to create an egg sac. Males create silk webs as a temporary depository for sperm before setting off to find a mate.

Tarantulas in Texas and other locales seasonally “migrate,” although their en masse movement is not a true migration, explains Moellendorf. After male tarantulas have completed their final molt, they embark on a search for females so that they can reproduce before they die — often only a few months after they mature sexually. It may take a male tarantula three to seven years to mature, and then he begins wandering, leaving his familiar burrow behind.

According to Moellendorf, Texas brown tarantulas, as well as other Trans-Pecos species, often wander in droves across roads and countryside at dawn and dusk in May through July and again in September through November. They are looking for love: receptive females.

I witnessed this spectacle of nature one

July morning while riding a motorcycle down a lonely highway threading from Pecos to Bakersfield. At first, I noticed a few tarantulas crossing the road. Mile after mile, a few became hundreds, and this parade went on for 50 miles. Slowing down and weaving down the blacktop, I did my utmost to avoid squashing them.

Car and motorcycle tires are the least of the many perils that tarantulas face. “Tarantulas have survived scores of natural enemies and global changes,” says West. “Now, with the heavy use of pesticides and agricultural, industrial and urban development that transforms the tarantula’s habitat, tarantulas face their biggest threat — man.”

Ultimately, tarantulas deserve respect and concern rather than fear and indifference.

“Tarantulas are an integral part of our world and form one of the threads of balance in the greater web of life,” concludes Moellendorf. “Just like a spider’s web, if a strand is broken or removed, the rest may unravel, and whatever happens to tarantulas will affect us in some way. All things are connected.” ★

THE ETHICS OF CAPTURING AND KEEPING TARANTULAS AS PETS

MANY arachnophiles keep tarantulas as pets in terrarium environments. Tarantulas require very little maintenance other than a steady diet of live crickets and other insects. Enthusiasts consult websites (such as www.arachnophiles.com or www.arachnoboards.com) and guidebooks (such as the excellent, comprehensive book, *The Tarantula Keeper’s Guide*). Exotic pet stores sell popular tarantula species, including some from Texas, but think twice before adopting unusual or rare tarantula species or those captured from the wild.

“Many stores acquire spiders from the wild, so ask whether one is purchasing a captive-born specimen or a wild-caught one,” advises Dave Moellendorf. “There are enough tarantula breeders raising exotic and native species in captivity that they should not be taken from the wild unless they are in danger of being bulldozed by development or exterminated in some



other fashion, and also only if there is no other safe place to release them within their native habitat.

“Texas tarantulas often found wandering across the countryside are normally short-lived males that will not make good pets,” adds Moellendorf. “They are generally nervous and want to complete their life cycle. There’s nothing wrong with, say, catching a male, studying it and then putting it back into the wild so he can complete his life cycle. Females make for better pets, but all should be left alone as the rate of human expansion is already creating stress on their environments. If we are not careful, they will begin to disappear.”

Rick West concurs: “From an ethical standpoint, wild animals should never be taken from their environment and kept as either pets or novelties to impress or scare other people. Tarantulas, like any other animals, are sentient creatures that have a specific place in their habitat — primarily keeping the population of noxious pests from overpopulating.”

Some tarantula hobbyists argue that large populations of tarantulas across Texas and the Southwest, as well as other parts of the world, are being plowed up and destroyed by agricultural and urban development. “So what’s wrong with collecting and keeping a few?” a well-intentioned arachnophile might ask.

“This is an age-old argument between plant or animal hobbyist and conservationists,” says West. “If a person is going to remove a living organism from their natural environment and keep it in captivity, I strongly advise they assume the role of responsible stewardship. First, learn about that organism’s optimum care and keeping. Second, keep the tarantula in the best escape-proof environment possible.

“In reality, and sadly, many mature tarantula species are taken both legally and illegally from their country of origin. Even though many countries have enacted laws to protect their tarantulas, this does not stop illegal collectors and tarantula smuggling.

“Some progressive countries allow government-regulated locals to collect small numbers of mature tarantula, breed them in captivity and export only the young produced by captive breeding. This seems to satiate the demand of the pet trade, as well as reduce the poaching of wild tarantulas. However, the biggest threat to tarantulas remains human encroachment and the loss of their habitat.”

Keep Texas Wild

HONOR ROLL

Many state symbols represent the wild side of Texas.



