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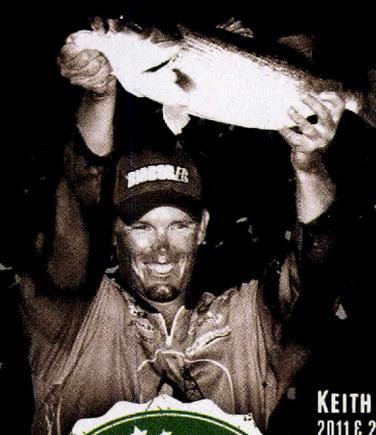


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BACK: The Battleship Texas, which served in two world wars, celebrates its 100th anniversary this year. The battleship is a state historic site. Photo courtesy Battleship Texas.

PREVIOUS SPREAD: A rainbow trout is netted after being caught in the Guadalupe River. Photo by Chase A. Fountain / TPWD

THIS PAGE: A monarch dries its wings after emerging from a chrysalis. Photo © Kitchin and Hurst / Leesonphoto

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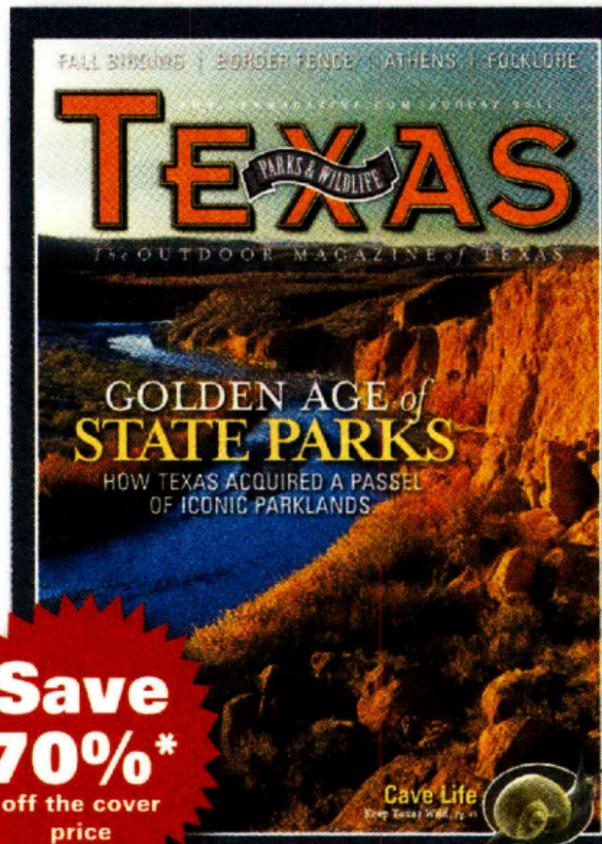
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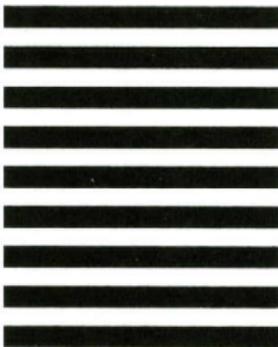


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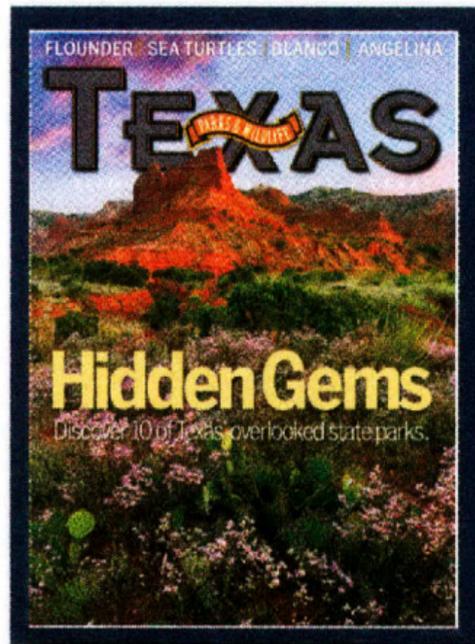
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# TEXAS

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MARCH 2014, VOL. 72, NO. 2

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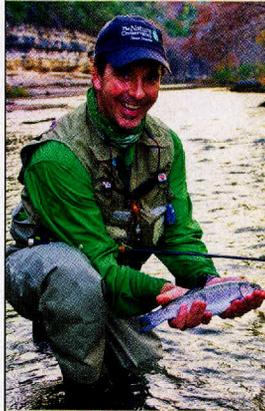
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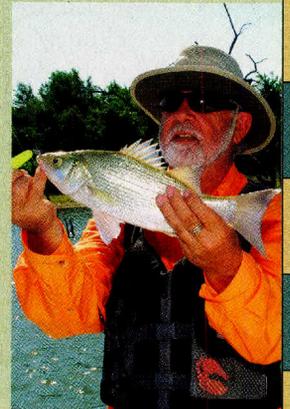
# In the Field

**RED WITTLIFF** lives with his wife and two children in Austin, where he is an attorney and president of R3 Digital Forensics LLC. He became a passionate fly-fisherman as a teenager — and even managed to finagle a weekend job at the famed Austin Angler fly shop when he was in high school. He has fly-fished



Western trout streams and turquoise-blue Bahamian flats. But his favorite fly-fishing is found in Texas. He loves to cast deer-hair flies to bass in stocked ponds and stalk the skinny waters of the Lower Laguna Madre for redfish and speckled trout. Most of all, he enjoys sharing his love of fly-fishing with friends and family. Reid's article, "Shaking Hands With a Fish," recounts fly-fishing experiences that he shared with his father and friends and are forever etched in his memory.

**LARRY D. HODGE** likes fishing for hybrid stripers because he likes to catch fish. Few fishing experiences can equal the mayhem that breaks out on a boat when multiple rods dive for the bottom of the lake, reels scream and everyone scrambles to grab a rod and start hauling in fish. Larry has pulled in a 13-pound freshwater drum and a 10-pound bass while fishing for hybrids. He has experienced the whole gamut of hybrid fishing from catching and cooking them to photographing biologists collecting broodfish to staying up all night photographing spawning of the fish. Some of his all-time favorite fishing trips were catching hybrids with his wife, Zoe Ann, and guides Tony Parker and Bob Holmes.



**KEIRA QUAM's** love of the outdoors began when she was a toddler. Childhood family trips to camp, ski and fish (in addition to summer camp) taught her many skills and gave her an appreciation for spending time in the beauty of nature. In 2000 she began her partnership with TPWD as a volunteer instructor while teaching outdoor education in middle school. Students



planned monthly outings to practice skills taught in class, including fishing, camping, backpacking, kayaking and archery. Her goal was for them to have positive first-time experiences in the outdoors. After retirement, she eagerly accepted a position with TPWD as the aquatic education specialist for North Texas. Her recent outdoor pursuits are fly-fishing and kayaking, and her Skill Builder article this month gives some tips for beginners.

# AT ISSUE

FROM THE PEN OF CARTER P. SMITH

**She's one of the few centenarians among us.** A grand old dame by any measure and most any account. Proud and stately, she appears from a distance as strong and formidable as when she left home on her maiden voyage.

She can be forgiven, however, if not everything holds up for her just the way it once did. Her weathered skin tells of a life spent amidst salt and sea. Her once-sturdy frame occasionally lists under the untold burdens of time and tonnage. She is 100, after all. And, as all who have known her can attest, she's had quite a ride.

In March 2014, the USS Texas turns 100 years old. Thanks to our partners at the Battleship Texas Foundation, we plan to fete her and the surviving sailors from the "Greatest Generation" who served aboard her in grand style.

Be assured, there is much to celebrate when it comes to the USS Texas, or the "Mighty T" as some prefer to call her. Commissioned in 1914 at a time when nations all over the world were competing fiercely to control the high seas, she was conceived to be the most powerful ship in the world. And from the time she set sail from her original berth, she didn't disappoint.

As the naval historians will recount, the USS Texas is the last of the old dreadnoughts, a 573-foot-long behemoth built for battle and service. She was the only battleship to fight in both world wars. A veteran of the Atlantic and of the Pacific, of fights from Omaha Beach to Okinawa, she received five stars for the battles she waged during World War II.

Fittingly, she was named by the National Park Service as a National Historic Landmark, the first of only eight ships to receive such a designation.

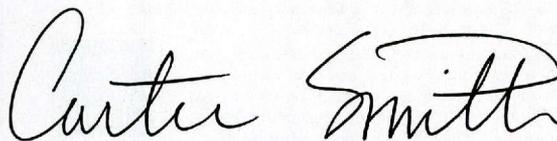
Today, the USS Texas is back "home," resting in berth along the Houston Ship Channel under the shadow of the San Jacinto Monument. She was formally retired by the U.S. Navy in 1948 and designated as a battleship memorial museum. In 1983, she was transferred from the Battleship Texas Commission to the Texas Parks and Wildlife Department, where colleagues from our State Parks Division proudly care for her and her noble history, with the able and ample help from partners, namely the Battleship Texas Foundation.

Her biggest battle today is largely one of age. She's no longer as watertight as she needs to be, and persistent leaks over the years have taken their toll. As visitors to the ship can now see, however, extensive efforts are under way to shore up the steel beneath her hull and to fix the most critical of repairs needed to keep her afloat.

On Saturday, March 15, the Battleship Texas Foundation will honor her age and legacy of service at a very special centennial commemoration at the San Jacinto Battleground State Historic Site. Among other festivities planned for the day, Robert Earl Keen Jr. and Texas musicians Reckless Kelly, Kelly Willis/Bruce Robison and Charlie Robison will be performing on site. It will be a family-friendly affair, with lots of activities for the kids to enjoy. Suffice to say, it promises to be a grand old time for a grand old ship. I hope you will join us on that day to help applaud her history and celebrate her future.

Thanks for caring about our wild things and wild places. They need you now more than ever.

*Her weathered skin tells of a life spent amidst salt and sea. Her once-sturdy frame occasionally lists under the untold burdens of time and tonnage. She is 100, after all.*



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# MAIL CALL

PICKS, PANS AND PROBES FROM OUR READERS

## FOREWORD

**Aptly named Rose, my late mother was a hothouse flower.** Raised in New York City, reveling in shopping and galleries and Frank Sinatra, she made the move to Dallas as a young bride, leaving her feeling adrift in a strange, savage world. She did her best to create order in what felt like a jungle to her, keeping every tree limb and blade of grass trimmed and orderly.

Rose's namesake flowers made their appearance like obedient disciples each spring, emanating from perfectly pruned bushes, fed with precise measurements of fertilizer, "saved" from insect contamination by a shelf full of poisons.

Enter daughter number three (yes, me), more dandelion or sunflower than cultured blossom. I was more often found rolling on the lawn, raking up piles of unruly autumn leaves to fling myself into or searching for the tiny insect survivors of her pesticide forays. My knees were perpetually skinned or scabbed, my nose freckled from frequent sunburns, my tangled hair full of dirt and leaves. There's a photo or two where she's tamed me into a starched dress, white gloves and groomed hair topped by a preposterous hat, but those trappings couldn't disguise the wild gypsy inside yearning to break free.

My mom must have been prescient about my disheveled arrival, as she named me after an old-fashioned "country" woman who served up greens, scratch biscuits and gravy in an East Texas farmhouse. Moorie (our childish pet name) wasn't my real grandmother, but the biological ones were once-a-year visitors at best. Moorie helped my mom through her transition to Texas by offering a shoulder to cry on and sisterly advice. I knew well the comfort of her soft, ample arms and the peace I felt when her slow, drawling voice murmured, "It'll be all right, honey." Through my beloved Moorie, I learned about the simple pleasures that could be found around her modest cabin near Timpson.

Sometimes I didn't recognize the "pleasures" for what they were, like the time I ran in hollering for Moorie's husband, Gaston, to bring the gun, quick! I had found a snake along the fenceline, and it sure looked as if it needed killing to me. "Aw, honey, that's just a good ol' king snake," he told me as he walked back to the house. "That's a damn good snake, there." I shook my head and wondered if Gaston had hit the whiskey bottle once too often, but now I know just what he meant. I've never looked at snakes the same way again.

Decades have passed, and both of those wonderful ladies have passed as well. Thanks to mom and Catholic school, I know about opera and orchestras and fine dining, though you'll be sure to find a rip in my stockings or a dog hair on my sweater, if you look closely enough. Thanks to Moorie, I know that successful fishing means delicious supper and that biscuits and gravy don't come from a can.

As springtime warms the frozen ground, and youngsters head out for adventure, be a "Moorie" in someone else's life, if you can. Teach a young person to hunt or fish, bird-watch or stargaze. That spark you ignite today could burn brightly for a lifetime.

*Louie Bond*

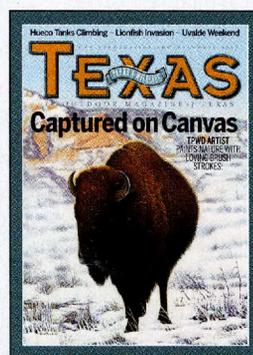
LOUIE BOND, EDITOR

## LETTERS

### PORTRAIT OF AN ARTIST

I just wanted to say that your story "A Brush With Nature" (December 2013), featuring Clemente Guzman and the story of his family, was truly enjoyable and a great testament to family, hard work and education. I didn't mean to read it when I picked it up, but once I started, I didn't put it down until through. Thanks for a great read, and congratulations to a great family of good Texas folks!

RAY EMERSON  
Waco



"Your story 'A Brush With Nature' was truly enjoyable and a great testament to family, hard work and education."

RAY EMERSON  
Waco

### PRAISE FOR GAME WARDEN

As a longtime subscriber to the magazine, I am always impressed with the articles published within. Each issue involves people who are deeply involved with our state's wild places and things—true conservationists.

One in particular who has earned recognition is Game Warden Eddie Lehr. He was named Texas Officer of the Year by the Association of Midwest Fish and Game Law Enforcement Officers. Locally, Lehr is known as the "Ghost" for his innate ability to just "appear," leaving violators scratching their heads. The stories of his work are legendary, but that's not all there is to this story. Lehr is a conservationist who works hard to protect the resources of the state, and he works hard at education. Lehr worked with my grandson, who had just taken his first doe. It was a wonderful experience that changed my little buddy's heart. He is now convinced that he no longer wants to be a doctor but wants to be a state game warden.

I truly appreciate the time Lehr spent with my grandson. He spent a long peri-

# MAIL CALL

od explaining hunting, harvesting and protecting the resources we have available to all of us. My little buddy has a new best friend.

KEITH DAVIS  
Crockett

## WHERE'S THE PARK COVERAGE?

I just received my January/February Issue and have just a few comments. The magazine is supposed to be about Texas parks and wildlife. There is one article about a park — Cooper Lake State Park. Is the Dallas Arboretum a state park? Can my family visit the sunken ship, the USS Hatteras? Most of Earl Nottingham's pictures are not in our state parks — Big Bend Ranch or Davis Mountains. Why not? The article on Wichita Falls is not state park-related. What's up with this? Do you not have anyone there who is interested in our own parks?

I have found that most of the issues we have received are the same way. What about articles on the flooding at Palmetto and McKinney Falls state parks and the recovery efforts there? Can we see more articles about what the magazine is supposed to be about? If you don't have anyone to write about our parks, then maybe my wife and I would love to do it, as our mission is to visit them all!

RICHARD AND MELINDA BLACK  
Belton

## BEAUTIFUL FLOWER

Karen Clary, you are right, heartleaf hibiscus is a beautiful flower and a very hardy plant ("Heart to Heart," January/February 2014). It is very common here in Starr County (South Texas) and grows profusely around the area. We call it wild hibiscus. I even have some that grow in my backyard. They are tricky to transplant and will reward you with beautiful blooms year-round, especially after a good rain.

ABEL PORRAS  
Rio Grande City

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I received my electronic copy of *Texas Parks & Wildlife* magazine by e-mail and was wondering why I receive my hard copy by mail weeks before I receive a

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DON WAPPLER  
Georgetown

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## MEMORIES OF DAD

For over half a century, I have enjoyed reading *Texas Parks & Wildlife* magazine. My father, William C. Porter, introduced me to it when I was a child. I would eagerly await its arrival each month, and he and I would read it together.

My father took me fishing all over South Texas. Port Aransas and saltwater fishing

were my favorites ... from deep-sea fishing and catching kingfish and amberjack to pier fishing for whiting and drum to bay fishing for trout and redfish. He knew lots of people who had stock tanks full of freshwater fish. I once caught a 2-pound bass using a cane pole with dead shrimp for bait. I also loved catching the always-feisty freshwater or saltwater perch.

Now, every month, when my *TP&W* magazine arrives, it reminds me of my dad. Thanks.

MOLLY PORTER BURKE  
San Antonio

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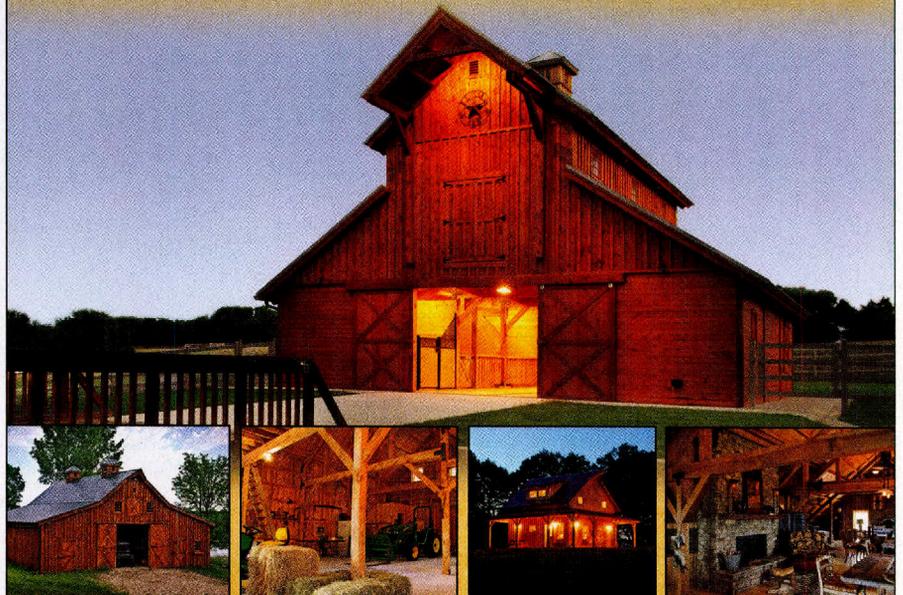
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# SCOUT

NEWS AND VIEWS IN THE TEXAS OUTDOORS

## BATTLESHIP TEXAS TURNS 100

*Festival, museum display commemorate centennial of famed vessel.*



**It's not every day that you get to** celebrate your 100th birthday, but the Battleship Texas will be hosting a centennial festival March 15 with special guests, fireworks, flyovers and much more.

