

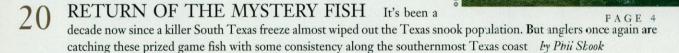
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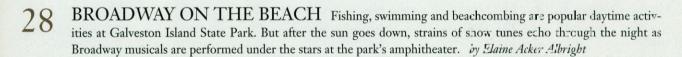
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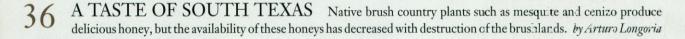
Depositor



- 4 BEST STATE PARK FISHING HOLES, PART I State parks offer some of the best fishing in the state. In the first of our three-part series, we'll tell you about 12 parks with small rivers and streams where anglers find light-tackle action in scenic surroundings. by 7im Cox
- HAVING A BLAST Shooting is an excellent sport for women, since it relies on hand-eye coordination rather than strength or speed. Women are taking up firearms in increasing numbers and finding shooting sports to be a fun way to build confidence and self-esteem. by Christina Leimer







40 RAIN A look at fresh and rejuvenated Texas landscapes during and in the wake of springtime rains.

COVERS

Front State parks provide fishing fun for the whole family. See the first of a three-part series beginning on page 4. Photo © Robert Liles. Canon F1 camera, Canon 80-200 f/4 lens, 1/125 second at f/5.6, Fuji 100 film.

Inside Front Lightning whelks are among the many shells awaiting early morning beachcombers at Galveston Island State Park. See story on page 28. Photo © Stephan Myers. Pentax 6x7 camera, 135mm macro lens, one second at f/22, Fuji Velvia film.

Back The fresh colors of crimson clover emerge after a springtime rain in East Texas. See more rain photos beginning on page 40. Photo © Rusty Yates. Pentax 645 camera, Pentax 120mm lens, 1/4 second at f/32, Fuji 100 film.



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ATISSUE

My dad was sort of an amateur archaeologist. I remember getting up before dawn on Saturdays and heading out to the woods with a group of men and boys from the Texas Archeology Society to search for the remains of Karankawa Indians who roamed Texas's Coastal Plains for hundreds of years before Cabeza de Vaca arrived from Spain. On those wonderful outings we would prepare a simple stew in tin cans and buty it under hot live oak coals so that after a hard day's work in the middens we would dig it up, sit down together and share a feast.

In this way, thousands of Texas children of my generation were introduced to the great outdoors. Whether hunting, fishing, camping, hiking or even archaeology, it usually was something you got to do on the weekends with your father.

Today, 25 percent of the families in Texas are headed by single parents and 81 percent of those single parents are women. I find it disturbing that of the nearly six million women in Texas of the age to require a hunting license, only 30,000 of them actually have one. Faced with these numbers, it is no surprise that more and more of our children reach maturity without ever being introduced to the outdoors.

That is why the Texas Parks and Wildlife Department has made a major commitment to the recruitment of women into all forms of outdoor recreation. In this issue, Christina Leimer tells the story of the marvelous Sue King who founded the Women's Shooting Sports Foundation and is leading efforts nationwide to recruit women into this field. Equally exciting, we have formed a partnership with Marilyn Oshman, chairman of Oshman's Sporting Goods, to conduct four of our highly successful three-day courses called "Becoming an Outdoors Woman."

Here at Texas Parks and Wildlife, our approach is that there are 5,970,000 potential customers out there who happen to be female and who represent a huge new market for license sales.

Besides, I look forward to the day when my daughter and millions like her will introduce their children to the skills, leadership, values and fun to be gained outdoors...along with a commitment to take responsibility for the earth.

— Andrew Sansom, Executive Director



In June...

The fun of summer camp and a trip to the beach are combined in Sea Camp, where youngsters learn about marine life and environments. We'll visit sea camp next month. Also, the Battleship Texas at Normandy, state park fishing, humminghirds and more. May 1994, Vol. 52, No. 5

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Flowing North

In "Return to the River" by Turk Pipkin in the February issue, he states that "...the South Llano is the only river in Texas that flows north." On maps it appears to flow mostly east and northeast.

My understanding for some time has been that the South Concho River is the only river in Texas that flows north. My maps seem to show the South Concho flowing north its full distance.

> H. W. Dickerson San Angelo

■ Turk Pipkin was especially chagrined to hear that he had overlooked the South Concho as a northward-flowing river, since he is a graduate of Central High School in San Angelo and spent much of his youth along that very stream. "If it had been somewhere in East Texas I could have blamed a lack of information, but as it is I guess I have no excuse," he said.

Recycled Paper

I wish to commend you for using the recycled paper. The paper is good and it certainly saves our resources.

But I will miss the stiff mailing wrapper. I've cut it into two- by four-inch pieces for my shopping lists. But although it is missed, it is the best thing to do.

E. Francis Grand Junction, Colorado

■ Thanks for the compliments on the recycled paper we have been using since the January 1994 issue. With that issue we also dropped the white mailing wrapper in an effort to keep one more sheet of paper out of the landfills, although it sounds as if you put it to good use. The mailing label is attached with an adhesive that allows you to peel it off the cover. The adhesive then can be rubbed off. Since Texas Parks & Wildlife is the state's conservation magazine we thought we should be doing our part by using recycled paper, dropping the mailing wrapper and certainly not using a plastic bag to mail the magazine.



Texas Archeological Society

Thank you for publishing Bob Parvin's "Partnership for the Past" (February). Parvin showed what an important part professional and experienced avocational archeologists play in teaching proper scientific methods of excavation, data recording and laboratory methods to Texas Archeological Society members. He also gave us an idea of how much fun and camaraderie is combined with the hard work and serious research.

Membership in the Texas
Archeological Society is open to all
who have an interest in Texas
archeology and are dedicated to the
preservation of our past for future
generations. We need to enlist
support in our efforts to investigate, preserve and protect the
heritage of Texas. It is up to all of
us to safeguard our legacy for
future generations and to ensure
that the basis of what Texas is and
was is not lost for all time.

Ellen Sue Turner, President Texas Archeological Society San Antonio

Fish ID

What is the beautiful fish on page one and the blue fish on page 26-27 of the March issue? I'm sending this issue to my niece who hopes to be a marine biologist from Texas A&M someday, and I know she will want this information. Right now she is living with her family halfway around the world and it is fun for her to show off Texas to everyone who doesn't know what a fabulous place this is.