REPTILE

TEXAS HORNED LIZARD
Adopted 1993

Who could resist this handsome fellow? Unfortunately, this state symbol is on the "threatened" list, meaning there aren't very many left in the wild. If you want to help, you can join the Texas Horned Lizard watch at www.tpwd.state.tx.us/hornedlizards.

» FAVORED NEIGHBORS

IN 1782, OUR NATION'S leaders chose the bald eagle as our national emblem. Why? They wanted a symbol to represent freedom. As Texans, we have chosen many different symbols to represent our state's rich history, different cultures and abundant wildlife and plants. But imagine trying to pick one bird to represent more than 600 different species! Or one insect from 29,000 species! Sounds hard, right? With help from students like you along with citizens and special groups, our state legislators since 1901 have selected a state bird, state tree, state flower and many other special symbols. Let's find out what plants and animals represent our great state!

LONE STAR FLAG



Established 1845
TEJAS
(Caddo Indian word for "Friends")

PHOTO © LARRY DITTO

» Texas Symbols

TREE

PECAN
Adopted 1919

SQUIRRELS, opossums, raccoons, birds and many other animals (including us!) eat the healthy nuts produced by pecan trees. Orchards in Texas produce an average of 60 million pounds of pecans annually.



FLOWER

BLUEBONNET
Adopted 1901

LOOK CLOSELY at the blue flowers that grow on upright stems. Some have white centers while others have purple centers. Why? White attracts pollinators like bees; purple means a bloom's already been pollinated!



BIRD

MOCKINGBIRD
Adopted 1927

WATCH OUT for this medium-sized bird with light gray feathers and a long tail. Mockingbirds may swoop down on you if you get close to their nest!

MAMMAL (Large)