The Battleship Texas Foundation and the Texas Parks and Wildlife Department are joining forces to celebrate the Texas' 100th commissioning anniversary. The celebration will pay homage to the battleship, which is the last remaining dreadnought to have served in both world wars,

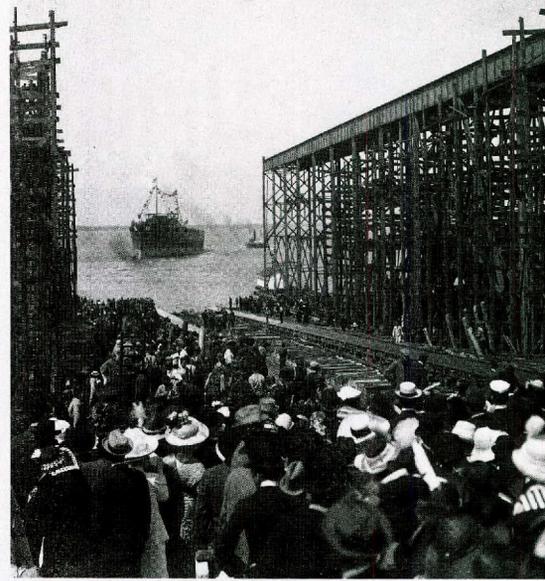
and to the surviving crew members from "The Greatest Generation." The family friendly festival will be held on the grounds surrounding the ship for guests to enjoy music by Robert Earl Keen's A Texas Uprising (including Reckless Kelly, Kelly Willis/Bruce Robison and Charlie Robison). There will be plenty of food and TPWD activity booths, flyovers plus a fireworks display to end the event

Interactive exhibits will highlight the ship's history as an engineering marvel

of its day and its missions across the globe, as well as the history of both world wars, including the Battles of Normandy, Iwo Jima and Okinawa. Visitors will be able to examine vintage aircraft and land vehicles and learn what life on the ship was like for its many sailors. Guests will also be able to view a new video about the ship's history and tour the Texas throughout the day.

All funds raised will support battleship preservation efforts.

PHOTO COURTESY OF BATTLESHIP TEXAS



The Battleship Texas, celebrating its 100th anniversary this year, served in both world wars. In 1948, the Navy transferred the ship to Texas, where it became a memorial museum.



In 1948, the decommissioned Texas became the first battleship memorial museum in the U.S. and today is anchored in the Houston Ship Channel in LaPorte. TPWD took over management of the historic ship in 1983.

In the early 20th century, fleets of armored attack warships guaranteed command of the seas. To keep up, the U.S. Navy replaced the 1892 Battleship Texas with a larger all-big-gun "super-dreadnought" version commissioned on March 12, 1914.

More than 1,000 men lived aboard Texas when commissioned; the number increased to more than 1,800 during World War II. The Texas' history includes: first U.S. Navy vessel to house a permanently assigned contingent of Marines, first U.S. battleship to mount anti-aircraft guns, first to control gun-fire with directors and range-keepers (analog forerunners of today's computers), first to launch an aircraft from a catapult and one of the first to use radar equipment in the U.S. Navy.

The U.S. Navy transferred the battleship to the State of Texas in 1948, and for more than 65 years, the ship has been open as a public memorial at the San Jacinto Battleground State Historic Site. Because of the battleship's age, key structural areas are in need of repair. TPWD is currently making critical vessel repairs to the ship's "skeleton" so that the ship remains strong enough to hold herself up.

An exhibit, "The Last of the Dreadnought Battleships," runs through April 13 at the Bob Bullock Texas State History Museum ([www.thestoryoftexas.com](http://www.thestoryoftexas.com)) in Austin.

Artifacts on view include select pieces from the silver service presented by the people of Texas, historical photographs and personal items from men who served aboard the Texas. A special listening station shares crew member memories of service aboard the Texas

during World War II. The museum will host special High Noon Talks on the topic the first Wednesday of March and April. The mini-exhibit is a cooperative effort of the Bullock Museum and TPWD's curatorial services, exhibit shop and state historic sites.

To purchase advance tickets for the festival, visit [battleshiptexas.org](http://battleshiptexas.org); to find out more about volunteer opportunities or how you can support the Texas, visit [www.texasstateparks.org](http://www.texasstateparks.org). ★

— Louie Bond and Rob McCorkle

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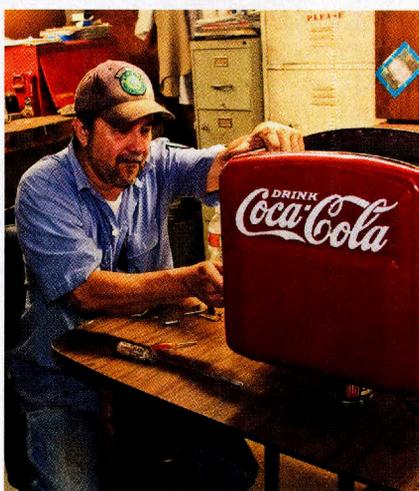


The ship rides the waves uneasily, swaying back and forth like a kite on a windy day. The sea may be rough, but life isn't all that bad. The officers on the Battleship Texas eat breakfast as the ship steams toward Pacific battlefields in November 1944.

In the clubhouse atmosphere of the Wardroom, officers dig into eggs cooked to order, bacon, grapefruit and buttered biscuits with jam, all washed down by the first of many cups of coffee. Stewards in white aprons serve the officers as if they are waiters in a fancy hotel. The food comes from a well-equipped pantry full of the latest appliances and set aside specifically for the Wardroom.

Admirals and other VIPs who stayed onboard the Texas had it even better. A detail of white-coated stewards catered to their every request, serving them from another special pantry assigned just to the Admiral's Quarters.

Today, that pantry's nickel-plated water heater shines as if freshly polished, as do the nearby brass dish racks. The steel steam warming table and pans look new, as does the refrigerator set aside for the admiral's delicacies. A fresh coat of white paint covers the bulkheads, and it takes close examination to reveal that the fine "hardwood"



door is actually cleverly painted metal. Battleship Texas superintendent Andy Smith and his staff take pride in bringing these scenes from 1944 back to life. Through a combination of research, salvage work, reproduction and restoration, a distant past returns to the ship every day.

Texas Correctional Industries reproduced the steam warming table and pans in the Admiral's Pantry, Smith explains. "We salvaged the refrigerator from another Navy ship of the time and restored it," he says.

Clearly this is detective work for the detail-oriented. For the ketchup bottles sitting in a rack in the nearby Wardroom Pantry, "we made copies of 1940s-era bottle labels" to ensure the

**Detailed restoration work has been carried out on the Battleship Texas to portray life on a warship in 1944. The effort involved research, salvage work, reproduction and restoration.**

right appearance, Smith says. Gathering the information needed to accurately re-create these scenes was a painstaking labor of love. In his office, Smith shares recollections of Texas veterans gathered by state parks interviewers over the years as oral histories.

There's never been a better time to visit the Battleship Texas to see the results of these efforts. The restored Wardroom and Wardroom Pantry await, and, with work nearly complete, the Admiral's Pantry will soon be open for you to see.

2014 marks the 100th anniversary of the ship's commissioning, and a celebration (March 15) and final reunion of the ship's veterans (March 12) will be held at the ship's berth east of Houston, within sight of the San Jacinto Battleground and Monument. For information, visit [battleshiptexas.org](http://battleshiptexas.org).

Join us at the Battleship Texas State Historic Site, 3523 Independence Parkway South in LaPorte. Call for information at (281) 479-2431 or visit [www.tpwd.texas.gov/battleshiptexas](http://www.tpwd.texas.gov/battleshiptexas). ★

— Walt Bailey

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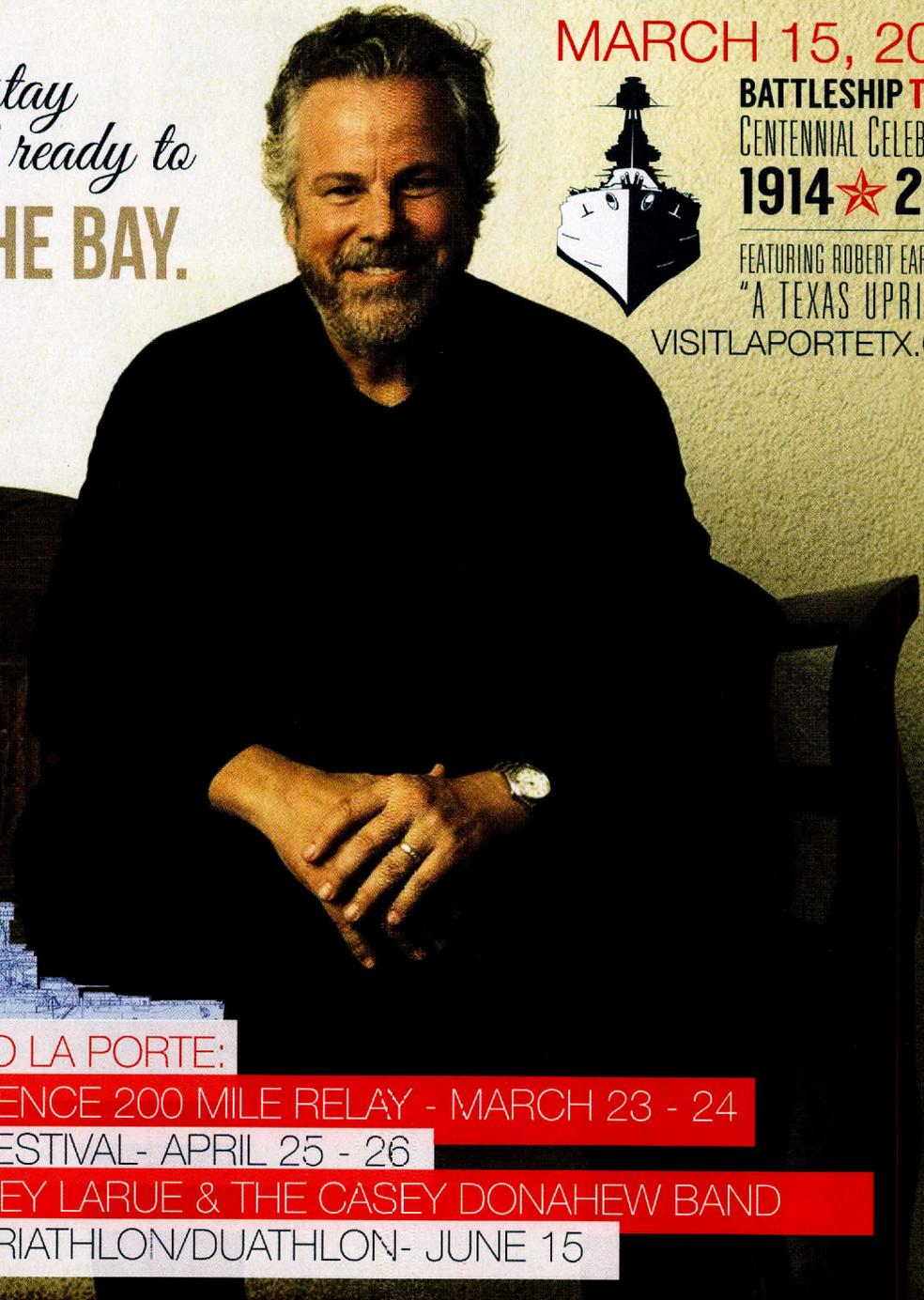
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# First Flowers

Elbow-bush and swamp privet win the race for Texas' earliest bloomers.



*Forestiera pubescens*



*Forestiera reticulata*



*Forestiera ligustrina*



*Forestiera angustifolia*



*Forestiera acuminata*

Mother Nature directed a severe cold front at Texas in early December 2013 with more snow and ice and lower temperatures than Texans usually embrace early in winter. While driving back to Austin from an event at Washington-on-the-Brazos State Historic Site, my family and I were struck by how many deciduous post oak leaves had fallen earlier than normal and how the tallgrass Fayette Prairie remnants had already turned golden brown. Fall flora had made a dramatic halt.

Shivering, I found hope in remembering that one of my favorite signs of spring is the flowering of elbow-bush and swamp privet. The wintry, naked floral landscape would be showing its first signs of spring with these amazing shrubs flowering in just a few months.

One of 12 species of shrubs in the olive family (*Oleaceae*), forestiera is commonly called elbow-bush, swamp privet, stretch-berry and desert olive. These perennial shrubs are often found growing in swamps, grasslands, prairies, woodland edges and desert shrublands. Forestiera is native to North America, Central America and the West Indies.

Forestiera plants have bright yellow male and female flowers borne on separate shrubs. Forestiera flowers in February or March before the leaves emerge and produces a very sweet fragrance. The fruits are tiny, bluish to purple-black drupes, which occur in clusters

on the female plants. These shrubs are thicket-forming and drought-tolerant except for the eastern swamp privet, and therefore most species are well-suited for use as a spreading background plant in a garden in sun or shade.

Forestiera plants are important food sources for many birds and small mammals. Some species of forestiera are among the most sought-after browse in southern and western Texas and tend to disappear in over-browsed areas. Livestock eat the twigs and fruit. The flowers are an important source of nectar for bees early in the growing season.

In Texas, there are five species of forestiera. Elbow-bush (*Forestiera pubescens*) is the most widespread member of forestiera in Texas and is often called "spring herald" because it is usually one of the first shrubs to bloom in the spring. Elbow-bush grows from North Central Texas to the Edwards Plateau and into the Trans-Pecos.

Netleaf forestiera (*Forestiera reticulata*) grows on dry hillsides and on ledges in limestone canyons from the Edwards Plateau west into the Trans-Pecos and south into Mexico. It is not a common shrub in Texas. The species name *reticulata* refers to the shiny, dark green leaves that are distinguished by prominent raised veins.

Desert olive or narrowleaf forestiera (*Forestiera angustifolia*) grows in the central, western and southern parts of Texas and

Texas has five species of forestiera, a perennial shrub that produces flowers in late winter or early spring.

on the Rio Grande plains in coastal shrubland areas or open woodlands on dry to well-drained limestone soils.

Upland swamp privet (*Forestiera ligustrina*) grows in the southern post oak savanna and Southeast Texas in the understory of oak-hickory woodlands and pine-oak forests on sandy and sandy loam soils.

Eastern swamp privet (*Forestiera acuminata*) is primarily restricted to swamps, oxbows and floodplain forests in eastern Texas, and along creek and river drainages near bays of the upper and middle coast. Eastern swamp privet is often shrubby but on occasion can grow as a small tree ranging to 25 to 35 feet in height. When traveling across major river drainages such as the Sabine, Neches and Trinity rivers in East Texas, you'll see that the eastern swamp privet shows a striking cluster of yellow flowers on the previous season's growth before new leaves develop.

Whether you are traveling across Texas this spring or visiting one of our state parks, pay special attention to the bright yellow flowers of forestiera. Smell the strikingly sweet aroma of one of the preponderant wildlife-utilized shrubs in Texas. ★

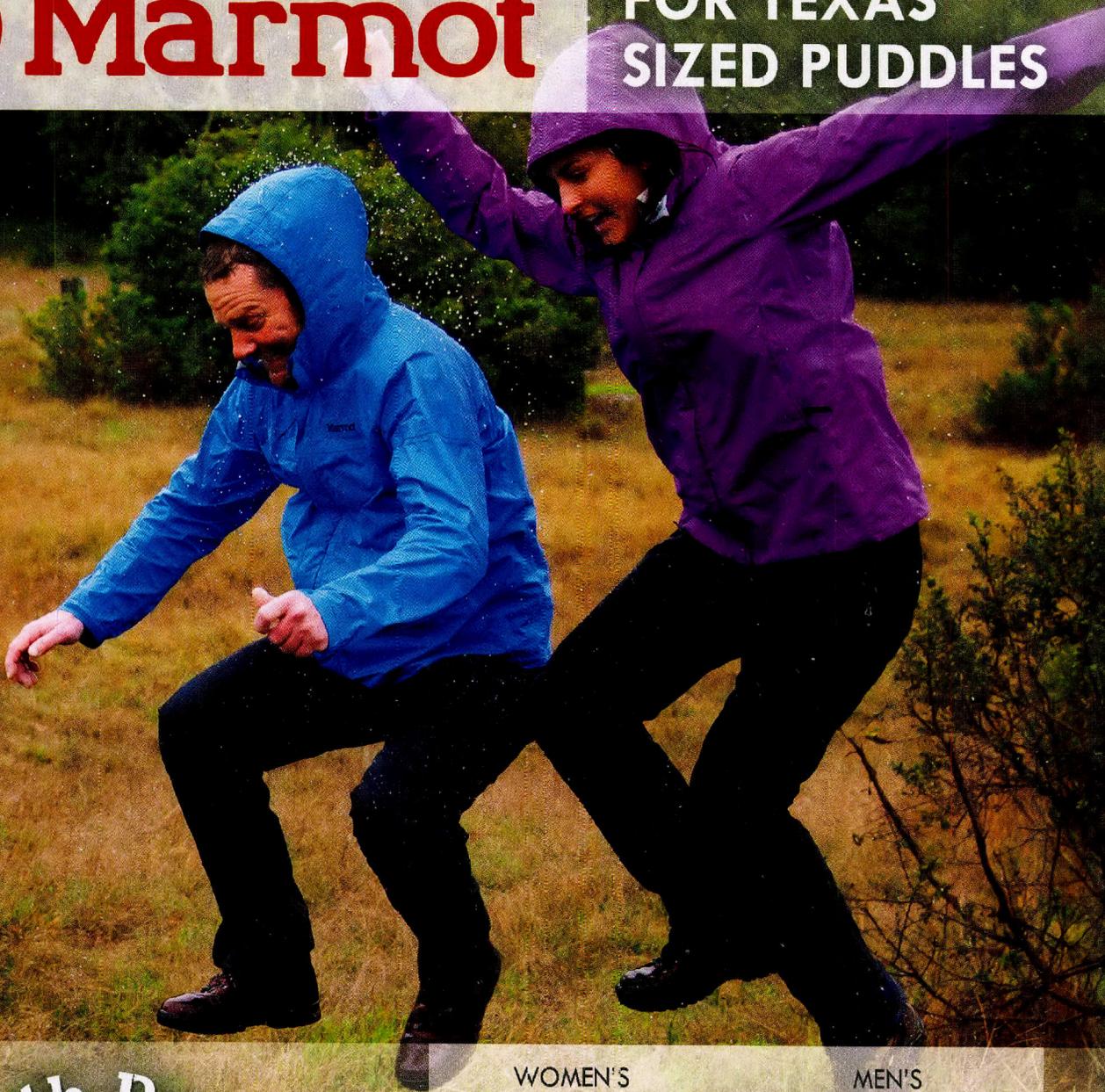
—Jason Singhurst



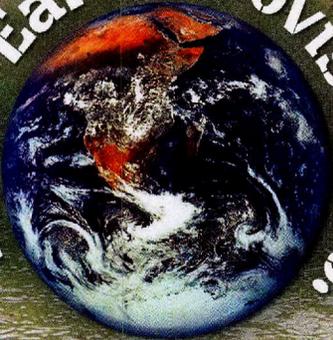
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photos by Ben Lucero



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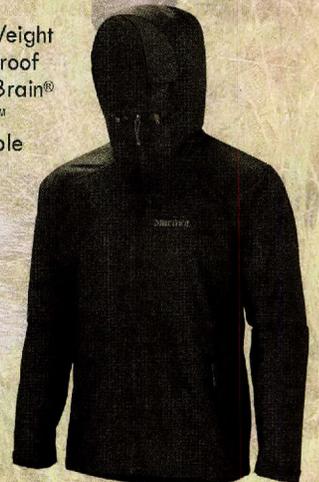


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# Kayak Fishing Kickstart

*Quietly stalk the best spots from the comfort of a kayak.*



**Kayaks provide a convenient way to get to spots that otherwise might be difficult to access, whether fishing in fresh water or salt water.**



I started kayak fishing several years ago. I had a kayak and a fly rod, but hadn't put the two together. My first time out was a great experience, so I was hooked.