Carol Barry

Carol Barry San Antonio

Texas Parks & Wildlife magazine welcomes letters to the editor. Please include your name, address and daytime telephone number. Our address is 4200 Smith School Road, Austin, Texas 78744. Our fax number is 512-707-1913. We reserve the right to edit letters for length and clarity.

■ According to photographer Stephan Myers, the fish on page one is a squir-relfish and the fish on page 26-27 is a juvenile blue tang.

Park Hunting Opposed

I have let my subscription to Texas Park & Wildlife lapse since the Texas Legislature voted to allow hunting in state parks. I know all of the reasons hunters state about why it is necessary to hunt animals and birds in Texas. However, I do not believe hunting is necessary anywhere in the state and certainly not in our state parks. I also did not renew my Texas Conservation Passport for the same reasons and I have not been to a state park recently.

Sherman Robinson

Cooking Crawfish

In the March issue you had two recipes for the preparation of crawfish.

The first and most important procedure was omitted: try to get delivery of crawfish on the same day they are caught. The fresher the better. Empty them into a wash tub, size one, two or three. Spread two cups or one pound of canning or cooking salt on the crawfish and fill the tub with tap water to a level to cover the crawfish. Let this stand 20 to 25 minutes, stirring two or three times.

Transfer crawdads into a clean tub. Again, spread two cups of salt and cover crawdads with tap water. Note how the water suddenly becomes muddy during the initial purging. This is the mud that would ruin the flavor of the cooked crawfish.

We usually cook about 240 pounds of crawfish on an occasion at our American Legion post. If large quantities are to be boiled, we suggest that the first purging water be discarded and the secondary purge be discarded after two secondary uses and one primary use.

Elmer A. Teinert Houston



Fishing opportunities abound at many of Texas's state parks, where small streams and rivers offer angling in beautiful surroundings. Lost Maples State Natural Area near Vanderpool is famous for its colorful bigtooth maple trees, but it also has excellent fishing spots such as this pond on Can Creek.

Part One BEST STATE PARK

FISHING HOLES

by Jim Cox

Small rivers and streams offer light-tackle angling in scenic surroundings.

exas freshwater fishermen are like bloodhounds on a fresh trail when it comes to finding good fishing holes. Many of them think nothing of driving 200 miles or more to fish the latest hotspot for bass, stripers or crappie.

But not all anglers have sufficient time or money to invest in such high-profile expeditions, or at least not very often.

The alternative, of course, is to find a place close to home that offers good fishing. And if that place happens also to have other amenities such as inexpensive lodging, picnic areas, bait houses, boat ramps, fishing piers and pleasant scenery, then so much the better.

irtually every Texan has this option. The Texas Parks and Wildlife Department operates about 100 inland state parks, and roughly half of them offer legitimate angling opportunities. Ariver runs through many of them; others have fishing lakes within their borders; still others are situated on the shores of some of Texas's legendary fishing lakes. Wherever you live in Texas, chances are one of these state park fishing spots is within easy driving distance.

The angling fare ranges from casting for native Guadalupe bass at Guadalupe River State Park, trolling for introduced red drum (redfish) at Fairfield Lake State Park, sampling the trophy bass fishery at Purtis Creek, or spinnerbaiting chain pickerel among the cypress trees at Caddo Lake. A bonus is the put-and-take rainbow trout fishery at scores of state parks each winter.

To list all the offerings would fill a

good-sized catalog, given the wide variety of species to catch and preferences of anglers. In an attempt to do the subject justice, we will feature the top state park fishing spots in three installments, starting with rivers and streams in this issue, followed next month by the best small state park lakes and ponds, then parks on major reservoirs.

Wading or bank fishing in a clear Central Texas stream is not a pursuit for the greedy angler seeking a trophy fish or heavy stringer. It's more of a close-to-nature experience, where the thrill of catching a one-pound bass on ultralight tackle, or helping a kid snatch a sunfish from the glistening waters may be more pleasing than fishing in less scenic surroundings. Because of Texas's topography, most streamfishing opportunities in state parks are in the western half of the state, especially in the Edwards Plateau, where elevation changes and abundant springs keep small rivers and creeks



Streams in state parks located in the Hill Country west of Austin often reward anglers with largemouth bass, the top two fish in this photo, and Guadalupe bass, Texas's official State Fish. Be sure to check the TPWD's Fishing Guide for special bag or length limits in some parks. Streams in many state park: are stocked with rainbow trout each winter, giving Texas flyredders the opportunity to enjoy Colorado-style fishing close to home (right).

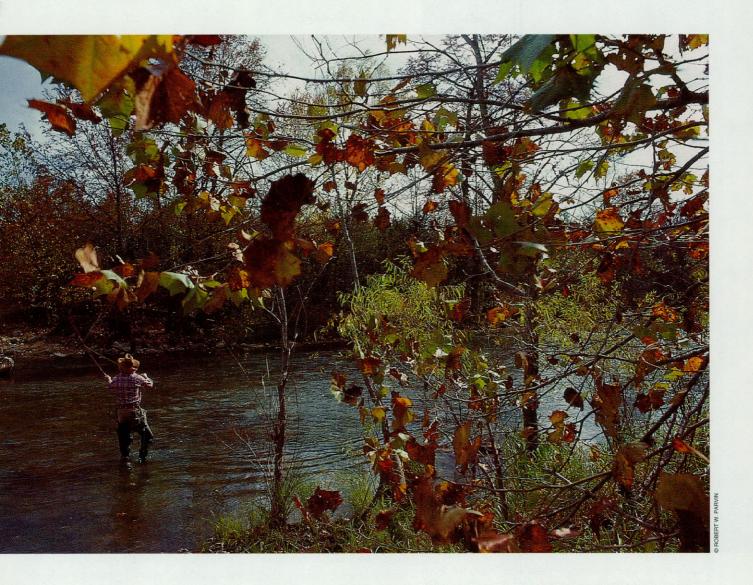


The deep holes and riffles of the Pedernales River running through Pedernales Falls State Park west of Austin are populated with channel and flathead catfish, largemouth and Guadalupe bass and several species of sunfish.

supplied with water.