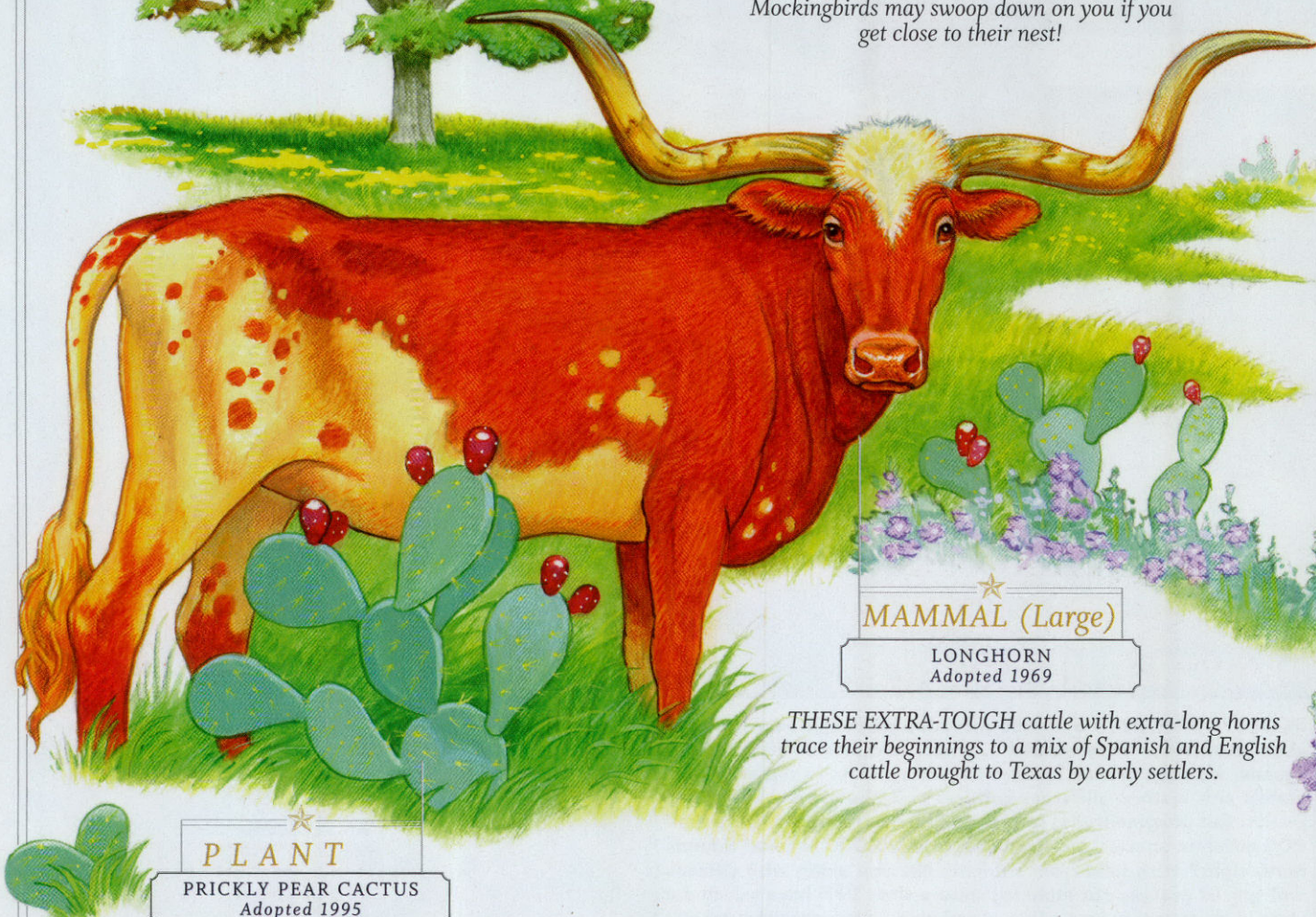
LONGHORN
Adopted 1969

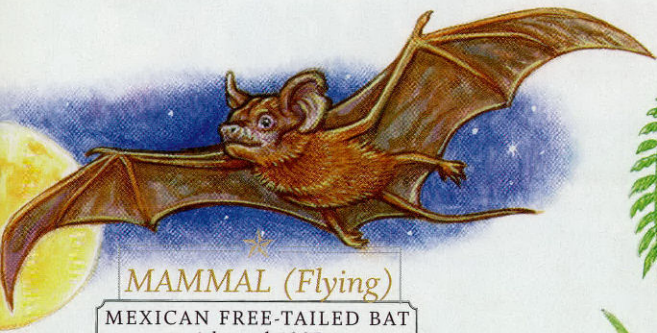
THESE EXTRA-TOUGH cattle with extra-long horns trace their beginnings to a mix of Spanish and English cattle brought to Texas by early settlers.

PLANT

PRICKLY PEAR CACTUS
Adopted 1995

LONG AGO, Native Americans ate the flat stems of this cactus after scraping away the thorns. They also ate the pear-shaped fruits called "tunas."





★
MAMMAL (Flying)

MEXICAN FREE-TAILED BAT
Adopted 1995

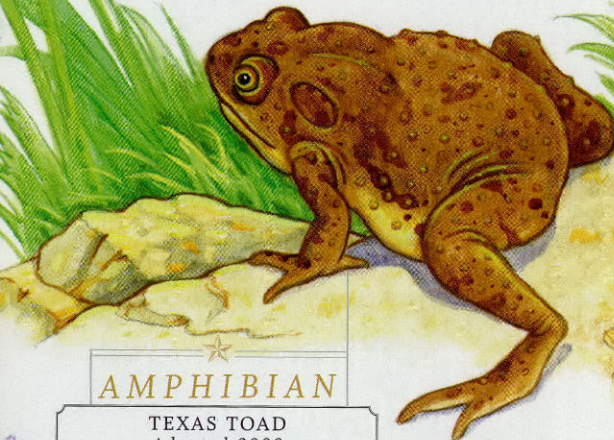
BRACKEN CAVE in Central Texas houses the world's largest group of Mexican free-tailed bats—some 20 million! Every night during the summer, they can eat as much as 250 tons of insects.



★
INSECT

MONARCH
Adopted 1995

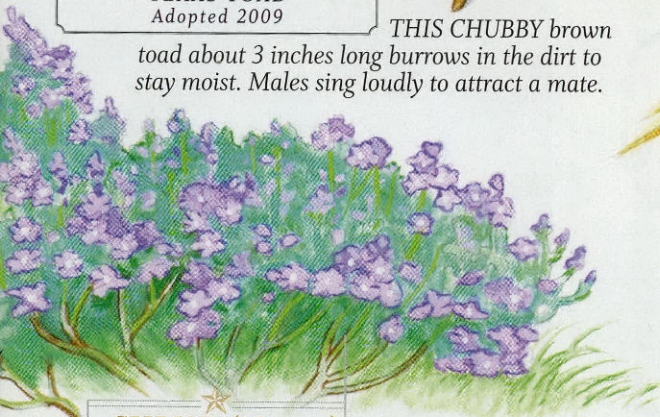
MONARCHS flutter through Texas twice a year. In the fall, they fly as many as 3,000 miles to reach warmer temperatures in Central Mexico. In the spring, they return north, laying eggs along the way.