Kayaks quietly maneuver to the best

spots, even in shallow water. They provide access to areas where it's difficult to stand or walk for wade fishing. No matter where you are, they allow you to get up close and feel a part of your surroundings.

Kayaks come as sit-in or sit-on-top varieties, from simple ones to ones designed for anglers. You can start out with one you have, or rent or borrow to try out different styles. A sit-in kayak with wide cockpit works best for me. I like to tuck all my things inside the boat for easy access. Other anglers like the convenience of a sit-on-top to straddle the hull, get on and off quickly and not worry about water in the boat. Some sit-on-tops even have foot pedals for propulsion, leaving your hands free for fishing.

Be sure to pack light, but here are some essentials for your trip:

- A fishing license, rod and reel, a net and tackle. Conventional rods or fly rods work fine. I use both. (Remember, no license is needed if you are fishing inside the boundaries of a state park, or are under age 17.)
- A life jacket. Look for the newer designs that allow for lots of shoulder movement.
- A TPWD *Outdoor Annual* (view it online at [www.outdoorannual.com](http://www.outdoorannual.com)) so you know if it's legal to keep the fish you catch.
- A paddle leash or some way to let go of your paddle and not have it float away. Forget this one time and you'll know what a difference it makes.

- A bicycle flag for the back of the kayak so you can be seen by others in the daylight, and a white light for the boat if you are traveling near sunset.
- An anchor. If the wind is blowing or the current keeps carrying you downstream, it is nice to have a way to stop at that great fishing hole you found. Some people also use a pole to jab in the bottom and hold the boat securely in place.
- Clothing made of synthetic fabric that dries quickly. Remember a hat and sunglasses, too.
- Enough food and water in case you are out longer than expected.
- A small first-aid kit, flashlight, whistle and cellphone in case you need to call for help or will be home late. Waterproof cases work for cellphones and car keys.
- Carabiners and bungee cords. Tie or hook stuff to your boat in case you catch a big fish and it pulls you off-balance.

■■■

In addition to wearing your life jacket, always prepare to be safe.

- Make sure someone knows where you are going and when you are expected back.
- Know how to exit and board your kayak.
- Learn the paddling strokes that don't tire your arms and that allow you to turn or stop quickly or pull up sideways.
- Like roads, travel on the right side.
- Bring a friend. It's safer, and you'll appreciate the help. Recently my fishing buddy asked me to remove the fish hook from the rope in the front of his kayak. Shortly after that, I needed the same help.

Whether you venture out on a lake, on a river or at the coast, kayak fishing is fun and rewarding. There are wonderful resources on the Web, including how-to instructions, tips on where to fish, forums, magazines and clubs. ★

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# Hillingdon Ranch

Roots run deep for stewards of Hill Country ranch.

**The Texas Hill Country is not** known for its thick topsoil, but family roots run deep on the Hillingdon Ranch in Kendall County, south of Fredericksburg.

Hillingdon Ranch, founded by Alfred and Annie Laura Giles in 1885, has remained in operation for more than six generations due to the diligent work and dedication of the Gileses' descendants, surviving droughts and other hardships.

Through photographs and stories, *Hillingdon Ranch: Four Seasons, Six Generations* tells the unique story of the Giles family, including how the ranch came to be and how the family has been able to sustain the ranch for over a century.

*Hillingdon* authors are David K. Langford and Lorie Woodward Cantu. Langford, an award-winning photographer who contributed both words and imagery, is the vice president emeritus of the Texas Wildlife Association. He lives on the Laurels Ranch, his piece of the Hillingdon family land. Woodward Cantu is a communications expert specializing in agriculture and natural resource issues.

A native of Europe, Alfred traveled to Texas after a bout with rheumatic fever, hoping the climate would help his health. An architect operating in the Hill Country as well as parts of Mexico, he bought the land from the railroad at 50 cents an acre and became one of the first recorded landowners in that part of Kendall County.

The ranch was named after Giles' ancestral home in Middlesex, England.

Nearly 95 percent of land in Texas is privately owned, and the Giles family's stewardship is an important example of how landowners can contribute to the success of their environment and the native animals that call it home.

As the family balanced the responsibilities for maintaining both land and wildlife, the Hillingdon Ranch survived two severe droughts and assorted parasites, including screwworms.

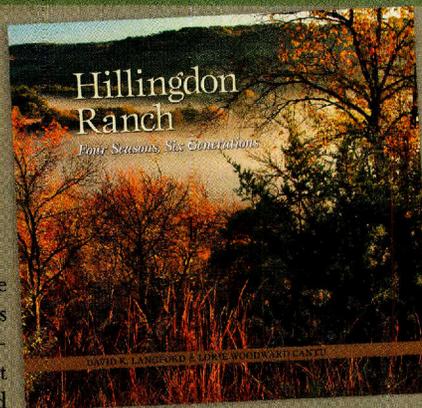
The stunning photographs featured in the coffee-table book were taken between Oct. 1, 2010, and March 1, 2012, while the ranch experienced the driest 17-month period recorded in the

ranch's history.

John Nielson-Gammon, Texas state climatologist, said the 2011 drought was the worst one-year drought ever recorded. Block Creek at the Hillingdon went completely dry. Previously, the creek had stopped running only a handful of times since the days of Alfred Giles.

Managing animal grazing during droughts is one of the major tests of stewardship for landowners. Fortunately, the long-term family views in regard to the health of their livestock helped the Giles family survive the drought.

"When the weather is perfect and everything is going perfect, which never happens, people look at us and think, 'Oh, what a wonderful way of life,'" says Robin Giles, a descendant of Alfred and Annie Laura. "If they were to live it a while, they'd find out it has its downfalls. There is always something going wrong, but you can choose to view those things as



something bad or you can choose to take them as challenges."

Turning the pages of *Hillingdon Ranch*, readers will see both the beauty and the hardship of living on the land. That mantle of responsibility has been handed down through the years to sons and daughters, who take the task of stewardship to heart.

"From my perspective, challenges make it interesting," Robin Giles says. "It would be such a boring world if everything ran perfectly all the time. Our challenge is adapting to dry weather."

For more information or to order, visit [hillingdonranchbook.com](http://hillingdonranchbook.com). ★

—Stephanie M. Salinas

## SIGHTS & SOUNDS TEXAS PARKS & WILDLIFE TV AND RADIO



### TELEVISION

LOOK FOR THESE STORIES IN THE COMING WEEKS:

#### March 2-8:

Public hunting lands; search for the ivory-billed woodpecker; re-creating a family photo at Inks Lake; lift, drift, pole, troll; photographer Chase Fountain.

#### March 9-15:

Game wardens on the job; science of striped bass; turkey calls; Mother Neff State Park; fiddler crabs.

#### March 16-22:

Bringing back the Guadalupe bass; natural symbols of Texas; protecting

seagrass beds; Lake Casa Blanca State Park; paddling the South Llano River.

#### March 23-29:

Kickapoo Cavern State Park; tarpon recovery; last dance of the Attwater's; teamwork on the radio; secrets of animal communication; Texas beaches.

#### March 30-April 5:

Beneath the surface of Texas; restoring coastal prairies; data man Alejandro Farias; Lake Livingston.



Get some turkey-calling tips just in time for the spring season. Watch the week of March 9-15.

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# Catching Rainbows

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*How to boost your chances of capturing this fleeting phenomenon.*



**Like many of the other good things** in life, rainbows are fleeting, and it's often a matter of luck and timing to be able to experience them. Many times we miss the opportunity. However, when it comes to capturing a great photograph of a rainbow, a few tips will put the odds in your favor.

**1. Although it sounds simple – be ready!** Remembering that moisture in the air plus sunlight equals a possible rainbow can give you a heads-up on a possible rainbow. As the moisture turns to distant rain, the odds increase, especially in the evening as the sun tracks toward the horizon. If you are lucky enough to shoot during “magic light” as the sun is just about to set, you are almost guaranteed a piece of wall art. With these atmospheric conditions, make sure your camera is at hand and ready to shoot. Your opportunity may last only a few seconds.

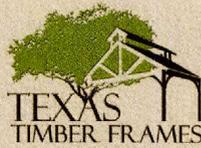
**2. Consider background and foreground objects.** While you may be in

awe of the rainbow and eager to shoot, resist the urge to fixate on it as the only object in the photo. Consider backgrounds and foregrounds that will include the rainbow in context and as a part of an overall scene. If time permits, move to an area void of telephone lines, poles or other distracting objects. Also, keep in mind basic composition concepts such as the “rule of thirds” by placing the horizon in the bottom one-third of the frame. But hey, feel free to break the rules if the situation warrants!

**3. Select the right lens.** Typically, a wide-angle zoom lens such as a 16-35mm will allow you to quickly compose a full or double rainbow to show the full “bow” along with any dynamic skies surrounding it. A tighter zoom will allow you to concentrate on the pot of gold (or other point of interest) at the rainbow's end.

**4. Use a polarizer.** Although its color-enhancing effects can often be

Emerging from low-hanging storm clouds, the last rays of light create a brilliant rainbow, briefly bathing this Panhandle scene with warm light. A good rainbow photograph is a combination of good lighting, location and luck.



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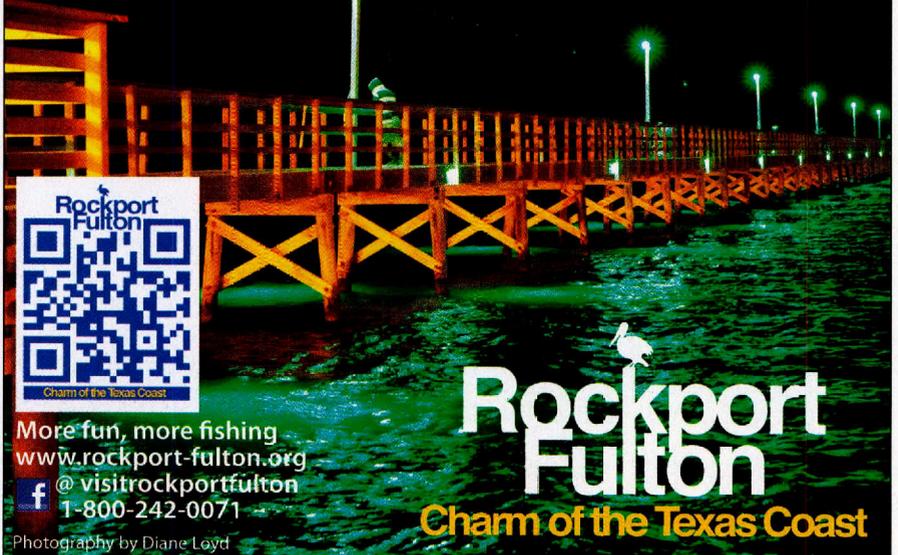
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## Unsurpassed Fishing

overdone, the polarizer is still one of the essential filters that should be in every outdoor photographer's bag, especially for capturing rainbows. A slight rotation of the filter can cut through atmospheric haze and reveal a rainbow's bright spectrum of colors that initially might look faint to the eye. The filter can also totally eliminate the rainbow if rotated too much. A quick turn of the filter is all it takes to show you that one "aha" position where the rainbow comes alive and stands out against the sky.

5. Carry a tripod. The loss of light caused by both evening conditions and use of a polarizer typically will require a lower shutter speed, which may lead to a blurred image caused by camera movement. If a tripod isn't available, try resting the camera on any available stable object such as a car window or fence post. ★

— Earl Nottingham

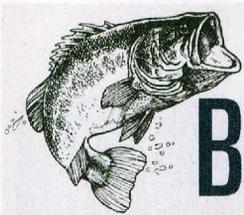


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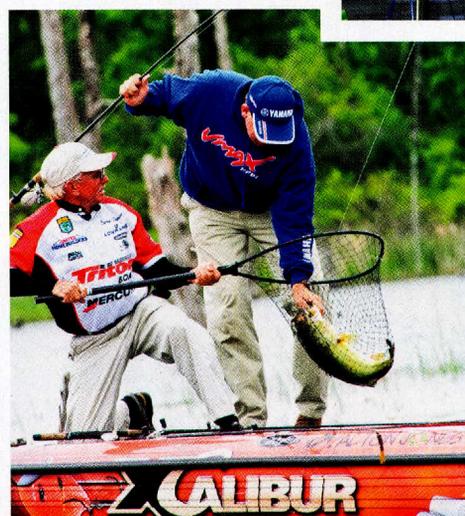
Charm of the Texas Coast

Photography by Diane Loyd



# Back Home for Big Bass

The Toyota Texas Bass Classic returns to its roots at Lake Fork.



**After a series of successful** tournaments on Lake Conroe, anglers and spectators are looking forward to returning to where the Toyota Texas Bass Classic began. Lake Fork, which continues to be one of the country's most highly regarded bass fisheries, will host this year's tournament May 9 through 11.

Lake Conroe produced a fair number of large bass for anglers in previous tournaments, but it's hard to top Lake Fork for giant bass. As evidenced by the current Toyota ShareLunker season numbers, Lake Fork has big bass magic.

The unique tournament field features most of the top professional bass anglers from three major pro tours. Pro anglers say they love the

PHOTOS AT LEFT © EARL NOTTINGHAM/FPWD; NET PHOTO © CHASE A. FOUNTAIN/FPWD; OPPOSITE PHOTO © LARRY D. HODGE/FPWD



Lake Fork is home to some big bass, and now it's the home again to the Toyota Texas Bass Classic. There's more than fish: live music concerts and other activities also draw crowds.

"over the slot limit" fish to the scales each day, to the delight of the huge crowds witnessing the weigh-ins.

All the anglers come onstage to talk about their fishing day and often hang

bass classic because it is a no-entry-fee, bragging-rights "world championship" that spans the major tours.

Of course, a \$100,000 top prize doesn't hurt, either. Every angler in the tournament receives a guaranteed payout.

In 2007, Toyota Texas Bass Classic pioneered a professional tournament where bass are caught, weighed and immediately released. The format showcases Texas' great fisheries while also protecting the resource by reducing fish handling.

Lake Fork has a 16- to 24-inch slot limit for largemouth bass, which means that no one may keep a bass measuring between 16 and 24 inches. Tournament anglers are permitted to bring one

around the weigh-in area afterwards so spectators, especially youth, can interact with them.

Biologists from the Texas Parks and Wildlife Department provide excellent care for the large fish brought in. Specially treated, aerated tanks ensure that the bass are returned to the lake in healthy condition.

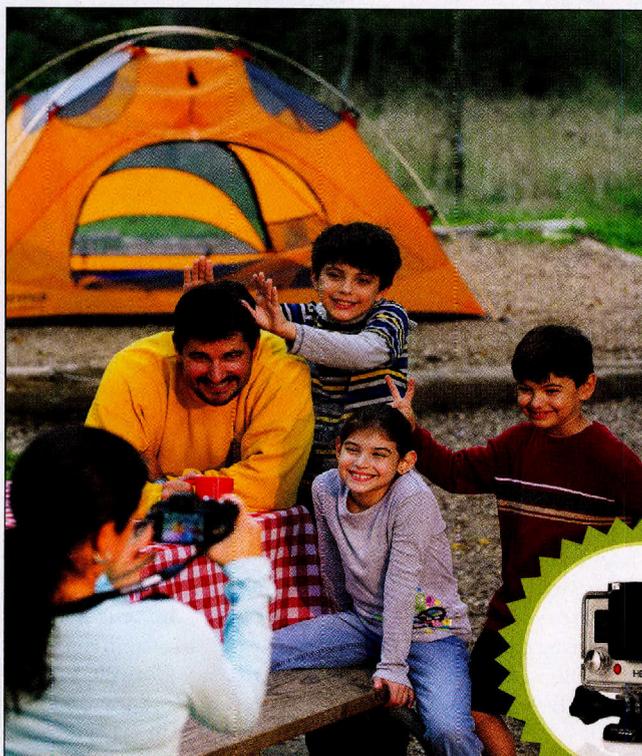
Texan Keith Combs was the 2013 champion and has been invited to return to defend his title. Combs also won the tournament in 2011; he's the only angler to win the event twice.

The pro anglers aren't the only winners here. Texans also benefit from the annual \$250,000 contribution from the tournament to TPWD, which uses the money to fund a variety of fishing programs like Neighborhood Fishin', a TPWD partnership with local communities to stock urban lakes with trout and catfish by season.

Of course, the event is much more than a bass tournament. The live music concerts draw big crowds, and other activities include sponsor exhibits, a barbecue cook-off, TPWD adventure area and Kids' Zone.

For more information, visit [www.toyotatexasbassclassic.com](http://www.toyotatexasbassclassic.com). ★

— Randy Brudnicki



## Picture Yourself at a Texas State Park!

MARCH 1 – APRIL 15, 2014

# Enter the Texas State Parks Photo Contest

Capture the many fun, playful moments you experience at a Texas State Park. Contest categories are age 17 and under, age 18 and older, and a brand new Instagram category (#MyParkPic).

Winners will have their photos featured in *Texas Parks & Wildlife* magazine and receive a HERO3+ Silver Edition GoPro® video camera at a \$300 value from Whole Earth Provision Co.