One of the finest of these small-water fishing holes is Blanco State Park, located within walking distance of downtown Blanco, about 50 miles west of Austin and almost the same distance north of San Antonio. Superintendent Terry Rodgers said the Blanco River running through the park offers excellentyear-round fishing, due in large part to a series of low-water dams that deepen and widen the stream. Although the lakes are not very wide, they combine to offer anglers almost 60 surface acres of fishable water. A boat is not necessary, since the entire shoreline within the park is accessible. Rodgers said boats are allowed, but only those that can be carried by hand to the shoreline. Electric trolling motors are allowed, but gasoline engines are not, he said.

The lakes' spring-fed waters harbor excellent populations of largemouth bass, redear and bluegill sunfish and channel catfish, according to fishery biol-



ogist David Terre of San Marcos. "Our surveys turned up a surprising number of largemouths over 14 inches in length, and lots of large redear sunfish," he said.

Blanco also ranks among the best trout fisheries, with as many as 3,000 rainbows stocked in one of the lakes each winter. Fish for the popular put-and-take fishery are purchased by the TPWD with revenues from the \$7 state trout fishing stamp, which is sold at the park.

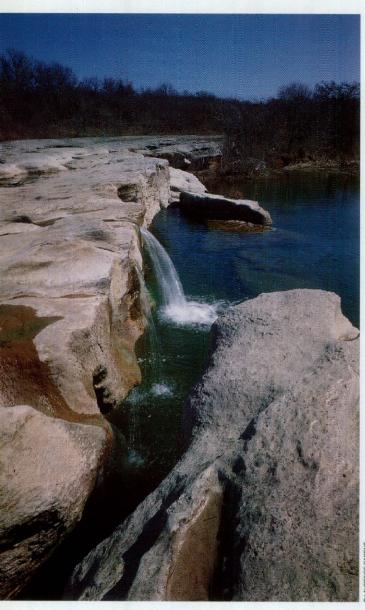
Full camping facilities are available. For information call the park at 210-833-4333.

A different sort of fishery is found at Colorado Bend State Park, where the Colorado River winds through a scenic valley before flowing into the upper end

of Lake Buchanan. A favorite with anglers long before it became a state park, this section of the Colorado is known for excellent angling during the spring spawning run of white bass, striped bass and hybrid stripers. Superintendent Robert Basse said that depending on the weather and water flow, fishing often is excellent from mid-February to mid-April. Anglers can walk the bank, wade in the shallower and narrower portions of the river, or fish from boats in the wicer parts. However, the river in the park area generally is shallow and rocky, so boaters should use caution. Basse noted that trotlining is allowed in that area, and catches of flathead catfish sometimes are outstanding. Night fishing for channel and blue catfish also is productive in the warmer months, Basse said, and a largely ignored fishery is catching freshwater drum using live crawfish for bait.

The park is located near the community of Bend. It can be reached from either San Saba or Lampasas via FM 580. From Austin, take State Highway 71, or U.S. Highway 153 and SH 29 to Llano, go north on SH 16 to Cherokee and turn east on FM 501 to Bend. Primitive camping facilities are available. Call the park at 915-628-3240 for information.

A stream that is probably known to fewer anglers than Colorado Bend is the Leon River where it winds through



Many Austin-area anglers have found that Onion Creek in McKraney Falls State Park possesses excellent populations of a variety of fish, including largemouth and Guadalupe bass, catfish and sunfish. The park is located on the Capital City's southern cutskirts.

Mother Neff State Park above Lake Belton. Park superintendent John Roberts said the park, ravaged by floods in 1992, now is back to normal operations Although the park is situated just a few miles upriver from Lake Belton, logjams and other obstructions often make the trip to the main lake difficult or impossible for boaters. However, the river has good to excellent fishing for catfish and crappie, and during springtime the river is visited by thousands of white bass swimming upstream from Belton on their spawning run. There is no boat ramp, but river bank access

is good for launching flatbottom boats or other small craft. The river usually is stocked with trout in winter. The park, the state's oldest, offers camping in a beautiful hardwood bottomland setting, and has facilities constructed by the Civilian Conservation Corps in the 1930s. To reach the park from Interstate Highway 35, take the Eddy exit and go west on FM 107, turning left at State Highway 236. The number is 817-853-2389.

Visitors to Lyndon B. Johnson State Park and adjacent LBJ Ranch National Historic Site might be surprised to know that the Pedernales River offers fine fishing adjacent to the state park. The river runs alongside Ranch Road 1, which forms a loop off U.S. Highway 290 just east of Stonewall in Gillespie County.

Park Ranger Lawrence Barrientes said three lowwater dams widen the Pedernales, and in some spots the water is as deep as 12 feet.

The river is an innertube angler's delight, and access also is good enough to allow launching small flatbottom boats, Barrientes said. With smallmouth, Guadalupe and largemouth bass, plus channel, blue and flathead catfish, crappie and sunfishes, this three- to four-mile stretch of river has something for most angling tastes. There are a few areas off-limits to fishing, so it would be a good idea to call or visit park headquarters before fishing. The telephone number is 210-644-2252. The park has no camping facilities, but lodging is available in the nearby towns of Stonewall, Fredericksburg and Johnson City.

Just a few miles east of LBJ State Park, the scenic Pedernales River winds through Pedernales Falls State Park. The river here is not dammed, but cascades down a series of limestone ledges, creating deep pools of clear blue water. Superintendent Bill McDaniel said except for some local catfishermen who fish for flathead catfish at night, little serious fishing activity occurs at Pedernales Falls. However, light-tackle anglers who fish the deeper holes away from the popular falls areas can catch Guadalupe bass, catfish and sunfish in delightful Hill Country surroundings. With about five miles of the Pedernales running through the park, anglers have plenty of elbow room for good fishing. Also one of the Hill Country's most popular camping spots, the park is located west of Austin off U.S. Highway 290 north on FM 3232. For information call 210-868-7304.

Another aesthetically pleasing stream for anglers is located on Austin's southern outskirts at McKinney Falls State Park. Plagued by water quality problems during the early 1980s, Onion Creek now is clean enough for fishing and swimming, due to the closing of the city's Williamson Creek water treatment facility several years ago. Park Ranger Chip Redus said pools below the two main waterfall areas offer deep sanctuaries for largemouth and Guadalupe bass, catfish, sunfish and many other species. Redus said local flyfishing groups have had good success catching sunfish while wading in the shallower stretches of the creek, especially above the upper falls. The park is located on Scenic Loop Drive east of Interstate Highway 35, and west of U.S. Highway 183 (Lockhart Highway). For information call the park at 512-243-1643.