★
AMPHIBIAN

TEXAS TOAD
Adopted 2009

THIS CHUBBY brown toad about 3 inches long burrows in the dirt to stay moist. Males sing loudly to attract a mate.



★
SHRUB (Native)

TEXAS PURPLE SAGE
Adopted 2005

PURPLE BLOSSOMS often cover this silver-leaved shrub right before or after a rain. It provides cover for wildlife and nest sites for birds.

★
GRASS

SIDEOATS GRAMA
Adopted 1971

CATTLE and other wildlife eat the bluish-green leaves of this native grass. In the fall, leaves turn reddish-orange. Guess what the seeds look like? Yes, oats!



★
MAMMAL (Small)

ARMADILLO
Adopted 1995

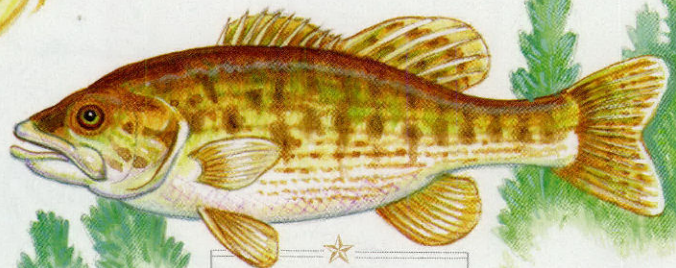
MEET THE WORLD'S ONLY mammal that wears a hard shell! Armadillos mainly eat worms, beetles and other insects at night, but you may spot one out during the day.



★
REPTILE

TEXAS HORNED LIZARD
Adopted 1993

SPINY AND FLAT-BODIED, Texas horned lizards eat mainly red harvester ants but also grasshoppers, beetles and spiders. When threatened, they can hiss, inflate their bodies and squirt blood from their eyes.



★
FISH

GUADALUPE BASS
Adopted 1989

GUADALUPE BASS live nowhere else but in a few Texas rivers. They measure up to 12 inches and may live up to seven years.



Spike's Activity Page



>> HOMETOWN HEROES

DID YOU KNOW THAT STUDENTS (LIKE YOU!) at Danbury Elementary School worked to get the Texas toad named as our state amphibian? "The students worked with a Texas Parks and Wildlife biologist, who recommended five amphibians they might consider," says librarian Ace Filipp. "Then the class researched the animals and campaigned for their favorite by making posters and commercials." After a campus-wide election, the Texas toad won, beating the barred tiger salamander, Strecker's chorus frog, the cliff chirping frog and the Houston toad. From there, the students worked with their local state lawmakers. In 2009, the state Legislature approved the Texas toad as our state amphibian. Gov. Rick Perry agreed, too. You're never too young to make a difference!



PHOTO © BILL DRAKER / ROLFAP.COM

>> WILD SCIENCE

SURE, the horned lizard is the state reptile, but what exactly is a reptile? All animals are grouped by characteristics. Identify these drawings of state symbols and see if you can match them with the descriptions that best match them.

INSECTS
Have antennae and six legs; bodies have three sections

BIRDS
Covered with feathers, lay eggs, have beaks and wings

REPTILES
Cold-blooded, air-breathing, leathery skin

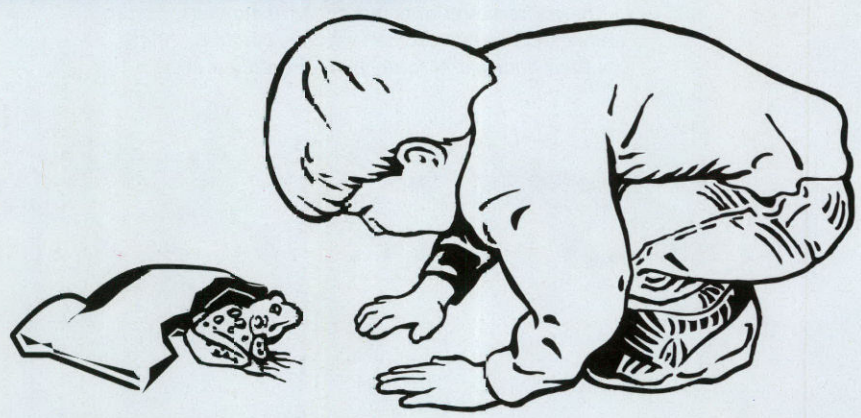
FISH
Cold-blooded, covered with scales, found in water