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For entry details and contest rules:

[www.TexasStateParks.org/photography](http://www.TexasStateParks.org/photography)



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# 3 Days in the Field / By Sheryl Smith-Rodgers

**DESTINATION:** WHITNEY, MERIDIAN, CLIFTON

**TRAVEL TIME FROM:**

AUSTIN – 2 hours / BROWNSVILLE – 7 hours / DALLAS – 1.5 hours

HOUSTON – 3.5 hours / SAN ANTONIO – 3.25 hours / LUBBOCK – 4.5 hours / EL PASO – 8.25 hours



## Three for the Road

*Whitney, Meridian and Clifton provide natural, historical Central Texas sights.*



The sun sets over the lake at Lake Whitney State Park.

**Flameleaf sumacs, live oaks,** ashe junipers and native grasses blanket the gently rolling hills as we drive along Bosque County Road 4145 northwest of Waco. My husband and I have just embarked on a fall weekend jaunt to three towns (and two state parks) that we've never explored — Clifton, Whitney and Meridian.

Set atop a grassy knob, a stone church with a wooden steeple beckons us to stop. We've come upon the St. Olaf Lutheran Rock Church, built in 1886 by immigrants who established

nearby Norse, the state's largest Norwegian settlement. Inside, we're dazzled to find pastel hues of blue, yellow, pink and green gracing walls and ceilings. Scuffed floorboards and wooden pews dulled from use recall long-ago Sunday services when pastors addressed parishioners from the ornately decorated altar.

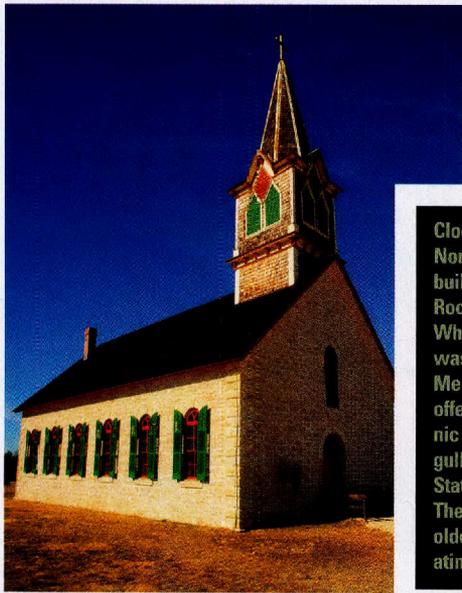
Doland Olson, a direct descendant of the original settlers, happens by and graciously shows us the oldest grave in the adjoining cemetery. A cracked tombstone, held together

with cement, honors a young woman who died in 1885.

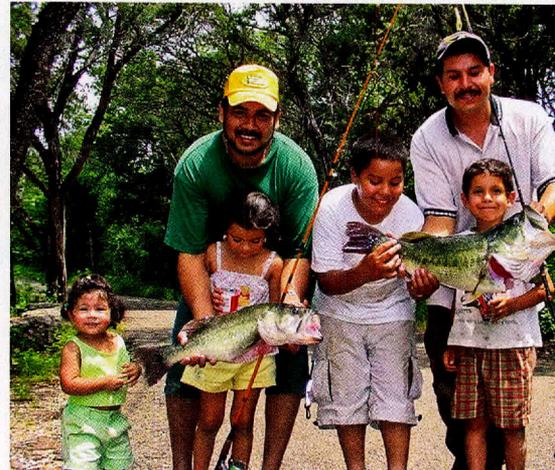
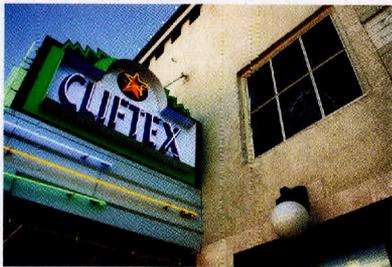
"My grandparents, who came from Denmark and Norway, and my parents are buried here," he tells us.

We continue east and stop briefly at Our Savior's Lutheran Church, a steepled edifice completed in 1885 and brick-veneered in 1907. Early Norse settlers worshipped here first. They built the Rock Church soon after to accommodate their growing numbers.

In Clifton, we stop at Los Verdes Restaurante Mexicano for chips,



Clockwise from top left: Norwegian immigrants built St. Olaf Lutheran Rock Church; the Clifton Whipple Truss Bridge was constructed in 1884; Meridian State Park offers good fishing; a scenic footbridge crosses a gully at Lake Whitney State Park; the Clifftex Theatre is billed as Texas' oldest continuously operating theater.



enchiladas and unlimited charro beans, served with smiles galore by our waitress, Yvonne. My husband, James, a history buff, can't wait for the next destination on our schedule — the Bosque Museum.

"Our mission here is to chronicle the land, people and culture of Bosque County," says curator Bill Calhoun.

That's a huge objective, but this relatively small collection of exhibits accomplishes it quite well. Artifacts range from Paleo-Indian and Early Archaic spearheads to pioneer kitchen utensils, blacksmithing tools and a 1850s rocking chair handmade by Cleng Peerson, the "father of Norwegian immigration."

James lingers by the Horn Shelter Exhibit, which depicts a prehistoric burial site found along the Brazos River in southeastern Bosque County. There, archaeologists in 1970 carefully removed the skeletal remains of a man and young girl, radiocarbon-tested to be some 11,200 years old. The Paleo-Indian site is one of only a few in North America that include skeletal remains and grave items such as turtle shells and coyote teeth.

"Take our picture," says James, standing next to "Sam," a bronze bust of how the Horn Shelter man may

have looked.

Next we mosey over to Clifton College, a red-bricked 1920s building that houses the Bosque Arts Center. Inside, we find director Jane Scott, who gives us an impromptu tour. First, we peek inside the adjoining Tin Building Theatre, formerly used as a manufacturing warehouse. Then we hop aboard the elevator to see the second-floor art galleries.

"We've hosted the Bosque Art Classic, a national juried art show, for nearly 30 years," Scott says. "This past year, we had 600 entries and hung 150, so it's quite the big deal here."

James and I love how the galleries, gift shop and first-floor classrooms still retain remnants from school days long past, such as chalky blackboards and transom windows. We sure envy Clifton folks, who can attend art shows, piano lessons, pottery classes, theater productions and other cultural programs in their own hometown.

We end the day with eggplant Parmigiana, lasagna and buttery garlic rolls at Bella Veta Italian Restaurant near the Arts Center. *Delizioso!*

Saturday morning, we're off to Whitney, a short half-hour trip northeast that crosses the Lake

Whitney dam. Downtown, we browse a few antique shops. James examines oil lamps while I eye a hanging Christmas tree, fashioned by a local artist from vintage jewelry. (My new bejeweled tree will look stunning over our buffet.)

On Brazos Street, James snaps a photo of me seated on an extremely long, barn-red bench, site of Whitney's infamous Battle of the Benches in 1949. According to local history, upright womenfolk despised the "whittlin' and spittin'" old-timers, who routinely occupied the bench. With the mayor's support, they had the bench removed. Outraged, the old-timers petitioned for an election to get their bench back. They won, 124 to 67.

Next stop: Lake Whitney State Park, a 775-acre getaway located three miles west of Whitney. In the day-use area, we plunk down at a shaded picnic table, where we eat our sandwiches and enjoy lake views. Nearly 37 square miles big, Lake Whitney appeals to anglers looking to snag



Bluebonnets blanket the ground in spring at Meridian State Park, left; a fiery sunset colors the sky over Lake Whitney.



bass, crappie and catfish. On weekends, families and youth groups fill up campsites and screened shelters, many of which overlook the lake. Weather permitting, members of the Whitney Area Miniature Aircraft Club often fly their radio-controlled planes at the park's paved airstrip on weekends.

Uh-oh, I see a dung beetle about to topple into an open socket in the concrete slab at our picnic site. Too late! I dash over and discover oodles of black beetles trapped at the bottom. While I watch, another tumbles in! Perhaps a male's love-inducing pheromones are drawing in the girls? Whatever the case, no one can climb up the steep sides. So I arrange a stick and some frogfruit as escape ladders. While I watch, several clamber out and fly away.

At the Two Bridges Trail, we meet up with park Superintendent Chris Bishop.

"We don't have alligators," quips Bishop, who previously worked at Brazos Bend State Park near Houston, "but we do have an abundance of white-tailed deer, roadrunners, turkeys and other wildlife. In the next few years, we plan to build as much as six miles of new trails."

As we hike the nearly mile-long wooded loop, I spy yellow bitterweed, broomweed and native grasses in open areas. As the trail name implies, we cross two wooden footbridges.

James and I part ways with Bishop, then we motor over to the Towash Forest Trail, located on the park's other side. The wide 1.1-mile path cuts through woods, then loops through a grassy meadow that skirts by the lake. Along the shore, nearly dead baggypods, tall and laden with seedpods, rattle in the breeze. Monster grasshoppers wing by, and I stop to photograph a pink mound of fall witchgrass.

For supper, we savor fried catfish and shrimp at the Texas Great Country Café and Pie Pantry in Whitney. Fried corn-on-the-cob as a side? Pretty tasty! The waitress boxes up a slice of pecan brownie pie for later. Sweet!

Back in Clifton, James and I buy tickets to see a movie at the Cliftext Theatre, billed as Texas' oldest continuously operating theater (it opened in 1916). We love the outdoor neon lights, old-time ticket booth and Art Deco light fixtures. There's even an intermission, a throwback to our own yesteryears.

On our way home Sunday morning, we take FM 1991 from Clifton to Meridian. A mile down the country byway, we venture off to cross an old iron bridge over the North Bosque River. Built in 1884, the Clifton Whipple Truss Bridge — a design style patented by civil engineer Squire Whipple — served travelers until a more modern bridge was built in 1941.

In Meridian, downtown businesses and the Renaissance-style courthouse — built in 1886 of quarried limestone — are closed. No problem. We're eager to tour Meridian State Park, located just a few miles south off Texas Highway 22. The 504-acre park encircles Lake Meridian, a no-wake, 72-acre reservoir perfect for canoeing, kayaking and fishing. Workers with the Civilian Conservation Corps built the park's stone refectory, roads and other structures in the early 1930s.

"We're a nesting site for the endangered golden-cheeked warbler from March through June, a huge draw for folks hoping to catch a glimpse of the elusive bird," says Superintendent Adrian Smith. "People especially love the park's quiet, laid-back atmosphere and beautiful scenery."

The heavily wooded roadsides and camping areas astound us as we loop around the park's east side. Beautiful! Then we drive to the park's west side and get out at the Shinnery Ridge Nature Trail. For nearly an hour, we meander along the 1.64-mile path that winds through ashe junipers and thickets of scaly-bark oaks.

Two-thirds of the way along, the dirt trail turns to asphalt, and the thick juniper canopies give way to open skies. Brickell-bushes with fringe-tipped yellow flowers remind me of mistflowers in our gardens, and I pause to observe a question mark butterfly warming her wings atop a Texas oak branch.

Heading back to the car, we stop to photograph three black vultures, roosting a short distance away in a dead tree. They eye us warily and then flap off over Lake Meridian, disappearing beyond the treetops. Likewise, we must depart. But we'll be back, perhaps for a spring weekend jaunt. I hear the wildflowers here are stunning. ★



 **COSTA**

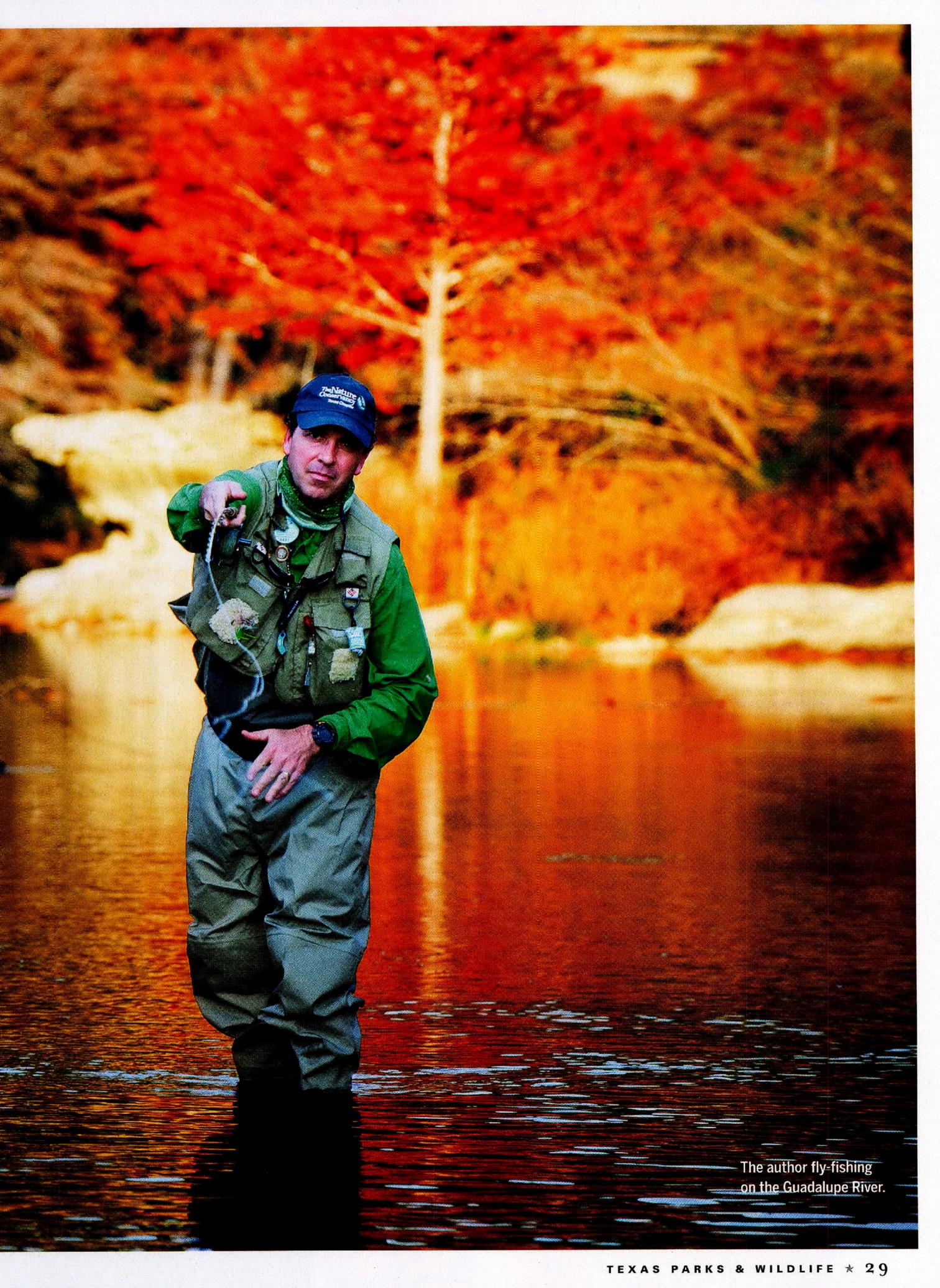
Available in prescription. Find an authorized optical  
eye care professional near you at [CostaDelMar.com](http://CostaDelMar.com)



*Shaking Hands With a Fish*

THE UNEXPECTED WONDERS OF FLY-FISHING.

BY REID WITTLIFF



The author fly-fishing on the Guadalupe River.

*When I'm about to go fly-fishing, I become anxious and clumsy. I'm keyed up not only because of the prospect of catching fish, but also because, if experience holds true, I stand a good chance of seeing or experiencing something completely unexpected.*

I begin to fish the same way every time. I take the end of my line and bend it into a loop. I then thread the loop through the guides on the rod. This way, if the line should slip, it will catch before falling back through the guides to the ground. This is a handy trick because I almost always fumble the line.

When I am finally rigged, I peel line off the reel and flick it through the guides so I have enough slack to cast. Then, I find a fishy-looking spot and begin the *whoosh-whoosh* of the cast. As the line flies out over the water, I intently watch the spot. The fly I have cast is connected to filament-thin tippet, then leader, then fly-line and ultimately to me via my left hand. I can make the fly come alive by stripping in some of the line or by adding slack to make the fly appear completely untethered.

If I do it all well, the fly will seem edible and easy to catch. When the take comes, even when I am expecting it, the impact of the fish on my line electrifies me. Every time. This direct connection of fish to line to angler is one of the things I love most about fly-fishing.

"It's like shaking hands with a fish," as a buddy once described it.

There are other, deeper things to love about fly-fishing, too. For me, those things are less about the fishing and more about the things that happen when fishing. Time and again, fly-fishing has given me the chance to experience unexpected wonders and share delight in them with those I love.

One such thing happened when I was fly-fishing with close friends on the gin-clear white sand flats of the Lower Laguna Madre. We were on a tiny skiff, poling across the skinny

waters of the flat looking for redfish and speckled trout. We had worked all day to find fish and covered miles of water. We found only a few and caught not a one.

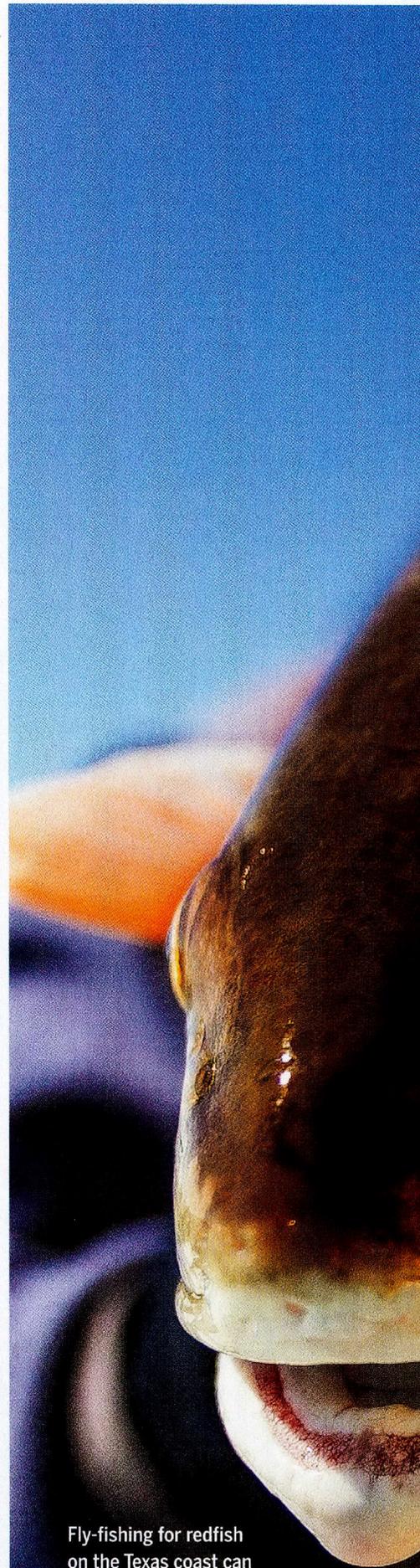
It was late afternoon, and the glare from the sharp angle of the sun made spotting fish almost impossible. We were tired and ready to call it a day. Suddenly, our guide said, "Fish! Fish, fish, fish!" We looked where he pointed. There — where just a moment before there was nothing — were a hundred or more redfish tails swaying back and forth like tiny sails in a gentle breeze. The tails rose out of the water as the fish searched for food on a circular patch of sparse seagrass about the size of a helicopter landing pad on the otherwise barren flat. As suddenly as the tails appeared, they vanished, all at the same time as if on cue.