Classic Hill Country stream fishing also can be found at **South Llano River State Park** in Kimble County, where the spring-fed Llano winds for about two miles alongside the park.



Inflows of clear spring water keep West Verde Creek (left) supplied with water so visiting anglers can enjoy catching largemouth bass, sunfish and channel catfish along about three miles of creek frontage in Hill Country State Natural Area.

Groves of pecan trees shade the river, which is populated by Guadelupe and largemouth bass, catfish and a variety of sunfish. While the river is subject to fluctuating levels, it has plenty of deep spots that provide year-round fishing. A two-acre spring-fed lake offers excellent bass fishing under a special catchand-release-only regulation. The lake also is stocked with channel catfish for those who wish to catch something for the skillet The park has full camping facilities, and also is adjacent to the Walter Buck Wildlife Management Area that offers hiking and wilclife observation whenever public hunts are not schedulec. The park is located five miles south of Junction on U.S. Highway 377. For information, call 915-446-3994.

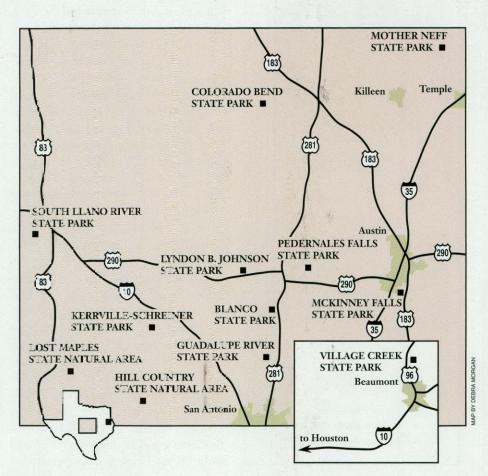
Another small-water spct is Hill Country State Natural Area in Bandera and Medina Counties west of San Antonio. Park Superintendent Shaun Heavey said West Verde Creek winds for more than six miles through the park, and about half that stretch maintains year-round water from springs. The clear creek vields good catches of sunfish and large mouth bass, and it is stocked periodically with channel catfish. Heavey said fall and winter are best times to fish the creek. The park is 10 miles west of Bandera off Highway 173 and FM 1077. For information call 512-796-4413.

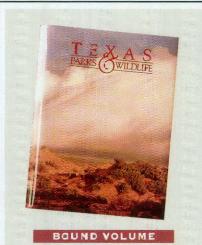
Guadalupe River State Park was

established primarily to offer put-in and take-out facilities for canoeists and other river recreationists, including fishermen. Its location some 30 miles north of San Antonio in Comal County gives convenient access to the scenic Guadalupe River above Canyon Reservoir. Park Ranger Deirdre Hisler

said local catfish anglers often are successful, and light-tackle fishermen can catch small bass and sunfish in the deeper holes. For those interested in floating the river outside the park, the main put-in spot upstream is the State Highway 3160 bridge. Downstream, good take-out points are Spring Branch Road or the U.S. Highway 281 crossing. The park is located eight miles west of the intersection of U.S. Highway 281 and State Highway 46. For information call 512-438-2656.

Also on the Guadalupe River is Kerrville-Schreiner State Park in Kerrville, although the Guadalupe is





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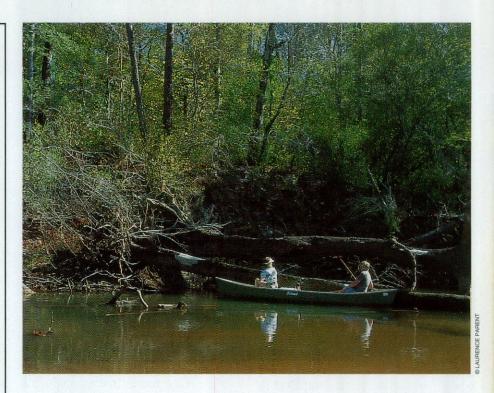


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more of a narrow lake than a river because of a low-water dam below the park. This section of the river, called Flat Rock Lake by local anglers, offers good fishing for largemouth bass, catfish and sunfish. Superintendent Tim Hufstedler said the department and local bass clubs placed a number of brushpiles in the lake to improve bass fishing, and the river has been stocked with Florida-strain largemouth bass and channel catfish. Bank fishing access is excellent, especially near the river walk area where the channel runs close to the bank, Hufstedler said. A boat ramp and lighted fishing pier also are available in the park, which is located off State Highway 173 just south of downtown Kerrville. Full camping facilities are available. For information call 210-

One of the state's most scenic parks is Lost Maples State Natural Area west of San Antonio in Bandera County. Each fall, throngs visit the park to view and photograph the bigtooth maple trees Superintendent Roy Heideman said fishing should not be overlooked at the park's two spring-fed ponds. The one- and two-acre lakes have been stocked with channel catfish, and they also have good populations of largemouth bass. There is a special catch-

Viliage Creek State Park (above) gives visitors access to one of the few free-flowing streams remaining in East Texas. Village Creek winds through classi: Big Thicket scenery before flowing into the Neches River on the Hardin-Orange County line. Few visitors to the LBJ State and National Parks near Stonewall (right) may realize that the Pedernales River provides good fishing holes adjacent to the parks.

and-release-only regulation for Guadalupe and largemouth bass in all waters in the park, including the Sabinal River and Can Creek, which have been designated a genetic refuge for Guadalupe bass. The river was stocked with Guadalupes to assure a supply of pure-strain fish, since the species has hybridized with smallmouth bass in some Central Texas waters. The park is located five miles north of Vanderpool off State Highway 187. For information call 210-966-3413.

All of the parks mentioned above are in the western half of the state. East Texas is a land of reservoirs, and that's where most of the fishing opportunity exists. There is one state park, however, that illustrates what classic creek fishing might have been in Texas a century ago. Village Creek State Park in Hardin County was opened on a limited basis last fall, but there is access



for fishing, both from the bank and from small boats. The spring-fed creek is just as wild and scenic today as it was 50 years ago, according to Superintendent John Parker, who grew up fishing and canoeing there.