MAMMALS
Air-breathing, hairy, feed milk to young

AMPHIBIANS
Change from water-breathing to air-breathing



>> KEEPING IT WILD



FIND OUT WHICH "WILD" state symbols live in your area. What can you do to protect them or help others appreciate them? For instance, you can make a "toad house" for your yard. Find an old clay pot (broken or whole) and bury it halfway in the soil in a spot that's hidden among plants. If you like, set out a shallow saucer filled with water. Toads drink by soaking water through their skin. Maybe you could plant a pecan tree at your school? Or plant milkweeds for monarchs?

NEXT MONTH: Nature's Cleanup Crews



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PHOTO BY TPWD

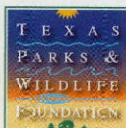


* Yep, this is pretty close to the actual size of a lunker.

Big news for bass anglers.



Bass anglers love catching big bass. That's why Texas Parks and Wildlife's ShareLunker program has spent years working on the genetics and selective breeding of largemouth bass, or "lunkers," with the goal of improving the quality and size of fish stocked in Texas lakes. Sponsor dollars have always been relied on to help pay for this important fisheries program. Thanks to Toyota, our new title sponsor, for providing funding to help make Texas a better place to fish and enjoy the outdoors through their support of **Toyota ShareLunker** and many other outreach and conservation programs in Texas.



The Consummate Naturalist

Author and photographer
John Tveten is remembered by
friends and peers.

BY GARY CLARK

I never knew a naturalist quite like

John Tveten, who passed away on Oct. 12, 2009, just before his 75th birthday, after a brief bout with cancer. John was brilliant but humble, knowledgeable but always studious, dedicated to careful observations but always ready to share them. Walking with him outdoors was like walking with a talking volume of field guidebooks for plants and critters. Shannon Davies, John's editor at Texas A&M University Press, knows such a walk.

In telling the story of walking with John in a vacant lot at Rockport, Davies recalls: "When I walked with John, I learned there was no such thing as a 'vacant' lot. In that tromped-down, overmowed, sorry patch of earth, John saw tiny butterflies on tiny

wildflowers growing in the grass with the ants, flies, bees, bugs and minuscule snails. Later, I learned that not only did John know everything, he could write books about everything."

Yes, John knew everything. He was a consummate naturalist in the tradition of such legendary 20th-century Texas naturalists as Henry Attwater (1854–1931), Roy Bedichek (1873–1959) and Harry Oberholser (1870–1963). As did his naturalist predecessors, John wrote detailed accounts of nature, including books and articles on birds, butterflies, wildflowers and coastal ecology. However, unlike most naturalists before him, John was an accomplished nature photographer whose pictures

illustrated not only his own publications but also scores of books and magazine articles. His photographs, for instance, provided compelling visual documentation in David Schmidly's landmark book, *The Mammals of Texas* (University of Texas Press, 2004). His photographs also mesmerized all of us who attended his deeply informative lectures at nature festivals, nature clubs, schools and museums.

Often in the background but hardly out of the way was John's wife, Gloria, who was also an accomplished naturalist. She assisted John in all of his writings long before her name appeared with his name in publications. John never failed to acknowledge her and her help. She always sat at the back of the room to operate the

slide projector during John's stirring lectures, and her accompaniment on the projector freed John to soar as a lecturer with his enticing rhetoric.

One of his lectures at the Houston Museum of Natural Science in the late 1970s profoundly influenced me.

"You don't have to go to faraway places to see the wonders of nature," John intoned as his eyes glistened with excitement. "The wonders of nature are right here in Houston." Gloria clicked the slide projector. On the screen, in glorious splendor, was a huge flock of snow geese arrayed across a blue sky, set off against the backdrop of an oil refinery.