We watched as the fish glided past the skiff just out of casting range.

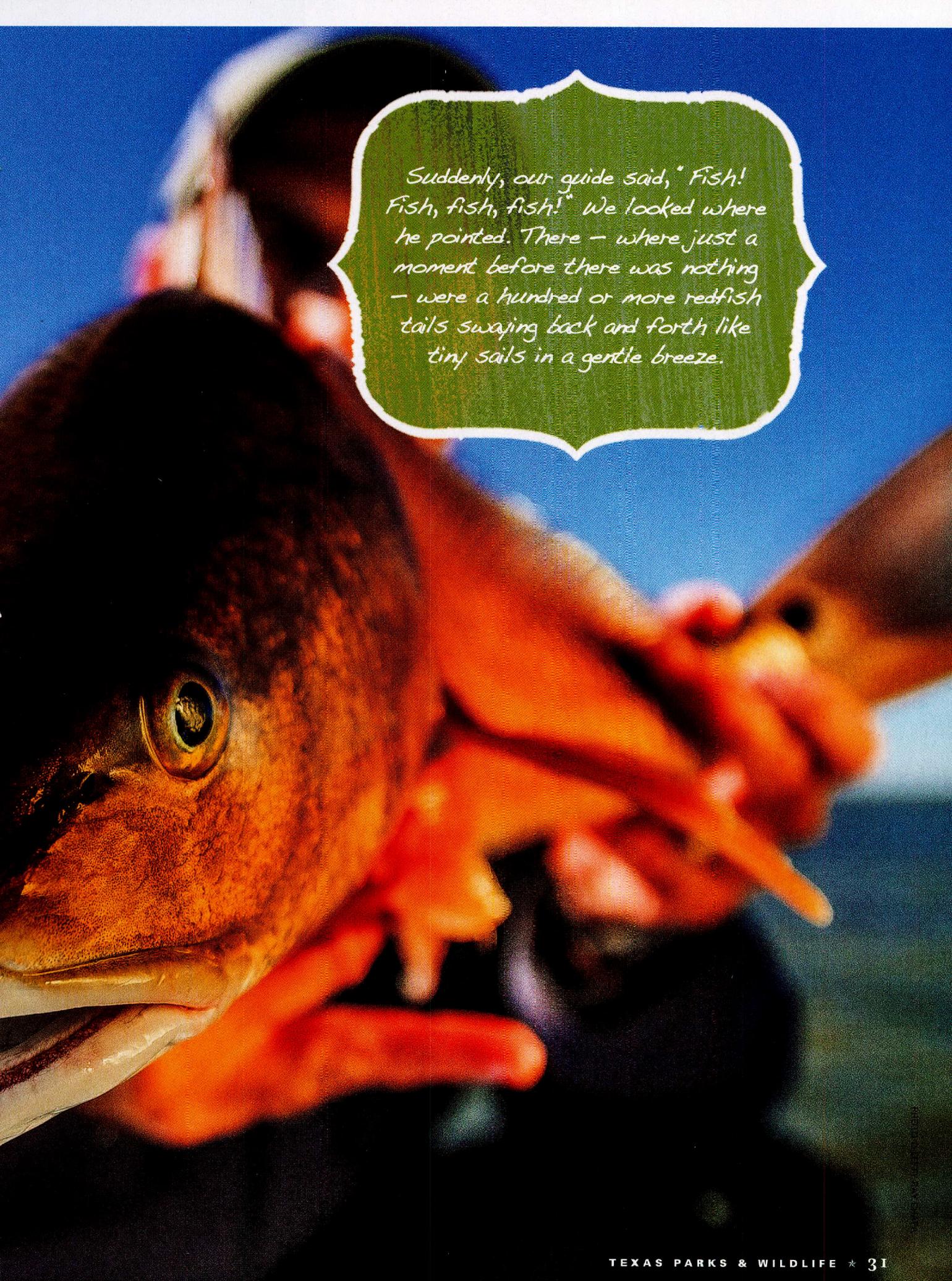
To our surprise, the tails came out of the water over another patch of seagrass to our right. Like before, the tails emerged in perfect unison. The redfish then proceeded to march across the flat, tailing on one seagrass bed after another. Each time, tails popped out of the water at exactly the same moment and then, after a minute or two, went down together as if some piscatorial drum major directed the whole show. It was a magical, shivers-up-the-spine thing to see.

For a time, we just stood silently on the skiff and watched. Then, we slid off the boat and began shaking hands with one fish after another. It was the fastest redfish action I have ever experienced.

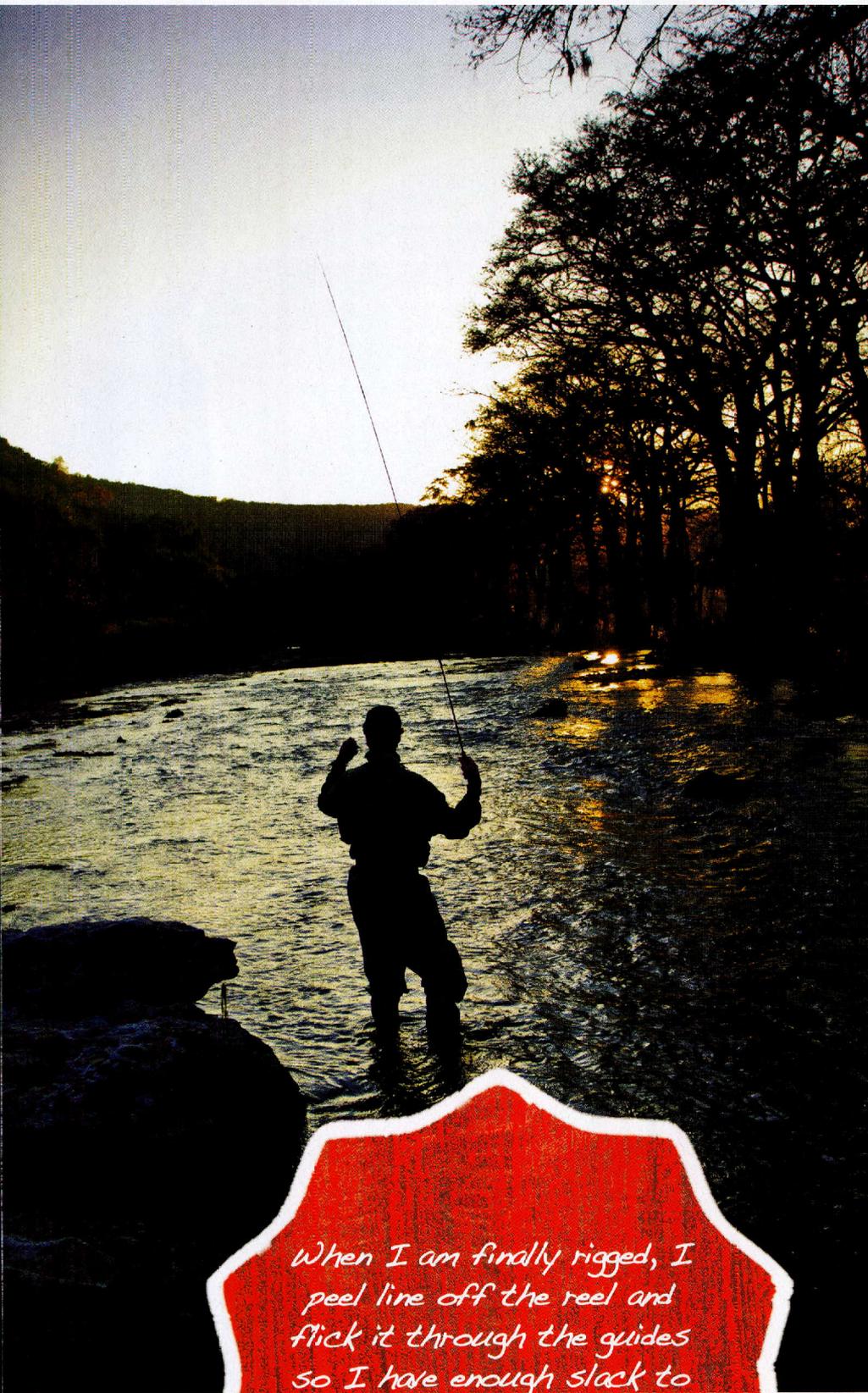
As good and fun as the fishing was, the parade of tails is what sticks with me as truly special.



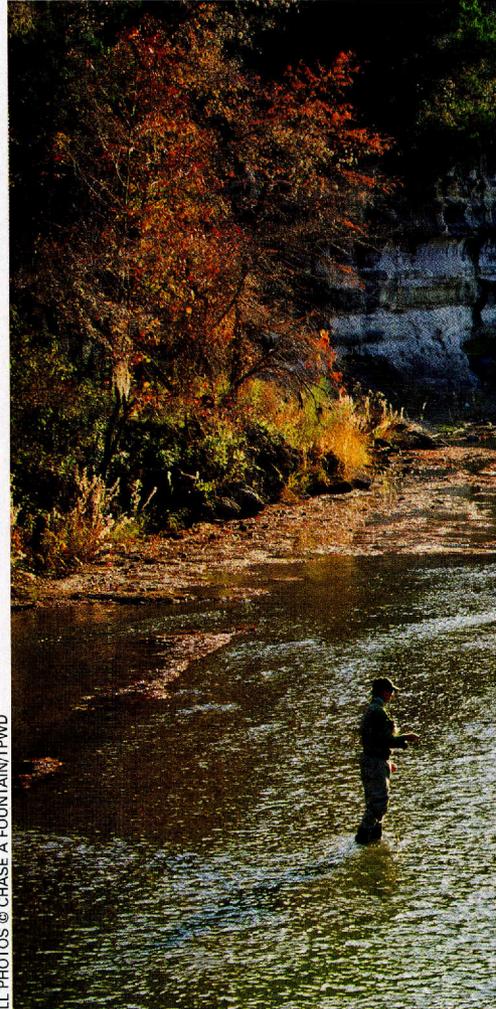
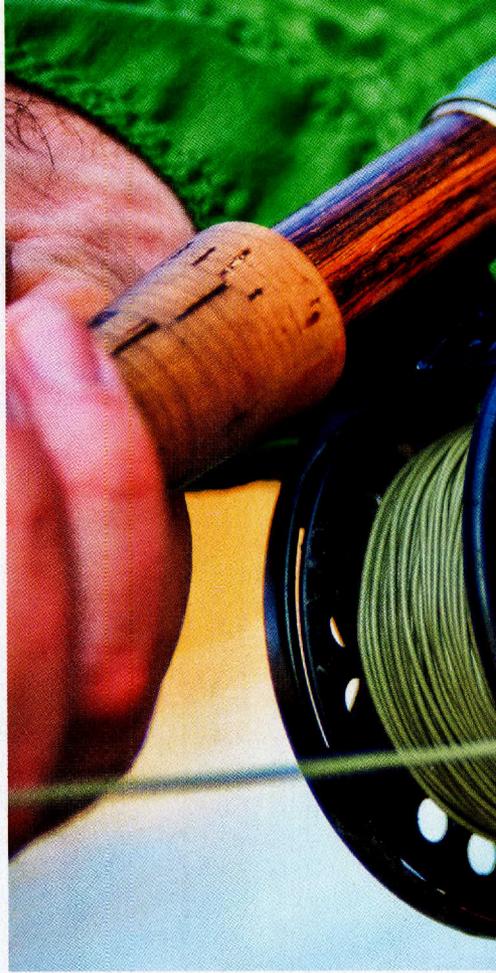
Fly-fishing for redfish on the Texas coast can bring fast action.



*Suddenly, our guide said, "Fish! Fish, fish, fish!" We looked where he pointed. There — where just a moment before there was nothing — were a hundred or more redfish tails swaying back and forth like tiny sails in a gentle breeze.*



*When I am finally rigged, I peel line off the reel and flick it through the guides so I have enough slack to cast. Then, I find a fishy-looking spot and begin the whoosh-whoosh of the cast.*



ALL PHOTOS © CHASE A FOUNTAIN/TPWD

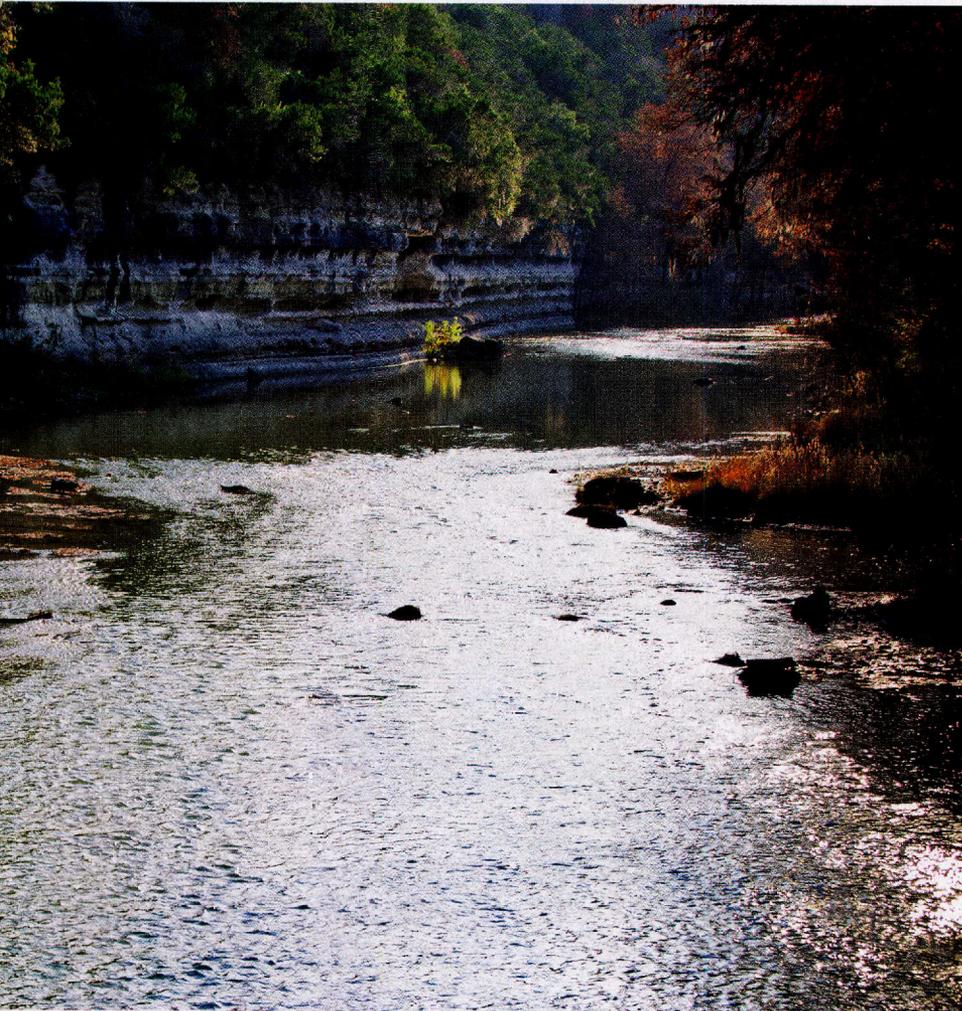


Before I graduated to saltwater fly-fishing, I learned to fly-fish for bass. My main instruction came from a video by Dave Whitlock called *Fly-fishing for Bass*. In it, Whitlock catches one whopper bass after another. As a “newbie” fly-fisher, I watched it dozens of times. My goal was to catch a big bass just like Whitlock did.

I spent one whole summer trying to do so on a tiny stock pond about 15 miles from my hometown. One edge of this pond was tree-lined, and one branch of these trees stretched way out from the bank, creating a nice shady patch of water.

Fish liked the cool water in the shade, but the branch made it tricky to get a fly into that spot of water. Whitlock had a solution for this problem — the underhand cast. To do it,

The Guadalupe River below Canyon Lake offers a special treat for Texas anglers: the opportunity to fly-fish for trout.



you cast your loop below your rod, instead of above it as usual. I never learned to do it effectively, but I did learn to do a side-armed version well enough to occasionally deliver a fly to that patch of water without getting hung up in the trees.