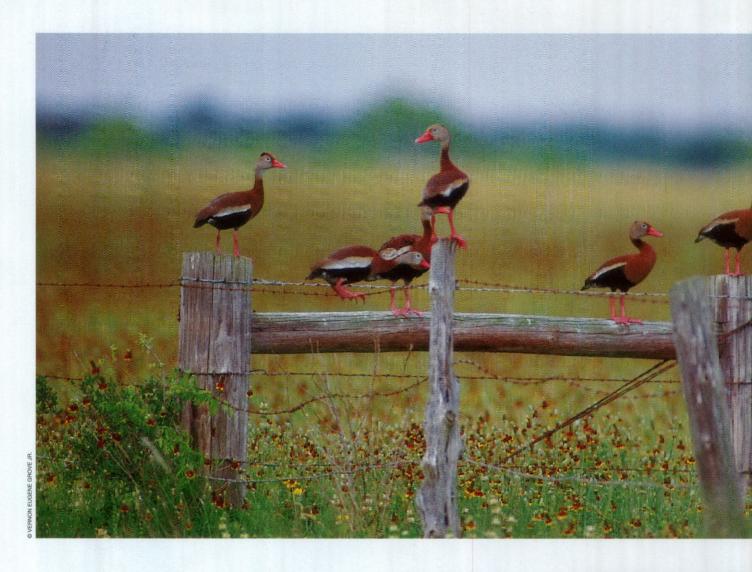
"This is an unbelievably beautiful area, and people who visit here can't believe there can be such an unspoiled wild stream only 10 miles from Beaumont and 90 miles east of Houston," Parker said. Anglers can fish for largemouth bass, catfish and other species in the kind of wild surroundings encountered in the nearby Big Thicket National Preserve. The preserve, in fact, will border the state park when a federal land acquisition project is completed, Parker said.

The park has a bit over a mile of Village Creek frontage, but many anglers and other floaters put their craft in upstream at any of three road intersections, including U.S. Highway 296, State Highway 327 or FM 418. Below the park, you can float the creek four miles to its junction with the Neches River, turn upstream a short distance

and take out in the Big Thicket preserve on the Orange County side. In addition to enjoying the profusion of cypress, tupelo, oak and willow-covered shoreline, anglers can see a profusion of wildlife including white-tailed deer, alligators, beavers and abundant bird life. The entrance to the 1.000-acre park is located in Lumberton. For information call 409-755-7322.

NOTE: RESERVATIONS FOR ALL STATE PARK FACILITIES MUST BE MADE BY CALLING 512-389-8900.

STATE OF NATURE



Fencerow Habitat

You needn't own a mountain range to create a haven for wildlife

With the patent of the first practical design for barbed wire in 1873, the open Texas range was doomed. No longer did ranchers have to contend with roaming livestock. But this enforced division of land led to overgrazing and extensive cultivation, practices that devastated habitat and did more damage to native wildlife than unregulated market hunting ever did.

Ironically, the invention that tamed the West may create a haven for many forms of Texas wildlife. Long, narrow strips of overgrown fencerows have become vital habitats for the shelter, feeding and breeding of a number of native species. Fencerows also act as wildlife "highways," allowing animals to travel to adjacent areas without venturing out into the open.

Fencerows benefit farmers and ranchers in a number of ways. The growth harbors large numbers of birds that are voracious consumers of insects. Predatory birds and mammals sortie to the surrounding fields and pastures to feed on rodents. Trees, shrubs and grasses reduce wind and water erosion.

David Rideout, a wildlife biologist with the Texas Parks and Wildlife Department's Private Lands Enhancement Program, recommends a single wire strung between widely spaced posts for starting your own fencerow habitat. Birds will land on the wire and their droppings and spilled food will seed the row As the grasses, forbs and shrubs







Fencerows provide lookouts and feeding cover for a variety of birds, including black-bellied whistling duck: (left) and blue jays (above). Seed: dropped by pirds promote growth of vegetation along fencerows.

effect on area wildlife.

Some of the native plants found in fencerows are viny dewberries and muscadine grapes as well as fruit-bearing shrubs such as sumacs, American beautyberry (French mulberry), elderberry and possumhaw. Hackberries and persimmon are common and squirrels inadvertently plant oaks and other mast-procucing trees as well. The diversity of this bounty ensures food year around for wildlife.

This smorgasbord of natural

food draws mammals from whitefooted mice to white-tailed deer. Birds that flock to fencerows include a variety of songbirds cardinals, brown thrashers, mocking birds and hermit thrushes are common inhabitants. Game birds such as quail, dove, turkeys and pheasants also find fencerows inviting places to live and feed.

If you have an existing fencerow, this habitat requires no labor or materials. It will, in fact, save money through erosion prevent on and the cost and energy of not having to burn, cut or poison the overgrowth.

Save wildlife habitat as well as your money, time and labor. Let that fencerow grow.

by Allen Grawl

Katy Prairie Conference Scheduled for April 29–30

"The Katy Prairie Conference: Balancing Growth and Conservation," sponsored by the Texas Parks and Wildlife Department, the Katy Prairie Land Conservancy and West Houston Association, will be held Friday, April 29 and Saturday, April 30, 1994 at the Harris County Extension Service Auditorium in Bear Creek Park.

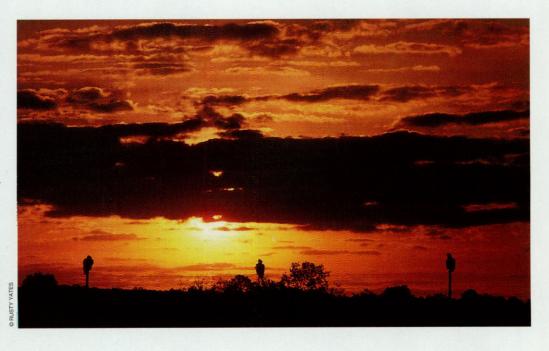
This conference will provide a public forum on the best scientific information available on issues affecting Katy Prairie. Among the topics of discussion will be the delineation and characterization of Katy Prairie; the role of the prairie as winter waterfowl habitat; recreation on the prairie; the use of land trusts to preserve prairie land; developing a regional habitat plan and ecotourism on the prairie.