John's resonant voice boomed. "I've seen beautiful sunsets all over the world, but can you beat this sunset?" Gloria clicked the slide projector again. And on the screen, the richly hued orange disk of the sun, with gulls silhouetted against it, touched the sea at twilight off Galveston Island.

John dazzled the rest of the audience and me that evening with nearly a hundred slides of colorful birds, resplendent butterflies and gorgeous wildflowers all photographed in the greater Houston area. His face was beaming when he said, "The Houston area is a wonderful place to enjoy the wonders of nature."

In that lecture, John reminded me, a native-born Houstonian, that some of the world's richest natural treasures lay right at home. From that point on, I began working hard with local nature clubs and conservation organizations to help build interest in the wildlife of Houston and in wildlife throughout Texas. John gave me the inspi-

lepidopterists around the world and became so well known that people from Europe and Japan called upon him after World War II to help resupply butterfly specimens to war-ravaged natural history museums.

In college, John studied chemistry and earned a Ph.D. in organic chemistry from the University of Illinois in 1960. Gloria, whom he had married in 1958, earned a master's degree in mathematics that year from the same university. After graduation, the couple traveled to Baytown, where John took a job as a research chemist at ExxonMobil (then known as Humble Oil and Refining Co.). Gloria joined the faculty of Lee College in Baytown as a professor of mathematics.

John had been pursuing a hobby as a naturalist and nature photographer during his tenure at the refinery. One day, while sitting in an office meeting, he found himself more interested in a spider creeping along the conference table than he was in the momentous chemical discussions at hand, so he resigned from the company in 1973 to become a full-time nature photographer and writer. He also became a nature tour leader for such organizations as the Smithsonian Institution's travel program, the National Audubon Society, the Houston Museum of Natural Science and the Spring Branch Nature Center (now called the Robert A. Vines Environmental Science Center) in Houston.

His photographs began appearing in hundreds of magazines, books, calendars and filmstrips. His articles began showing up in state and national magazines, including *Texas Parks & Wildlife* magazine and *Smithson-*

John through his newspaper column, "Nature Trails," that began in the *Houston Chronicle* in 1975 and ran until March 1999. The column was first written under John's byline, but later under a joint byline with Gloria. I devoured that column with the eagerness of a hummingbird devouring nectar. And like nectar to a hummingbird, John's columns nourished me as a naturalist.

Legions of nature buffs, including birders, butterfly watchers and wildflower enthusiasts, can trace their inspiration and early teachings to John. He encouraged in people not only a knowledge of nature but also an appreciation.

For example, when my wife, Kathy Adams Clark, began her career as a professional nature photographer, she turned to John to guide her with his legendary photographic skill. John taught her to know a critter or a flower and to know it well before taking a picture. Kathy now drums that lesson into other photographers.

Tributes to John have been pouring in since his death. Kathy, who was at his bedside when he passed, said: "All of us who called him a friend will remember his strong love of this planet and his optimistic spirit. He was a naturalist first and a pho-

(continued on page 55)

"HE WAS A NATURALIST FIRST AND A PHOTOGRAPHER SECOND. HE ALWAYS SAID THE CRITTER WAS MORE INTERESTING THAN THE CAMERA."

ration and fueled my enthusiasm to do that work. Fortunately, his and Gloria's book *Nature at Your Doorstep: A Nature Trails Book* (Texas A&M University Press, 2008) documented the joy of nature where we live, and we can hope it will fire the enthusiasm even in people yet unborn to conserve natural treasures in their hometowns.