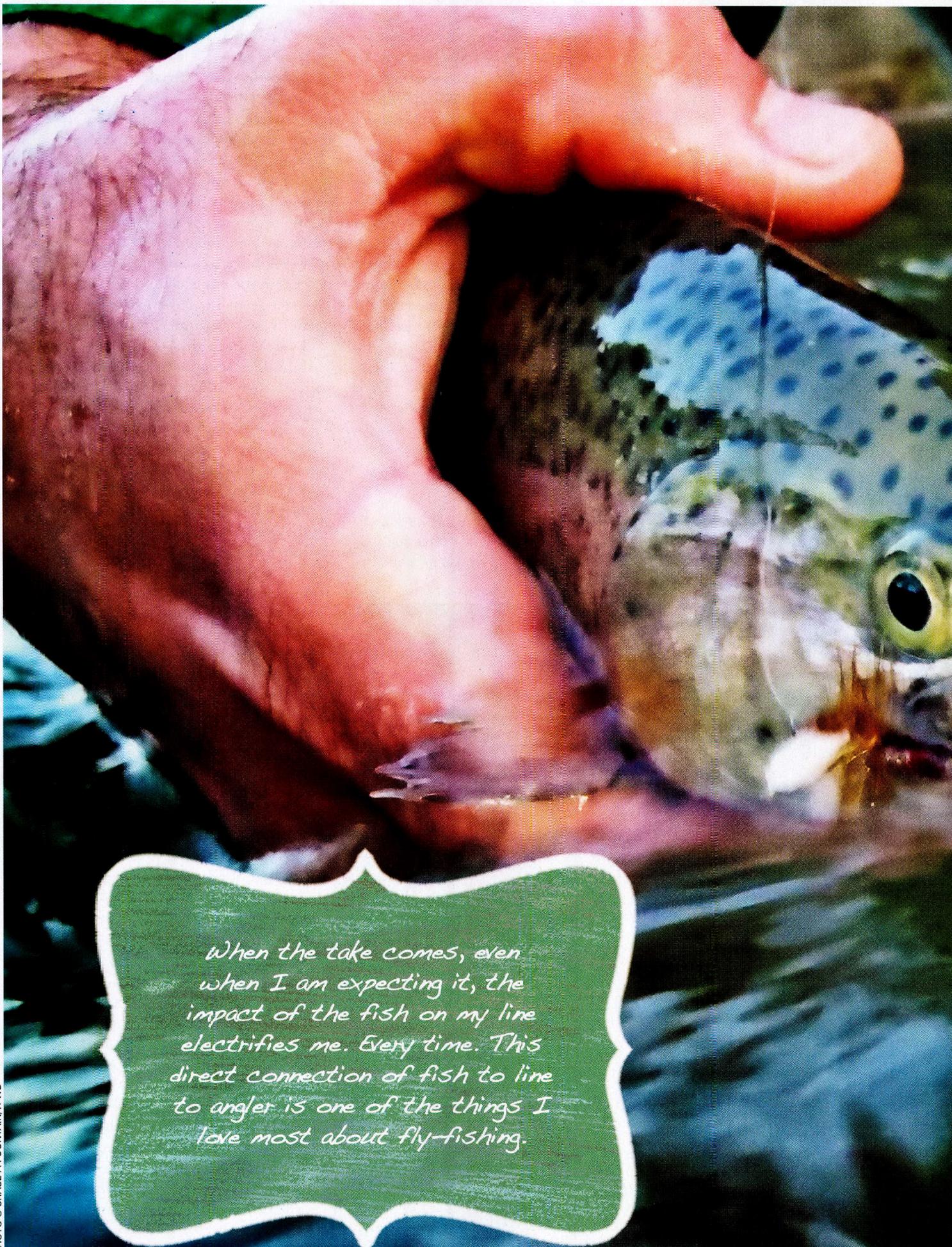
My usual tactic was to side-arm black wooly buggers under the branch near the bank and slowly strip them back. I hooked and caught a lot of perch this way — and also lost a lot of wooly buggers in the branch. But I never found the big bass I was hoping for. Not until late one summer afternoon when I was fishing with my dad.

As the sun started to fade, he paddled me to the shady spot for a final few casts. For some reason, I tied on a big green-and-orange, frog-like popping bug instead of my usual wooly bugger. I side-armed the bug under the branch and let it sit. Then, ever so gently, I stripped the line just enough to make the frog’s rubber legs jiggle. Like a ballistic missile fired from the depths of the ocean, the biggest bass I had seen on that pond exploded out of the water. He flew straight up, rolled over at the top of his leap, and with jaws spread wide fell back to the water, engulfing the frog on re-entry.

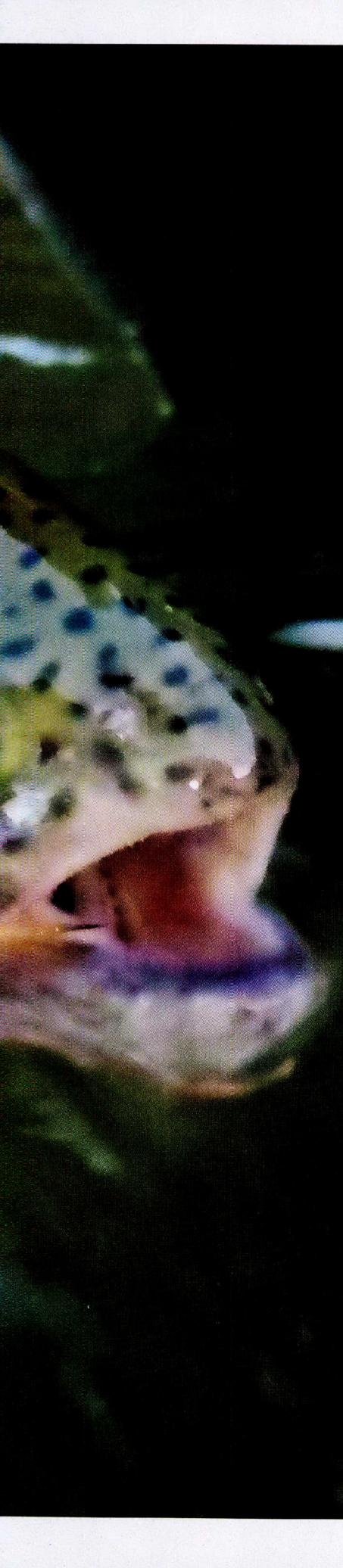
I froze. Never had I seen a fish take a fly on the way back into the water. Dad yelled at me to set the hook, and I tried. It felt as though my line was connected to a solid brick wall — but only for the briefest of instants. Then my line, sans frog and sans bass, came careening back toward me.

A wave of disappointment washed over me. Whitlock’s video had a long segment on the hook-set. I had muffed the whole thing up. I looked back at my dad. He didn’t look frustrated. Instead, he had a huge grin on his face. I started to grin, too, and my disappointment evaporated. Neither of us could explain why that bass took the fly on the way back into the water. That was just “bassack-wards,” my dad said.

Perhaps my most cherished memory of a fishing surprise came about on a New Mexico trout stream. For a time during my teenage years, my dad and I and a dear family friend (whom I called Uncle John) took an annual trip to fly-fish for trout on this river.



*When the take comes, even when I am expecting it, the impact of the fish on my line electrifies me. Every time. This direct connection of fish to line to angler is one of the things I love most about fly-fishing.*



We fished with a particularly pernickety guide who was a committed fly-fishing purist.

This river produced big fish and in good numbers, but generally we had to use nymphs or other sub-surface flies to catch them. We relished the few times we found dry-fly action — it is much more exciting to see a trout rise and take a fly off the surface than to feel an unseen one tug your line.

Prior to these trips, Uncle John spent weeks tying flies so that he had boxes of them at the ready. Sometimes he made up entirely new patterns. This particular year, Uncle John had invented a new version of one of our go-to dry flies, the Griffith's Gnat.

The Griffith's Gnat is a tiny fly that looks more like a speck of fuzz than any insect a trout might want to eat. It is meant to replicate groups of 10 or 20 gnats that sometimes cluster together on the water. When there are sufficient numbers of these clusters, trout will rise and gently suck them in.

The version Uncle John created was not anything like the original. His version was about 20 times bigger and more closely resembled a pad of hair scraped from a shower drain than an actual Griffith's Gnat. We gave Uncle John a good dose of ribbing when he showed it to us.

We caught a lot of trout on this trip, including some big fish. But until the last afternoon, all our fishing had been with nymphs. We were lined up in the middle of the river nymphing when our guide called us together and pointed to the far riverbank. We saw a series of rising trout lined up along a seam in the current. The way they were softly tipping their noses out of the water indicated they were sipping gnats from the surface. Dry fly time.

Our guide — ever the purist — insisted that we tie on 15-foot leaders and wisp-thin tippets. He then had us

**Fly-fishing requires skill and artistry and draws on a rich tradition. This rainbow trout was caught in the Guadalupe River.**

slowly creep to within casting distance of the rising trout. He pulled three Griffith's Gnats from his fly box and gave them to us. In a hushed voice, he instructed us to cast above the spot we last saw a fish rise and to not make more than one false cast, so as not to spook the fish.

My first cast was perfect. The Griffith's Gnat floated a line that drifted directly where I had last seen a trout rise. But there was no take. I tried again. And then again, but nothing. I moved to another rising fish but could not raise him to my fly.

The guide, Uncle John and I began working together. One of us would cast, and the guide would instruct us on when to mend the line to keep the fly floating drag-free. We tried timing our casts so that the fly would be just above the fish when, based on his pattern, he should be rising. Nothing worked.

Finally, I turned to Uncle John and asked for his cluster fly. Uncle John gave me one as the guide tried to convince me otherwise. I began to tie it on anyway. The guide sighed and waded upstream to help my dad.

I cast the gargantuan fly to the same spot where I had cast the Griffith's Gnat. The cast was good, and the big fly lumbered down the feeding lane toward the rising trout. Just before it arrived at the spot where the fish should be, a big green snout poked out of the water. Uncle John and I held our breaths and tensed, but the trout did not eat the fly. I tried the same cast again. This time, when the fly reached the spot, the trout slammed it. I raised my rod and it was hooked.

A few minutes later, Uncle John netted the fish for me. I pulled his fly from the fish's lip and held it high for my dad and the guide to see. Uncle John and I laughed and laughed and laughed.

"A triumph," Uncle John said. "That's just a triumph."

And it was. Not just because we caught that trout on that fly, but because we were there to experience all of it together. ✪



# Butterflies ON THE BRINK?

Monarch monitoring shows their migrations in trouble.  
*By* ROB MCCORKLE



ALU



*Craig Hensley's lifelong love affair with monarch butterflies* began decades ago. He fondly recalls childhood days in Iowa lying on his back in a field and watching swarm after swarm of the delicate-looking insects fluttering overhead, some "cascading" down around him to fuel up on plant nectar for their long southward migration.

Today, Hensley, a Guadalupe River State Park interpretive ranger, has joined a growing chorus of experts warning about the fragile state of the autumn migration of millions of monarchs to their ancestral winter home in the mountains of central Mexico. The U.S. population of the resplendent orange and black butterfly has been suffering a precipitous downward spiral in numbers because of myriad environmental factors, many of them caused by people.

During the 20 years that Western scientists, many working for universities and butterfly monitoring organizations such as Monarch Watch and Journey North, have been keeping statistics on the butterfly's 2,000-mile fall migration from Canada and the northern U.S. to the monarch's winter roosts in Mexico, overwintering populations have fluctuated wildly. Populations that for two decades covered an average of 6.69 hectares of forest plummeted 82 percent in the winter of 2012, covering only 1.19 hectares, or just less than 3 acres. (A hectare equals 2.47 acres and is estimated to contain up to 50 million monarchs.) Early reports for the winter of 2013 look to be even worse coming out of Mexico, where monarchs overwinter in the oyamel fir forests in the Mexican states of Michoacán and Mexico.

"Monarchs are the new canary in the coal mine," warns Cathy Downs of Comfort, an accomplished Texas Master Naturalist who spends most of her days spreading the dire news of the monarch's plight to adults and schoolchildren alike. "It's very possible that although monarchs may not become extinct in our lifetime, we could lose the migration."

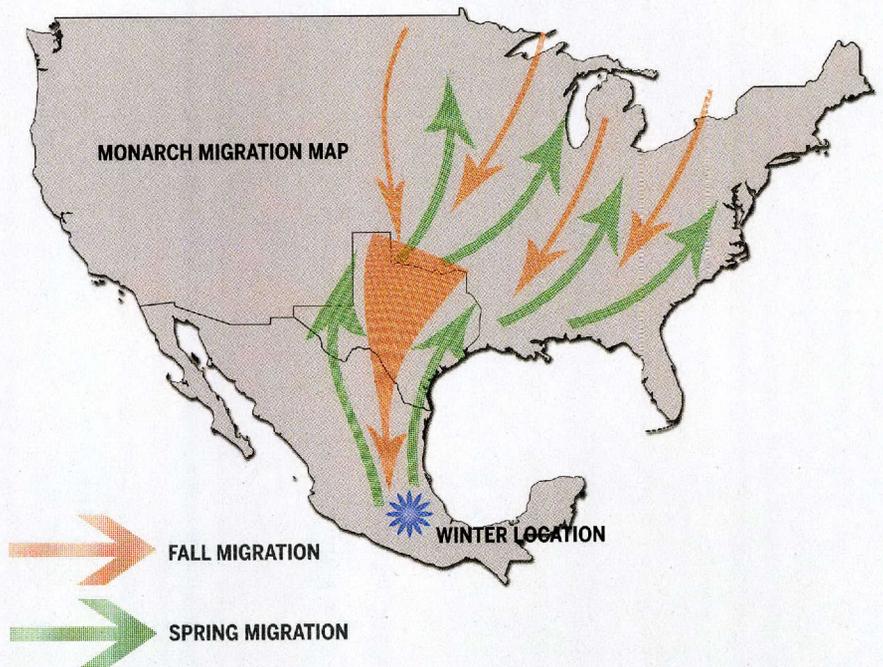
One of Downs' mentors and one of the most respected voices in the Texas monarch community is retired cardio-

vascular surgeon Kip Kiphart, who lives just outside Boerne and travels the state lecturing on *Danaus plexippus* and providing monarch training. On a chilly, mid-October morning at the historical peak of the fall monarch migration, the affable naturalist joined a handful of volunteers for a butterfly count at Guadalupe River State Park led by Hensley. Texas plays a key role in the life cycle of the monarch, the official state insect of Texas. Both the fall and spring migrants of the monarch population east of the Rockies funnel through the heart of the state on their way to and from central Mexico's Transvolcanic Mountains.

"Hard freezes down in the wintering grounds in 2002 caused a huge loss of monarchs, which roost at 10,000 to 12,000 feet, in what is typically a dry season," Kiphart explains. "Monarchs can tolerate temperatures down to 18 degrees if it's dry, but if it's raining and the mer-



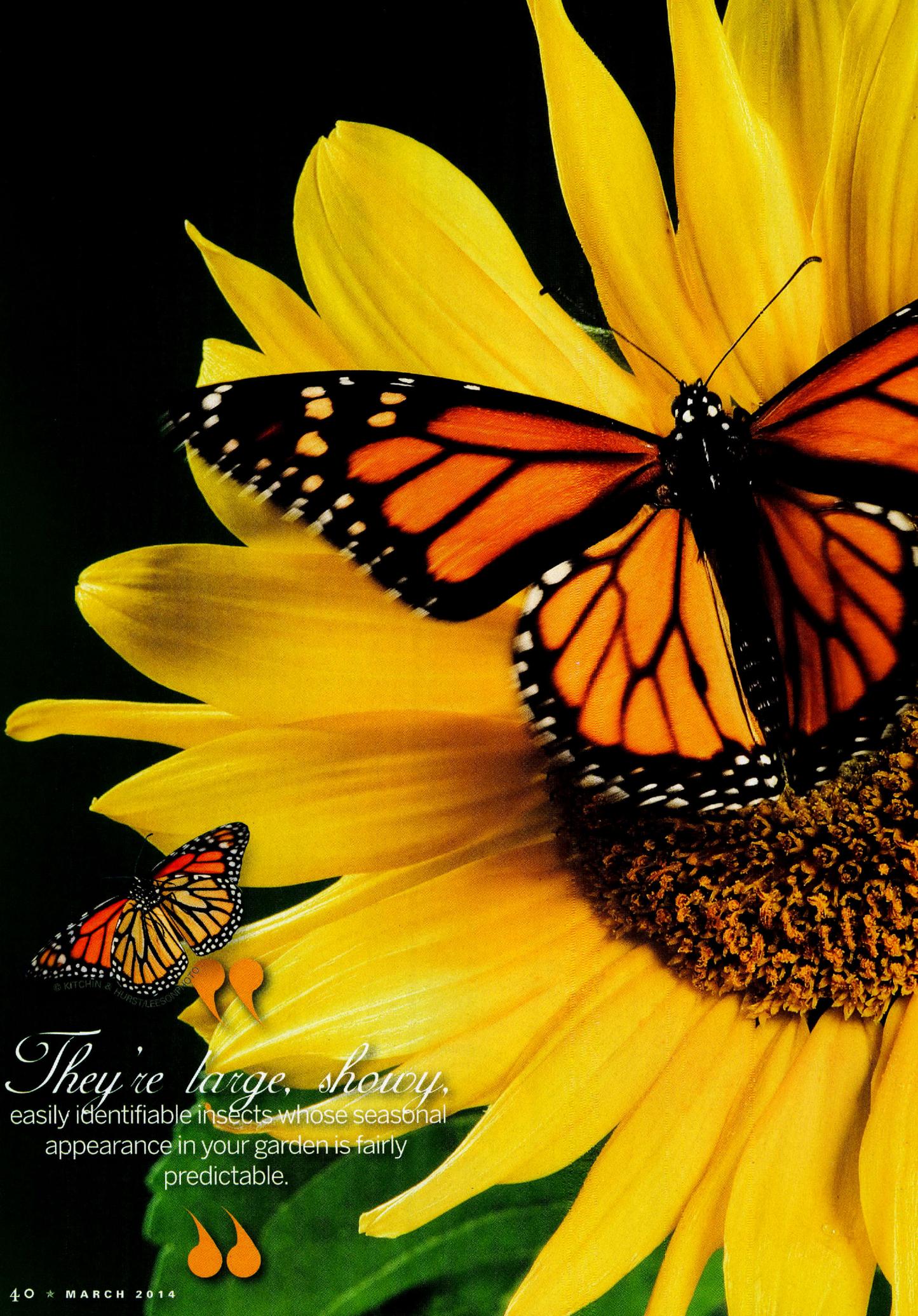
Monarchs migrate (below) in the spring and fall, spending summers in the northern U.S. and Canada and winters in Mexico. In spring, monarchs lay eggs along the way. An egg hatches into a caterpillar, which later forms a chrysalis (above) and emerges as a butterfly.



MAP © TPWD, CHRYSALIS © SUSAN ELLIS, BUGWOOD.ORG, CATERPILLAR © KITCHIN & HURST/LEESONPHOTO



*It's very possible*  
that although monarchs  
may not become extinct  
in our lifetime, we could  
lose the migration.



© KITCHIN & HURST/ISTOCKPHOTO

*They're large, showy,*  
easily identifiable insects whose seasonal  
appearance in your garden is fairly  
predictable.



cury drops to below 32 degrees, they can freeze to death. That's what happened."

Over the next two hours at the state park, the intrepid group made its way from the riverside to a portion of a restored 230-acre native prairie. The former mountain cedar patch now sports a diverse array of wildflowers and dozens of native antelope horn milkweed. Milkweed serves as the sole plant species upon which monarchs lay their eggs and upon which their offspring feed.

The morning's resulting tally included a number of different butterfly species (Texas has 450 species), but only one monarch that Kiphart spied through binoculars hitchhiking with a flock of kettling white pelicans winging south. Kiphart pointed out that by this time the previous year, he had already "tagged" 800 monarchs, but could claim only 97 taggings this time.