Conservationists, sportsmen, landowners and business persons are invited to attend. Reservations are limited to about 250 participants. For registration information, call 512-389-4979.

grow, more animal life will be attracted to the area.

Rideout said this is a good practice for the corners of cultivated fields. Modern machinery usually can't reach these areas and they usually lie fallow Fence posts are excellent sites for birdhouses and nesting boxes. Owners of small tracts also can participate in this habitat renewal since even a few feet of fencerow can have a positive

Plants growing around evergrown fencerows attract insects such as the grasenopper at left, which in turn attract larger predators. At right, a triv of buzzards perches atop fenceposts at sunset.



Having a Blast

ast quail season, the Hawkeye Hunting Club in Center got a glimpse of the future: six women from Texas, Louisiana, California and Nebraska, unescorted by men and geared up for a three-day quail hunt and sports shoot. They are the American Huntresses.

"My grandmother and mother rode horses and hunted I grew up with it, so I didn't know women weren't supposed to hunt and shoot," said Sue King, founder of the Houston-based Women's Shooting Sports Foundation (WSSF) which sponsors the all-female hunting trips. As an adult, though, she learned how unusual her childhood role models and activities were to the rest of the world. "Twenty years ago there were

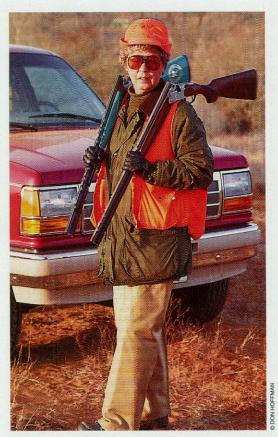
only men at the shoots so, as a woman, you had to behave exquisitely and go above and beyond in offering to help in order to be accepted and allowed to participate," said King, a former shooting instructor. "But with increasing urbanization, more disposable income and more women heading households, expectations about female



MORE WOMEN ARE FINDING SHOOTING SPORTS A FUN **WAY TO BUILD** CONFIDENCE AND SELF-ESTEEM.

by Christina Leimer





following a weit-trained pointer through the brush after bobwhite quail is a Texas tradition enjoyed primarily by men. But due in part to efforts of the Women's Shooting Sports Foundation. more women are getting involved in upland garne bird kunting and other shooting sports. Sue King (above) is founder and national director of the WSSF.

roles have changed."

Whether societal expectations about women and guns have changed, women definitely are taking up firearms in numbers that draw attention. And not just han Iguns. According to the National Shooting Sports Foundation (NSSF), the number of female shotgun shooters grew by almost 500,000 between 1988 and 1991. Nationwide, more than 5 million womer participate in target shooting sports and nearly 2 million hold state hunting licenses. In Texas, eight percent of the hunting licenses, 80,000, are issued to women.

In 1988, King organized the first Ladies Charity Classic event, an allfemale sporting clays competition intended to bring women shooters together and raise money for the Houston Area Women's Center. Ninety-seven women entered the event. That was 10 times as many participants as anyone anticipated. The following year the Classic drew 250 women shooters. Since 1991, it has been televised on ESPN and last year there were 18 such shoots around the nation. Funded by the NSSF and spearheaded by King, the Classics, the American Huntress program and support for the "Becoming an Outdoors Woman" national and statesponsored workshops were achieved in 1993.

Designed to encourage and assist women sport shooters and provide them the same hunting and shooting opportunities traditionally available to men, the organization's membership ballooned in just a few months to more than 500 women across the U.S. It serves as a resource directory and education and information center for all shooting sports including shotguns, rifles, handguns and archery for novices as well as experts.

Although the Ladies Charity Classics events, organized by

women and benefiting a women's charty, have serious goals, they try to keep things light. On one occasion they used targets shaped like vacuums, brooms, stoves and refrigerators. Then there's the irony that a women's shooting sports event is raising money to fight domestic violence. Everything is done to create a comfortable atmosphere in which women can learn and compete.

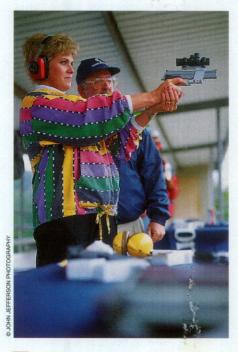
"It's fun. The support women give each other on the range is wonderful," said Donna Hagenbuch, the Californian in the women's quail hunting party. "It's so different from being out there with men who are always trying to outdo each other and always want to give you advice."

Every year women return to the

Classics and new faces appear. Loaner guns, free ammunition and prematch shooting seminars taught by women assistentry into the shoot. Referees help with loading and advice, if requested, and prizes are awarded at many levels in several classes. Women who never have picked up a gun can walk away with a prize, a little more confidence and maybe even get hooked on a new sport. And, since some of the top women shooters in the U.S. compete, experienced shooters won't go untested.

"Shooting is the perfect sport for women," said King. "There's no need for brute strength or blazing speed. It's a matter of hand-eye coordination and being able to stand in one spot, swing a gun and say 'pull."

But nothing is fun when it hurts, and many women fear the recoil of a shot-gun. King says that happens with ill-fitted guns. Thus another goal of the WSSF is to persuade manufacturers to design clothing, guns and accessories that fit women's bodies, such as hunting pants that have more room in



The increased participation of women in shooting sports includes a wide variety of activities, including archery, biack powder, skeet and sporting clays and pistol target shooting (above).



Shooting competitions such as sporting clays (above) do: 'i reauire size or brute strength, so women are able to participate on an equal basis with men.

the seat and less in the waist and shotgun stocks that match the shape of a woman's shoulder.

In fact, the time seems right for industry change. With increasing urbanization, the hunting tradition is carrying on in fewer and fewer families, so the traditional market is eroding. Then there's the public push toward gun control. Sizing up women's increasing interest in guns and the success of the

Classics, Browning's Ron Mosier believes introducing women to firearms not only will increase gun sales but will help curb efforts toward gun control, keep men from dropping out of the sport and encourage shooting as a family leisure activity.

For generations, couples occasionally have hunted together as a social event but the hunting tradition was typically passed on to sons, rarely to daughters. Therefore, the route to shooting is often more difficult for women than men.