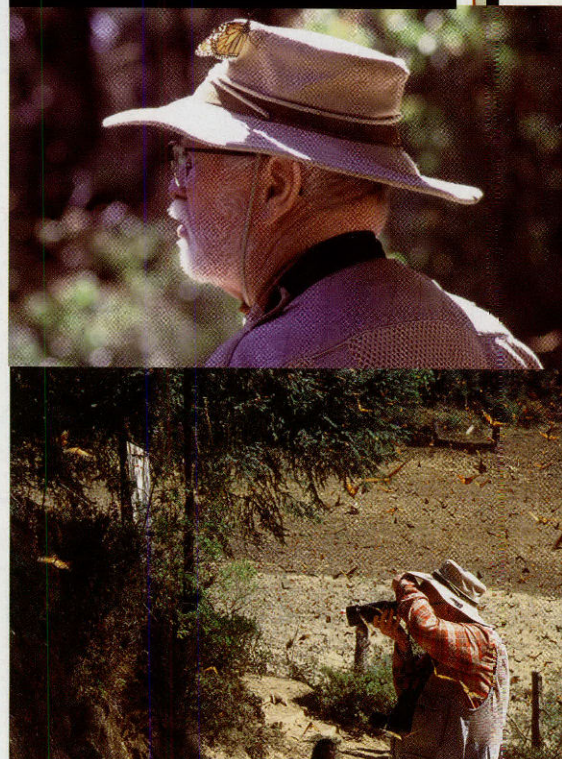
John's original hometown was Morris, Minn., where he was born on Oct. 16, 1934. He began life as a naturalist at an early age by building a large collection of butterflies in and around his home state. While still a boy, he corresponded with leading

ian magazine. As the years progressed, John produced numerous books, among them *The Birds of Texas* (Shearer Publishing, 1993) and, along with Gloria, *Wildflowers of Houston and Southeast Texas* (University of Texas Press, 1997) and *Butterflies of Houston and Southeast Texas* (University of Texas Press, 1996).

When John died, he was working on a definitive book about moths, a project for Texas A&M University Press. In typical fashion, John's research for the book included raising caterpillars to learn firsthand the life cycle and identification of moths.

Many people first became familiar with

Opposite and below: John Tveten at El Rosario Monarch Butterfly Reserve in the Mexican state of Michoacán.



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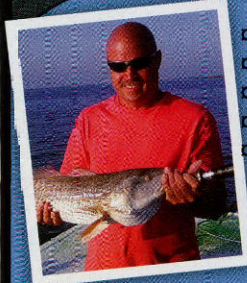
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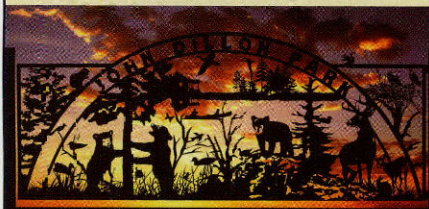
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(continued from page 19)

ride two abreast, and we talk all the way back. We agree that if we had it to do again, we would begin at Garner and delve deeper into ranch country. We could have ridden the entire 10-mile distance to Weatherford and arranged a pickup there. As it is, we are very proud of our 11.5-mile ride. Not bad for two out-of-shape cyclists!

Sunday is our last day to see the rest of Mineral Wells. After a delicious breakfast, we say goodbye to our hosts and their little dog at the Silk Stocking Row Bed & Breakfast and drive a few blocks to our first stop, the Washing Machine Museum, located in ... a laundry! We happily wander the aisles of the self-service laundry, experiencing the scent and humidity of wash day, as we examine artifacts such as washboards and early electric washers.

Next, we pause to snap photos of the decaying Baker Hotel. This old dame towers over downtown Mineral Wells with 14 stories of faded glory. The hotel opened in 1929, offering swank accommodations to tourists. It closed in 1972, but rumors of its reopening continue to swirl through town.

A quiet, gray Sunday morning is the perfect time to visit the National Vietnam War Museum. A Huey helicopter marks the entrance to the museum grounds, east of Mineral Wells. Also on the grounds is a half-scale replica of the Vietnam Veterans Memorial in Washington, D.C. The museum is a work in progress, with an exhibit hall planned that will explore all aspects of the Vietnam War. The majority of the Vietnam War's helicopter pilots were trained in Mineral Wells at Fort Wolters. Fort Wolters was originally a cavalry training post; during World War II, it housed German prisoners. After its final mission, helicopter pilot training, it was closed in 1973.

Our final destination is Clark Gardens Botanical Park. Max

and Billie Clark began gardening here in 1972 and opened the 35-acre park to the public in 2000. For a small admission fee, visitors can wander at will, exploring a wide variety of gardens. The Clarks collect irises, daylilies, azaleas and roses. The park also features a garden built around miniature trains, island gardens with themes, water features and much more. We have two hours to wander, and we use every minute.