Fred Urquhart of the University of Toronto first experimented in 1937 with tagging monarchs to try to track their movements. Today, hundreds of Texans net monarchs to attach an adhesive, dime-sized tag printed with a unique number to the butterfly's hind wing. Those who find one of the tagged monarchs (in Mexico, it brings a \$5 bounty) can call an 800-number or go online to

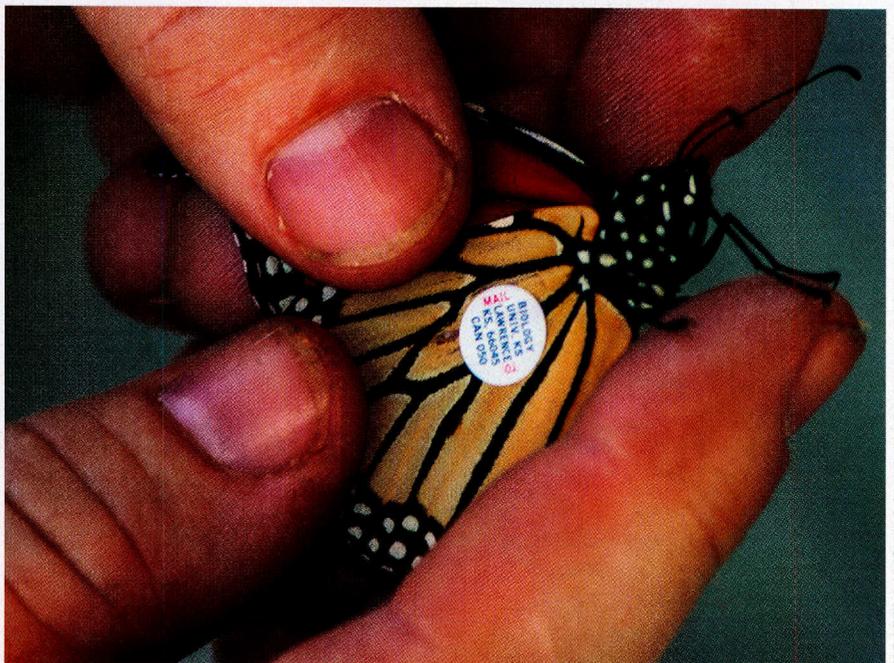
Monitoring groups track the progress of the monarchs during spring and fall migration. Tags (below) help researchers follow monarch movement.

report their find to Monarch Watch, a monitoring organization.

Longtime monarch researcher Lincoln Brower of Sweet Briar College in Virginia attributes the monarch decline of the past few years primarily to severe weather, but the overriding consensus of opinion points to habitat loss as the most insidious, long-term culprit. Native grasslands in Canada and the Midwest are being planted with soybean and corn — mostly genetically modified, herbicide-tolerant crops. Corn grown for ethanol production is also helping drive the loss of habitat. Sixty percent of the grassland ecosystem's milkweed has been wiped out because of the introduction of herbicide-tolerant crops and conversion of land to biofuel crops.

California hosts a separate population of monarchs, which spend winters clustered in eucalyptus trees and Monterey oaks and pines along the coast. There, the removal of aging trees and ongoing development are accelerating habitat loss. In the U.S., 6,000 acres a day fall victim to urban sprawl and development.

In Mexico, habitat destruction resulting from illegal logging, crop burning and fragmentation of monarch overwintering sites for subsistence farming continues to take its toll. While the Monarch Butterfly Biosphere Reserve, a World Heritage Site, boasts official protection status, the land is divided into more than 100 private properties (many of them *ejidos*, or communal agricultural lands), complicating management issues and



FAR LEFT © KITCHIN & HURST/LEESONPHOTO. THIS PAGE © KATHY ADAMIS CLARK/KAC PRODUCTIONS



PHOTO © SEAN FITZGERALD PHOTOGRAPHY INC.

fragmenting conservation efforts. Water diversion from overwintering forests and a high number of tourists also degrade monarch habitat. Biological impacts, such as mistletoe infestations in Mexico's host trees, butterfly parasites and disease, also add to the volatile mix of negative developments affecting the iconic insect.

What is it about the monarch in particular — one of the world's 20,000 butterfly species — that commands such awe and respect?

"It's no one thing," suggests Mike Quinn, a former TPWD invertebrate biologist also known as the "butterfly guy." "They're large, showy, easily identifiable insects whose seasonal appearance in your garden is fairly predictable. They're nationally and internationally acclaimed

for their annual mass migrations and their mysterious navigational abilities."

Quinn, who has coordinated the Texas Monarch Watch since 2000 and hosts the online Austin Butterfly Forum, points out that because of the monarch's distinct metamorphoses (four changes in form) and unique migration, the species serves as a classic teaching model. Educators often use the monarch to teach biology, chemistry, physics, geography and other academic subjects.

In Mexican folklore, some indigenous peoples marveled at the seemingly magical appearance of the butterflies in their communities each fall and winter. The butterflies' annual arrival in alpine villages toward the end of October and first week of November, when Mexico celebrates the

Day of the Dead (Nov. 2), led to a common belief that the monarchs were the returning souls of their ancestors.

Though most publicity centers on the fall migration, the returning spring flight north is also critical to the species' survival. Master Naturalist Downs notes that in the spring, monarchs migrate through Texas on three major flyways, "nectaring and laying eggs along the way." Successive generations make their way north, and it is the fourth generation of monarchs that makes it to the northernmost range in Canada and later migrates to Mexico.

On their northward journey, monarchs depend exclusively on about 30 different North American milkweed species, predominantly common milkweed (*Asclepias syriaca*), upon which to lay their eggs.



Tens of millions of monarchs died in 2002 when freezes hit their winter home in Mexico, dealing a devastating blow to the population.

Resulting larvae feed on the host: milkweed. Emerging butterflies depend on various wildflowers, such as penstemon, lantana and mistflower, for nectar on their northward journey to summer breeding sites. The leading edge of migrating monarchs typically begins reaching South and Southwest Texas in the first part of March, spreading into Central and North Texas later in the month and into April.

Monarch movement can be viewed on the Annenberg Foundation's Journey North website ([www.journeynorth.org](http://www.journeynorth.org)). The program involves 785,000 student observers at 29,500 sites across North

America. A number of those volunteers maintain and monitor monarch "way stations." Butterfly gardens planted with nectar sources and, in some cases, milkweed can be found on both private property and public property such as schools and parks.

More than 6,000 way stations have been established in Texas. Many of those sites are involved in the nationwide Monarch Larva Monitoring Project begun in 1996. The Texas Parks and Wildlife Department offers a "Butterfly Garden" brochure with suggested nectar and host plants. Information about establishing a Texas wildscape that benefits all wildlife can be found by visiting [www.tpwd.state.tx.us/wildscapes](http://www.tpwd.state.tx.us/wildscapes).

Milkweed, which is not an especially attractive plant, often succumbs to the garden hoe or highway department mower. Because milkweed contains a toxic compound absorbed by feeding monarch larvae, the emerging black, yellow and white striped caterpillars feeding on its foliage rarely become a meal for birds or other predators.

Planting milkweed is considered the most important step Texans can take to help monarchs. The three most common native milkweed species found in Texas are antelope horn, green antelope horn and zizotes. Challenging to propagate from seed, which is sold by a handful of Texas growers such as Native American Seed in Junction, milkweed has become commercially available as small plants in a few select nurseries. Consumers should be careful to make sure that the more readily available tropical milkweed and butterfly weed, with their attractive flower clusters, have not been sprayed recently with pesticides. This can be deadly to monarchs.

The real key to the survival of the miraculous monarch migration, however, lies with gaining an even better understanding of existing threats and sounding the clarion call about the creature's delicate dance on the edge of extinction.

Those interested in learning more can attend lectures and workshops listed online by TPWD on the Texas state park events pages, the Texas Master Naturalists and various butterfly forums.

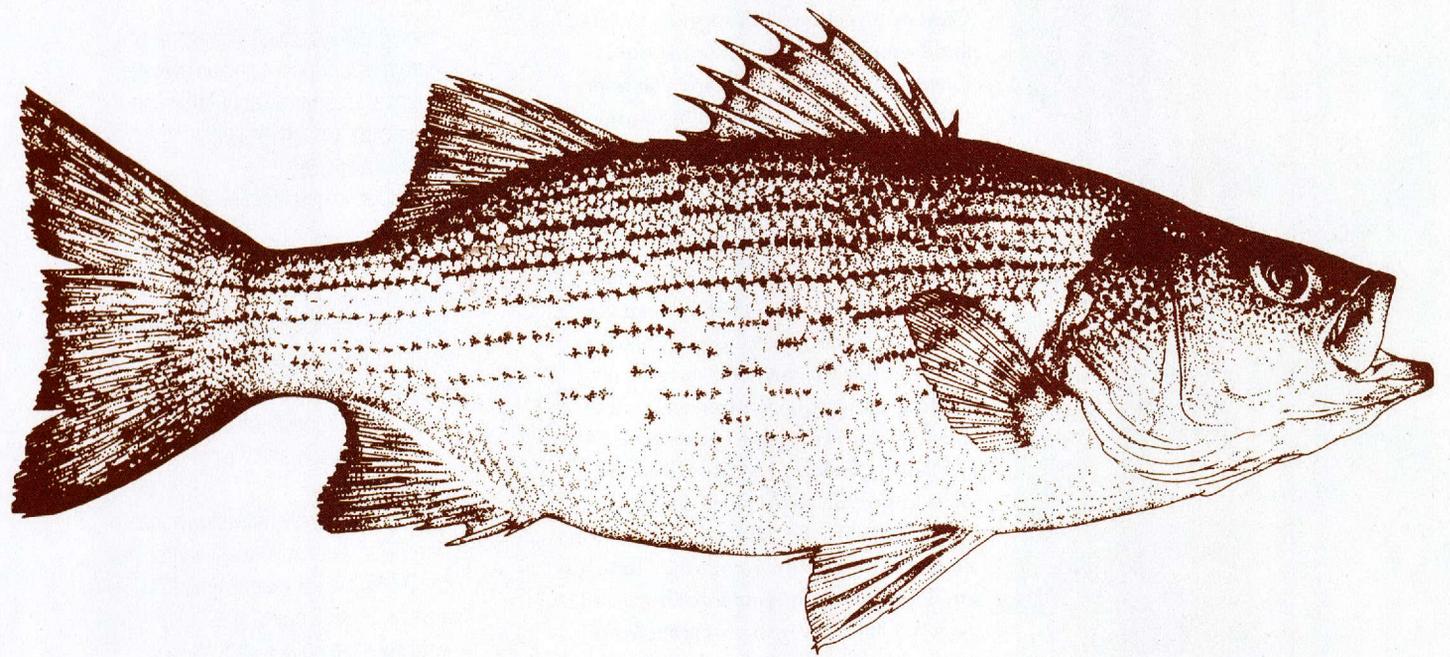
"If I can leave you with one message," inveterate monarch crusader Downs told attendees at last September's workshop in Kerrville, "it is this: Teach the children." ★



## Monarch FACTS

- » Monarchs have a typical wingspan of more than 3.5 inches and an average weight of 0.5 grams (about that of a paper clip), among the largest of North American species.
- » A single monarch female can lay up to 300 to 400 eggs.
- » An adult's lifespan ranges from one to nine months.
- » Migrating monarchs can cover an average of 25 to 30 miles a day.
- » Most monarchs joining fall migration are three to four generations removed from those that made the previous year's journey.
- » In order to grow and develop, monarch caterpillars need milkweed plants; they can increase their weight almost 3,000 times in 10 to 15 days.
- » Monarchs are notably promiscuous, with lifetime mating frequencies of about eight for each sex.
- » Monarchs contain a group of compounds known as cardiac glycosides, acquired by monarch larvae feeding on milkweed, that provide protection by inducing vomiting in many vertebrates.
- » Like birds, monarchs conserve energy by catching updrafts of warm air, called "thermals." Upon reaching the thermal top, they glide toward their destination.
- » There are two North American populations of monarchs divided geographically by the Rocky Mountains.
- » The eastern monarch population migrates each fall to Mexico, while a western population overwinters in coastal forests from California's Mendocino County south to Baja while moving inland in the spring to breed.
- » Monarchs overwinter in dense clusters of alpine oyamel firs in a semi-dormant state, living off stored fats.

# HIGH ON HYBRIDS



BY LARRY D. HODGE

If ever there was a fish that demonstrates the Texas Parks and Wildlife Department's commitment to making fishing better in Texas, it's the hybrid striped bass.

Without the work of TPWD's Inland Fisheries biologists and hatcheries, there would be no hybrid striped bass, usually referred to simply as hybrids, in Texas.

Hybrids are "made" fish, produced by fertilizing eggs from a species that migrates between salt and fresh water — striped bass — with sperm-containing milt from a freshwater species — white bass — to produce a cross called Palmetto bass. (Using eggs from white bass and milt from striped bass produces a cross called Sunshine bass.)

The result is one of the hardest-fighting, best-tasting game fish in the state. Hybrids are so popular with anglers that Texas might well be called the Palmetto State. (Sorry, South Carolina.)



**BIOLOGISTS BATTLE  
GOLDEN ALGA AND  
DROUGHT TO PRODUCE  
HYBRID STRIPED BASS.**

Fish eggs in a hatching jar.

**Palmetto bass come by their name honestly.** The cross was first produced in South Carolina — the real Palmetto State — in the 1960s. Hybrid production and stocking began in Texas in 1972, when a test run of 1,800 fish was produced. Numbers quickly climbed in future years, topping 1 million in 1977 and ranging from 2 million to 4 million in most years since then. Two of Texas' five freshwater hatcheries, Dundee and Possum Kingdom, produced most of those fish.

And then came golden alga and drought, with a couple of floods thrown in.

Golden alga is a microscopic killer that periodically blooms in some Texas waters, producing a toxin that basically smothers gill-breathing organisms like fish and mussels. In 2001 golden alga totally wiped out production at the Dundee hatchery. The Possum Kingdom hatchery was off-line at the time because of construction.

Production rebounded in 2002 and reached an all-time high of more than 8 million in 2010, but then came the drought of 2011, and Dundee lost its water supply. Possum Kingdom, meantime, had been struggling with golden alga. Production fell to just 1.3 million fingerlings in 2011.

TPWD biologists had been busy developing pond management strategies to control golden alga with moderate success, but no one can control Texas weather. Striped bass broodfish are collected annually below the Lake Livingston dam, and in 2012 flooding prevented the timely collection of broodfish.

"The spawning window when females have ripe eggs is only about three weeks," says Gerald Kurten, former director of TPWD's hatchery program for hybrids. "The Livingston site is the only one in Texas that provides a predictable supply of enough ripe females — 150 or so weighing at least 10 pounds each — to produce enough fry to stock hatchery ponds."

Hybrid production plummeted again, to just 6,605 fingerlings.

Biologists refused to accept defeat. Dale Lyon, manager of the Possum Kingdom hatchery, and the late Dennis Smith, former manager at Dundee, worked to develop ways to successfully raise fish despite golden alga. Doing this requires a delicate juggling act, Kurten says.

"The best tactics for eliminating golden alga in ponds are also detrimental to rearing hybrids," he explains. "Copper compounds will kill golden alga but will also kill the beneficial alga that provide food for the rotifers that are the first foods for hybrid fry. Un-ionized ammonia will kill golden alga but will also kill hybrid fry and fingerlings unless used at the right concentration."

Using just the right amount of ammonium sulfate to kill golden alga is so unpredictable and challenging that TPWD looked for another way to subdue the killer. Sterilizing incoming water using ozone eliminates golden alga.

"The disinfection of the incoming water supply in 2013 has seemed to be fairly effective at reducing the impact of golden alga in ponds," Kurten says.

"This same strategy will be employed at Dundee once we are confident that its water supply is restored. However, it's not cheap. The Possum Kingdom ozonation system cost about \$1.5 million."

In the meantime, Dundee has no water and no ozonation system, and the availability of broodfish from Lake Livingston can't be counted on, so what can be done?

Temporary production of hybrids was moved to the new John D. Parker East Texas Fish Hatchery and the A.E. Wood State Fish Hatchery in San Marcos, Kurten says. "Staff at these hatcheries has been required to develop the skills for producing hybrids as well as adapt to stricter water quality controls than are required for rearing the largemouth bass they typically produce."

Because floods prevent broodfish collection below Lake Livingston every 10 years on average, TPWD is also developing a captive broodfish program at the Possum Kingdom hatchery.

Spawning wild fish in a hatchery is an

intricate dance with nature that requires careful timing, constant vigilance and intimate knowledge of how the process works in the wild and how to replicate that process — plus a bit of luck.

"Striped bass broodfish are triggered to spawn by a combination of photoperiod, water temperature and water flows," says Rob Schmid, manager of the A.E. Wood hatchery. "A warmer than normal spring can cause the fish to spawn early; a colder than normal spring can cause them to spawn late. Flooding can draw the fish in earlier; drought can cause them not to come in at all."

It's a tricky process. "Since the collection of broodfish is limited to a short natural spawning window, if you blow it the first time, it may be too late to collect broodfish and spawn again," Kurten says.

When all works well, fisheries crews use electrofishing boats to collect female striped bass from below the Lake Livingston dam and white bass males from East Texas rivers. The future parents are taken to the hatchery, where females are observed carefully to gauge their readiness to spawn. At the collection site and periodically at the hatcheries, a glass tube is inserted into females' vents and egg samples are taken for viewing under a microscope to determine their stage of development. Color-coded tags are used to mark fish as being ready to spawn in two hours, four hours and so on.

"As the female progresses toward spawning, her stomach becomes more full and gets soft to the touch," Schmid says. "When eggs flow freely when light pressure is applied to the abdomen, she's ready."

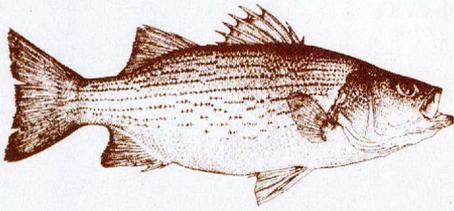
Spawning begins when the first female is ready and continues until all have been spawned, usually 24 to 30 hours later. Eggs from the females are



Above: Eggs from female striped bass and milt from male white bass are stirred with a turkey feather to ensure all the eggs are fertilized. Below: The millions of striped bass eggs in these hatching jars became tiny hybrid fry in two or three days.

Spawning wild fish in a hatchery is an intricate dance with nature that requires careful timing, constant vigilance and intimate knowledge of how the process works in the wild and how to replicate that process — plus a bit of luck.





## Catching Hybrids

You don't go fishing for hybrids; you go fishing to catch hybrids. The fact that they roam lakes in schools and feed aggressively means that when you locate them and they are ready to eat, they will bite almost anything you throw at them.