"I like being outdoors and having the challenge of something you can't anticipate," said Hagenbuch, whose father introduced her to hunting as a child on a Missouri farm. When she moved to California she lost interest, then picked it up again

when she married her husband, whose firearms interest came from military duty and sport hunting. "You hear a lot of interesting stories when you're on the firing range with women," said Hagenbuch. "One woman received some guns in a divorce settlement, gathered her courage to go to a nearby firing range and then brought her daughter into the sport. Another woman, in show business, was sent to a shoot

WSSF Programs

Ladies Charity Classic, all-female fun shoot in Houston each May (May 14 this year).

Couples Cup Classic, male-female team shoot, Houston, following the LCC events (May 15 this year).

American Huntress Program, allfemale hunts with wildlife education provided by the Texas Parks and Wildlife Department or departments of natural resources in other states Dates and locations vary.

Becoming an Outdoors Woman, three-day course covering outdoor skills such as shotgunning, black powder, archery, orienteering, firearms safety and hunting for the novice. Dates and locations vary; contact the TPWD at 512-389-4999.

National Ladies League, all-female shooting league being tested in northeastern states for feasibility of a national program.

For more information, contact the Women's Shooting Sports Foundation, 1505 Highway 6 South, Suite 101, Houston, Texas 77077, telephone 713-584-9907, fax 713-584-9874.

by her agent and found her reluctance overcome by her interest."

"Many women who shoot have professional careers. They're discovering it really helps them in business if they're able to shoot," said King. "In Texas, many corporations have hunting leases, and business meetings during sporting clays outings or bird hunts are becoming prevalent in the East."

Ann Ballard just got tired of doing all the dirty work and having none of the fun. A Houstonian who organizes hunting trips in North, Central and South America, she began sport hunting while managing deer leases. Now she's passing shooting skills on to her daughter.

Christina Leimer is a freelance writer living in Houston.



Women are discovering they can excel at shooting sports, given the proper training and equipment. Shooting events and hunting offer opportunities for women to build confidence and develop new friendships while enjoying the outdoors.



"People already understand what the problems are. It's putting energy into solving problems that's productive."

DON GREENE

on Greene loves rivers. "A river has a pulse," he said. "It's alive, almost spiritual." Whether he's paddling dignitaries down Houston's Buffalo Bayou or maneuvering a raft full of adventurous clients through the whitewater of the Rio Grande, Don Greene teaches preservation by putting people and rivers together.

"Too many environmental decisions are made inside closed, air-conditioned rooms," he said. "We insulate ourselves from our environment. People already understand what the problems are. It's

putting energy into solving problems that's productive."

Don Greene creates adventure for a living, but he spends nearly half his time promoting the wellbeing of the state's waterways. He operates out of the offices of Whitewater Experience on the outskirts of Houston's Greenway Plaza business district. In the shadows of glass and steel skyscrapers, a converted garage sports memorabilia and clutter from years of exploring rivers and bayous: waterproof lockers serve as chairs, newspaper clippings and photographs cover the walls and life vests dangle from the ceiling. Tiers of multicolored kayaks and canoes sit outside on

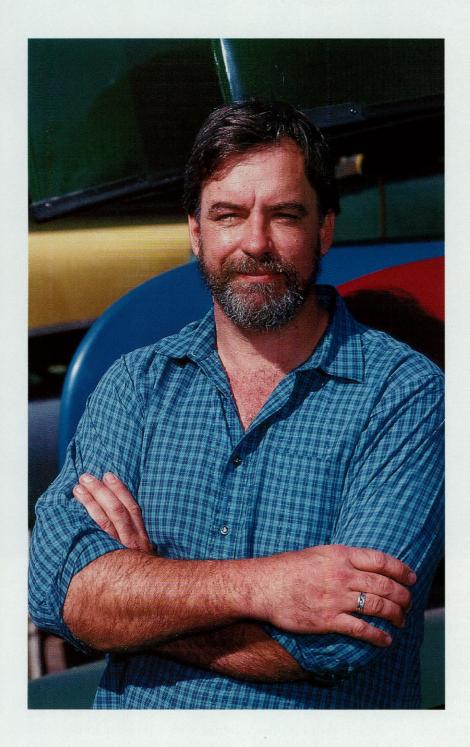
Farnham Street, the only other advertisement being a lopsided sign that says "Don't Miss the Boat!"

Greene is a wilderness man who smoothly changes hats from lobbyist to teacher to river guide. "Once you care about nature, you're hooked," said Greene. "I could go 20 hours a day. I work with people and serve on a lot of committees." He has consulted with the U.S. Environmental Protection Agency

and worked with the Department of the Interior on the formulation of river policies. He worked hard toward passage of the River Protection Bill in Texas and has created outdoor education courses for the University of Houston, Rice University and other schools. He conducted a three-day educational float trip down the Rio Grande for officials including Governor Ann Richards, Texas Parks and Wildlife Department

by Barbara Dunn, photos by Stephan Myers





Executive Director Andrew Sansom and Bob Armstrong, former Texas Land Commissioner and Texas Parks and Wildlife Commissioner, currently with the U.S. Department of the Interior. Greene also was instrumental in creat on of the Lower Colorado River Trail.

His numerous awards include the President's Outdoor Recreation Award

in 1976, the Jesse L. Walls Conservation Award in 1979, The Sierra Club Special Service Award in 1986, the Park People Environmental Award in 1989 and the annual Albinhyser Award from Houston Zoological Society in 1993.

While Greene's interest in conservation includes all waterways, the cleanup of Buffalo Bayou illustrates the change that can be brought by a dedicated few.