It is time to head home. We have missed some things in our mad weekend dash through town — visiting the 77-acre Boudreau Herb Farm, touring past the beautiful old homes from the resort days, canoeing on the Brazos River, enjoying a program at the state park. Perhaps we can come back one day! ★

DETAILS

- **Lake Mineral Wells State Park & Trailway, 940-328-1171, www.tpwd.state.tx.us/lakemineralwells**
- **Old Jail Museum, 940-659-2555**
- **Famous Mineral Water Co., 940-325-8870, www.famouswater.com**
- **Silk Stocking Row Bed & Breakfast, 940-325-4101, www.silkstockingbb.com**
- **Wilson Coin Laundry, 940-328-1662**
- **Baker Hotel, www.bakerhotel.us**
- **The National Vietnam War Museum, 940-664-3918, www.nationalvnwarmuseum.org/index.htm**
- **Clark Gardens Botanical Park, 940-682-4856, www.clarkgardens.com**
- **Boudreau Herb Farm, 940-325-8674**
- **Rochelle's Canoe Rental, 940-659-3341**
- **Mineral Wells Area Chamber of Commerce, www.mineralwellstx.com/HOME.2.0html**

(continued from page 51)

topographer second. He always said the critter was more interesting than the camera.”

John's former neighbor and Texas naturalist David Dauphin said: “John's books, field guides, newspaper articles, field trips and programs filled us with knowledge, the desire to see more and the need to savor nature slowly. John was a good friend, a kind man, a gentle man, a loving husband and father. I don't ever remember a frown on his face.”

Tom Collins, once the co-compiler for the Freeport Christmas Bird Count, said: “I remember that John didn't just give the typical field guide discussion of birds. His words brought them to life and made you want to know more about them.”

Greg Lasley, author of *Greg Lasley's Texas Wildlife Portraits* (Texas A&M University Press, 2008), said: “I'm proud to have called John a good friend for more than 30 years. He was one of the finest persons it has been my privilege to know, and I will miss him greatly. The writings about birds, butterflies, moths and other natural history subjects that John and Gloria produced over the years have enriched us all and leave a legacy for us to cherish.”

Kenn Kaufman, internationally known author of bird and butterfly guides, said: “I've never met a finer naturalist than John. His knowledge of everything in the outdoors, and his enthusiasm for it, were just extraordinary, but despite that he was amazingly humble.”

Texas naturalist Tony Gallucci composed a poem, which in part reads:

John spent his lifetime

First and foremost as a teacher

Sure he took photographs

But they were framed as visual lessons

Sure he raised caterpillars

But not for himself

Sure he wrote books

But to spread what he had learned himself

As for me, I thought of John as a scientist in mind and a poet in heart. He scrutinized nature with the inquisitive but exacting mind of a scientist. For example, in *Butterflies of Houston and Southeast Texas*, John wrote with the precision of a scientist about the complex family of longwing butterflies: “The concepts of family, genus, and species, after all, are artificial human constructions devised for our convenience. They help us indicate relationships among populations. The various butterfly populations, however, do not adhere to the strict order we impose.”

But he could also engage us with the heart of a poet as when he described his and Gloria's lifetime of observing birds in *Our Life With Birds: A Nature Trails Book* (Texas A&M University Press, 2004): “We enjoy seeing uncommon birds, but we also enjoy seeing common birds doing uncommon things. And, most of all, we simply enjoy birds being birds uncommonly well.”

I believe that John will be ranked among the greatest naturalists. His knowledge was encyclopedic, and his generosity and vitality in sharing that knowledge were without equal. Over the years, whenever I called on him for help or advice, he was always generous, always helpful and always excited to talk about natural wonders. John will live in my memory as a great man for his knowledge and an even greater man for his heart. ★

PARTINGSHOT



Photographer Bill Draker had noticed alligators from a bridge over a pond full of duckweed at the Welder Wildlife Refuge in South Texas. "When I approached, the alligators would submerge," he says. "I knew with a little patience and luck I could get a shot from above when one came back up. This alligator cooperated very well — one time."

IMAGE SPECS:

Canon 1V camera, 180 macro lens, 580 flash, Sensia 100 film with an exposure of F11 at 1/125 second.

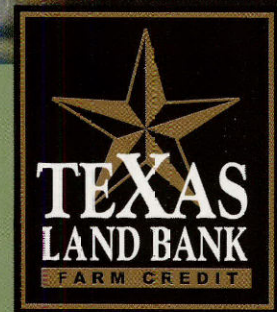


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