Hybrids tend to be in shallow water early in the day, since that's where shad and other baitfish spend the night. Topwater lures tossed up near the bank can bring explosive strikes. As balls of baitfish move into open water, hybrids lurk beneath, slashing into the mass of fish, which may fly out of the water trying to escape. Seagulls and other birds join in the action, and anglers use binoculars to spot "working birds" diving into the water to snag their share. Maneuvering close to a top-water feeding frenzy and throwing a Rat-L-Trap or buzzbait or almost anything will lead to vicious strikes.

Later in the day the baitfish head deeper, and the hybrids are close behind. Anglers switch to slabs or 4- or 5-inch Sassy Shad plastics and fish straight down, jiggling the bait up and down. Often the strike will come as the lure falls through the ball of baitfish to the waiting hybrids below.

For more information on hybrid striped bass and where to fish for them, see [www.tpwd.state.tx.us/fishboat/fish/](http://www.tpwd.state.tx.us/fishboat/fish/).



Above: Fish kills from golden algae in lakes supplying water to hatcheries affect not only life in the lake, but also the ability of TPWD hatcheries to produce more fry. Below: Zebra mussels such as these at Lake Texoma pose a serious threat to Texas water supplies and hatchery efforts. Opposite: Because hybrid fingerlings must be stocked into locations without predator fish, they are taken to suitable locations on the lake and stocked by hand from dip nets.

TOP PHOTO © TPWD, OTHER PHOTOS © LARRY D. HODGETP/TPWD



mixed with milt from the males in a container with a small amount of water and stirred with a turkey feather for about 30 seconds. Fertilized eggs are put into hatching jars to incubate for 48 to 72 hours. During this time they must be constantly watched to be sure water flow and temperature are optimal; there must be enough water flow to keep the eggs suspended and gently rolling, and the water temperature needs to be maintained between 64 and 66 degrees Fahrenheit. Fry are collected and moved to holding tanks before being stocked.

Since hybrid fry are very sensitive to light, they must be stocked into the outdoor rearing ponds at night, usually from about 10 p.m. until just before first light.

"Hybrid striped bass fry are very small, probably one-fourth the size of largemouth bass fry," Kurten says. "Ponds must be managed so that very small rotifers are available until the fish can be converted to commercial pellet-fed feeds at about three weeks old."

To produce the microscopic plankton the fry feed on, ponds are filled and fertilized with cottonseed meal on a strict schedule. Pond pH is closely monitored, because fertilization is a double-edged sword.

"Pond fertilization must be balanced so that ample food is available, but the phytoplankton and zooplankton blooms are not overstimulated," Kurten says. "High pH will kill hybrid fry and fingerlings."

The challenge is to keep the raven-



they're not home-free.

"There is some evidence that hybrids are more susceptible to golden alga toxins than other game fish," Kurten says. "Also, even though hybrids will act like their parent species and attempt to spawn, the incidence of wild hybrids spawning and actually producing substantial numbers of progeny has not been substantiated. Hybrid populations require restocking to maintain."

It would seem that hybrids are the

Hybrids differ from largemouth bass in that they are an open-water species. Rather than living close to vegetation, stumps or other structure in a lake, they roam the open waters of the lake like mini-wolf packs, looking for small baitfish.

ous little fish fed and growing without the digestive byproducts of their food killing them. It's a constant battle.

After a few weeks in the rearing ponds, the fingerlings will have grown to approximately 1.5 inches long and will be ready to take the ride to their new home in a lake. They are still so sensitive to light that they will go into shock if suddenly exposed to direct sunlight, so pond harvesting is done before sunup. When the hauling trailers arrive at the stocking site, compartment lids are opened slowly. To acclimate the fish to their future home, water in the hauling tanks is drained and replaced with lake water about a quarter of a tank at a time.

Hybrids differ from largemouth bass in that they are an open-water

species. Rather than living close to vegetation, stumps or other structure in a lake, they roam the open waters of the lake like mini-wolf packs, looking for small baitfish. District biologist Richard Ott describes what he looks for when stocking hybrids.

"We want to put them into an area without predator fish, so I watch the sonar for bait balls or predator fish," Ott says. "If I see that, we go somewhere else. I also like to find water that is a rich green color, because that means there is a good phytoplankton bloom, and that is what is going to support the zooplankton that is going to feed these little hybrids."

While TPWD biologists have been able to devise work-arounds for some of the obstacles to producing hybrids,

bobwhite quail of fish, vulnerable to lethal agents and dependent on just the right conditions to reproduce. Now they have one more threat to cope with: zebra mussels.

"Zebra mussels threaten hatchery water supplies because they can clog intake pipes," Kurten says. "They can limit the stocking range of some hatcheries, because we will not stock reservoirs without zebra mussels from a hatchery whose water supply may have them. Because of zebra mussels, we have adopted procedures to ensure that hatcheries do not spread them, and this substantially increases costs. Finally, zebra mussels have the potential to impact the productivity and fish yields in infected lakes."

So why, if producing hybrid striped bass is so difficult, does TPWD continue to do so? To answer that question, just put a hybrid on one end of a fishing line and yourself on the other. Then you'll know. ★

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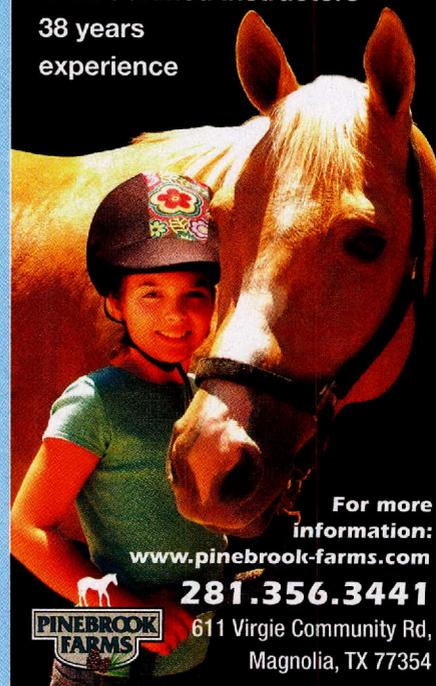


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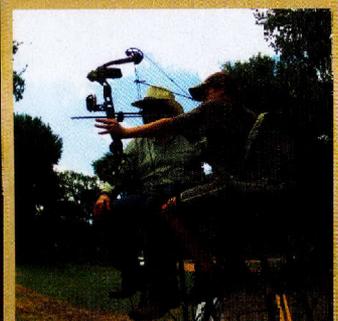


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## NEW SPORTS TECHNOLOGY

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

**Blinks blood red to mimic an injured prey.**

**A bass every seven minutes in test.**

**NEWARK, DE**— 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.



by Mike Butler

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.

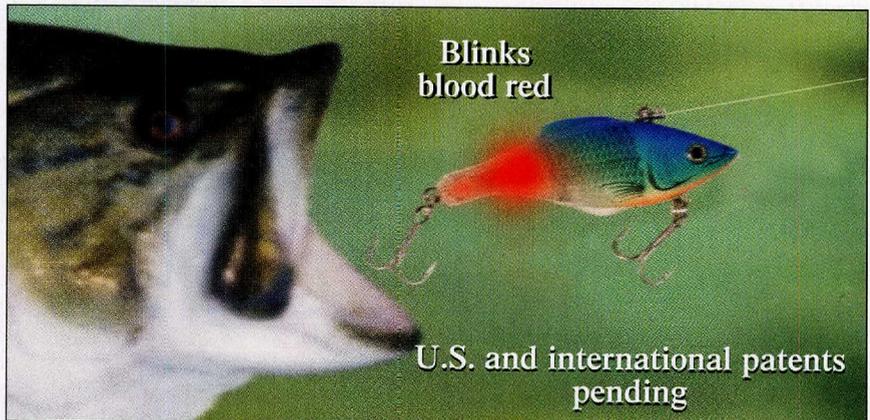
In Florida two professionals fished for four hours from the same boat. One used a flashing-red lure; the other used some top-selling U. S. lures. The new, "bleeding" lure caught three times as many fish.

## Works when others don't

Three fishermen in Washington State used a popular lure baited with shrimp and caught nothing after fishing three hours in cold weather. One of them tried a flashing lure he was asked to test and 30 minutes later caught a thirty-pound steelhead.

A Tournament fisherman on a lake in Florida tried everything in his tackle box and had no bites. He switched to a flashing lure and caught a bass on his first cast, and had his limit in 45 minutes.

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?"



**New technology uses a blinking red light to create appearance of a live, bleeding prey. Triggers a genetic strike response in fish.**

Then I phoned an ichthyologist (fish expert) for his opinion.

"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."



**New lure flashes blood red to attract fish. Blinks a different presentation each cast.**

There's a survival program built into predators that says "Grab a meal when you can. It may be a while before the next one."

"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.

## Different presentations

Because the technology reacts to movement, every retrieval generates a different kind of flash; so if a fish passes on your first cast, it sees a new presentation on your next one, and so on.

The technology is so new I could find only one distributor in the U. S. that offers a finished product. It's called Bite Light® and has several international patents pending. It comes in a kit of three.

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 300 hours in the water.

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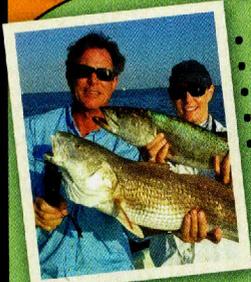
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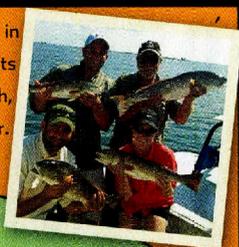
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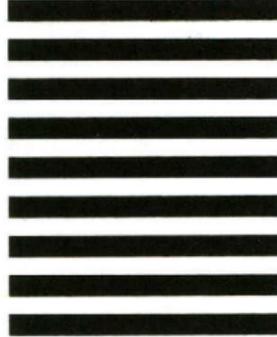


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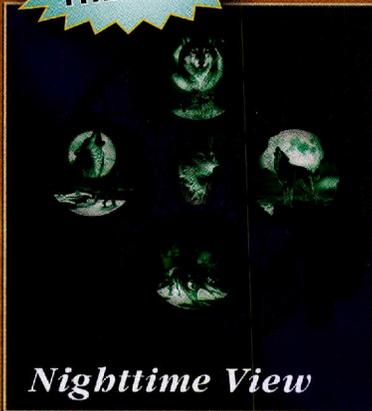


"Legends of the Wild"

"Dreamcatcher Display"

Full display shown much smaller than its impressive actual size of 18" in diameter and 26" H. Individual plates are 6½" in diameter

**GLOWS-IN-THE-DARK**



*Nighttime View*

*Daytime View*

[www.bradfordexchange.com/902706](http://www.bradfordexchange.com/902706)

**When the lights go down, the spirit of the wild shines bright**

Deep in the wilderness, the wolf pack's unearthly song fills the sky with their mystic spirit. Now, the *Spirit of the Wolf* Glow-in-the-Dark Plate Collection from The Bradford Exchange presents Al Agnew's acclaimed wolf artwork on four sculpturally bordered plates accented with real beads and feathers. When showcased upon the Native American-style dreamcatcher display and exposed to light, the plates and sculpts glow with mystic wonder.

**Strictly limited editions; order today!**

Strong demand is expected for this exclusive collection. Each of the five editions (four plates and display) can be yours for the \$39.99\* issue price, payable in two installments of \$19.99 each, backed by our 365-day money-back guarantee. You'll receive one edition about every other month. You may cancel at any time by notifying us. Send no money now. Just mail the Reservation Application today!



**Run free with the wolves as they journey through day and *GLOWING* night!**

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**RESERVATION APPLICATION SEND NO MONEY NOW**

THE  
**BRADFORD EXCHANGE**  
 -COLLECTIBLES-

9345 Milwaukee Avenue · Niles, IL 60714-1393

**YES.** Please reserve the *Spirit of the Wolf* Glow-in-the-Dark Plate Collection for me as described in this announcement.  
 Limit: one per order. **Please Respond Promptly**

Mrs. Mr. Ms.

Name (Please Print Clearly)

Address

City

State

Zip

**902706-E31791**

\*Plus \$8.99 shipping and service per edit on. Limited-edition presentations restricted to 295 casting days. Please allow 2-4 weeks after initial payment for shipment. Sales subject to product availability and order acceptance. Display shipped after Edition Two.

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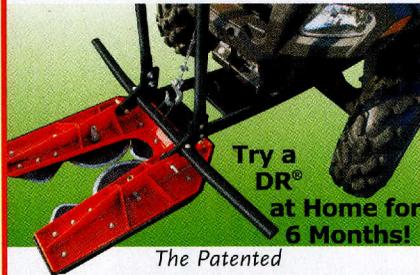
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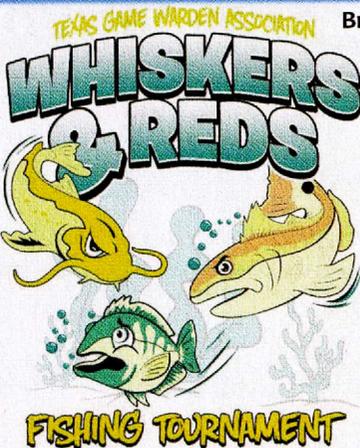
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**March 13<sup>th</sup>-15<sup>th</sup>, 2014**



Brackenridge Recreation Complex-EDNA, TX

Tournament Divisions:

- Catfish & Alligator Gar: March 13<sup>th</sup>-15<sup>th</sup>
- Youth (FREE): March 13<sup>th</sup>-15<sup>th</sup>
- Redfish & Crappie: March 15<sup>th</sup>

Justin Hurst Memorial 5K "Opossum Cop Hop":  
March 15<sup>th</sup>: 9AM-10AM

Vendor Booths:  
March 15<sup>th</sup>: 10AM-12AM

FREE Youth/Family Activities:  
March 15<sup>th</sup>: 10AM-4PM

Dinner Banquet (\$10/plate) & Auctions (silent, bucket & LIVE):  
March 15<sup>th</sup>: 5-9PM

FREE Live Music "The Emotions":  
March 15<sup>th</sup>: 9PM-12AM



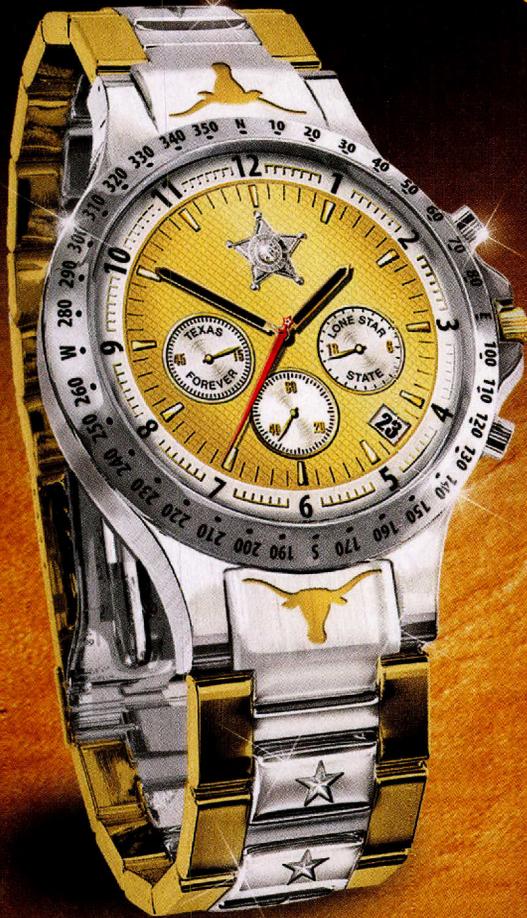
**Eventbrite**  
Tournament Entry Website

**active.com**  
5K Entry Website



# TEXAS ★ FOREVER

## LONE STAR MEN'S DIAMOND CHRONOGRAPH WATCH



*Hand-set with a sparkling genuine diamond*



*LONE STAR STATE is etched on the side of the watch case*



*Etched on the back with the distinctive state of Texas overlaid with the state flag, and the words TEXAS FOREVER*

*Crafted in Stainless Steel, with 3 Sub-dials, Date Window and Precision Quartz Movement*

A FINE JEWELRY EXCLUSIVE FROM THE BRADFORD EXCHANGE

### It's time to show your Texas Pride!

Now you can with a custom-designed timepiece as distinctive and bold as its namesake—the great state of Texas. Crafted in rugged stainless steel, our "Lone Star" Men's Diamond Chronograph Watch showcases a genuine diamond-studded sheriff's badge design on a rich gold-tone watch face, which features 3 sub-dials for seconds, minutes and hours, a date window, and the words TEXAS FOREVER and LONE STAR STATE.

The watch also has a rotating tachymeter bezel, and the stainless steel and gold-tone bracelet is accented with the state's proud Texas Longhorn and the famous Texas star. Etched on the side are the words LONE STAR STATE, and the back is etched with the state of Texas overlaid with the state flag and the sentiment TEXAS FOREVER. The watch's Precision Quartz Movement and adjustable C-clasp provide dependable accuracy and a comfortable fit.

### Limited-time offer... Order today!

Complete with a deluxe case and a Certificate of Authenticity, the "Lone Star" Men's Diamond Chronograph Watch is an exceptional value at \$199\*, and you can pay for it in 5 easy installments of \$39.80. To reserve yours, backed by our unconditional 120-day guarantee and a full-year limited warranty, send no money now; just fill out and send in the Reservation Application. But hurry... this is a limited-time offer!

[www.bradfordexchange.com/13375](http://www.bradfordexchange.com/13375) ©2012 BGE 01-13375-002-BI

### LIMITED-TIME OFFER

Reservations will be accepted on a first-come, first-served basis. Respond as soon as possible to reserve your "Lone Star" Men's Chronograph Watch.



Shown actual size

\*Plus \$9.98 shipping and service. Please allow 4-6 weeks for delivery of your jewelry after we receive your initial deposit. Sales subject to product availability and order acceptance.

RESERVATION APPLICATION SEND NO MONEY NOW

THE BRADFORD EXCHANGE  
- JEWELRY -

9345 Milwaukee Avenue · Niles, IL 60714-1393

**YES.** Please reserve the "Lone Star" Men's Chronograph Watch for me as described in this announcement.

Signature \_\_\_\_\_

Mrs. Mr. Ms. \_\_\_\_\_

Name (Please Print Clearly)

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

E-Mail (Optional) \_\_\_\_\_

01-13375-002-E31701

# PARTING SHOT



*Texas Parks & Wildlife* chief photographer Earl Nottingham captured this moment when sunlight briefly emerged following a late-afternoon rain shower near Chilton, south of Waco, illuminating the pastoral landscape with rich colors and creating a partial rainbow.

**IMAGE SPECS:**

Canon EOS-1Ds Mark II camera with 24–70mm f/2.8 zoom lens, f/6.3 at 1/250th second, ISO 100.



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