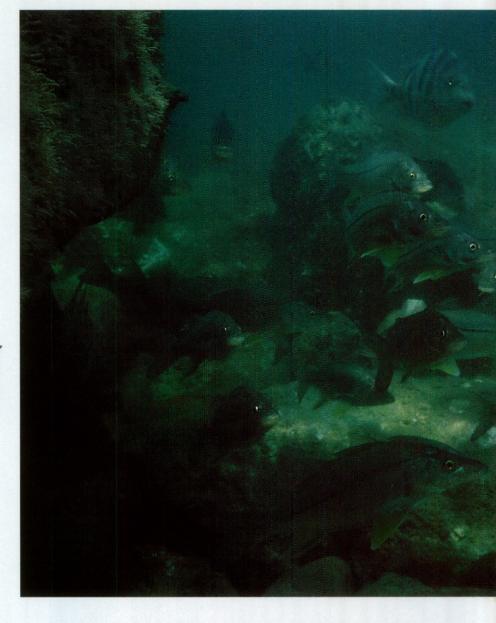
"Five years ago nobody called Buffalo Bayou a resource," said Greene. "We've been working on it for 18 years. Now the Houston Area Biology Teachers have begun a curriculum for use of the bayou as an outdoor classroom." Greene helped found the Buffalo Bayou Coalition and currently is president of the Bayou Preservation Association. Both organizations seek to recapture the amenities of the bayou while promoting practical, environmentally sound flood control solutions. He also is a member of Clean Houston's Education Committee and serves on the Harris County Flood Control Task Force.

"I grew up in Houston along the banks of Braes Bayou," he said. "All those spots that used to be my own special places in this world now are cement." Greene always had an avid interest in nature, and rose through the scouting movement to achieve the rank of Eagle Scout and the God and Country Award. He went to work in the corporate world after graduation from Stephen F. Austin State University. "I wore three-piece suits and had to travel a lot," said Greene. "In 1963 I began kayaking and spent a lot of time discovering water all over North America. I got real tired of our throwaway society, so in 1974, I quit my job and started Whitewater Experience.

"Nature is a mother," he said. "She talks to you if you listen. Rivers bring it all together: the energy, the geology, the wildlife. I'm so lucky. What could be more important than doing something you truly love while bringing about changes that will preserve nature and make the world a better place for future generations?"

The late Barbara Dunn was a freelance writer from Houston and a frequent contributor to the magazine.

Return of the Mystery Fish



Three anglers stand on the deck of a flats boat lobbing plastic shrimptail lures at a remote South Bay shoreline on a warm fall morning. Only minutes by skiff from the boutiques and highrises of South Padre Island, they scan the water for a telltale wake or puff of mud.

Mullet are darting about nervously as the skiff drifts across the finger channels. A white ibis, pushed back into a creek by the rising tide, flashes against the dark shoreline vegetation.

Veteran guide Gilbert Vela knows all the signs from a lifetime on shallow waters. This is prime habitat for redfish and seatrout, but the slapping and popping sounds are a tipoff that something out of the ordinary is going on. A different breed of predator is ambushing baitfish this morning.

When a big V-wake looms behind his lure, McAllen angler Aaron Sepulveda fights the urge to speed up his retrieve. In those microseconds before he feels the strike, Sepulveda knows he's about to do battle with a Texas snook. The fish then explodes from the water, flashing a dark lateral line and an arrogant, upslung jaw.

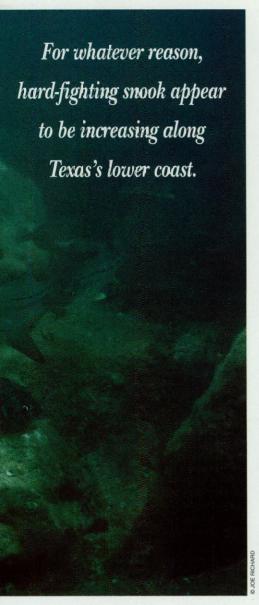
For Sepulveda, it is the beginning of an unforgettable angling experience. Before the day is over he will land two snook, including a 27-incher, and get a jump out of another that's close to 30, placing himself among the fortunate few anglers who have taken this prized game fish in Texas waters. "If they'd

by Phil Shook

had wings, they would have flown," Sepulveda said. "I have never had anything fight like that in my life."

For Vela, a popular flats guide who has caught snook since he was a boy fishing with a handline in the canals around Port Isabel, the morning's action is just as satisfying. It is another encouraging sign that the snook are back in their old haunts. Ten years after a killer freeze almost wiped out the Texas snook population, anglers again are catching the fish with a measure of consistency along the southernmost stretches of the Texas coast.

Vela has vivid memories of the win-



ter of 1983-84, when a hard freeze delivered a near knockout blow and left a decade-long imprint on the snook population in South Texas. He remembers the four- to six-inch cap of ice that gripped many areas of South Bay.

He said the snook, desperately seeking warmer temperatures in deeper water, traveled almost 20 miles to the end of the Brownsville Ship Channel where they congregated in a hole 30 to 35 feet deep. "About a week after the freeze, the water started to warm up and all the snook came to the surface," Vela said. "They milled around slowly on the surface and people gigged them out by the hundreds of pounds."

Since that winter of 1983-84, sncok have been protected from wholesale slaughter by being granted game fish status in Texas waters. Restrictive length and bag limits also have been established for the species. Veteran guides and fisheries officials say the recent string of mild winters also has played a key role in the reappearance of snook along the Texas Coast, just as it has contributed to the resurgence in seatrout and red drum populations.

Last year fisheries biologists collected snook in gill nets and anglers reported incidental catches of snook on upper portions of the Laguna Madre. Jim Dailey, a Texas Parks and Wildlife Department fisheries biologist in Palacios, said this is the first time these fish have been found that far north in vears.

Also last year, anglers found snook

around Port Mansfield, on the channels and dropoffs near the Arroyo Colorado and at the Three Islands area north of Port Isabel. "People fishing for bait with cast nets have picked up a lot of small snook, so they are on the comeback," said Arroyo City guide Dan Coley.

In addition to increasing appearances of fish in the traditional "snook holes" of South Bay, Vela said snook fishing in the Brownsville Ship Channel is better than it has been since winter 1983. "They usually fish for them early in the morning, but at night it can be awesome," he said.

Despite serious pollution problems and unregulated netting on the Mexican side of the river, the Rio Grande has emerged in recent years as a prime nursery for Texas snook. Tom Warren, a TPWD coastal fisheries biologist and ecosystem leader for the Lower Laguna Madre, said he has seen an increase in the number of snook collected in survey trawls on the Rio Grande since 1991. Last year at least half of the trawl samples conducted from the mouth to 30 miles upriver turned up snook. Warren said the snook averaged about six inches long and appeared healthy.

Based on spot checks, Warren said most of the fish collected in the Rio Grande are the common snook, a larger variety that can grow to 25 pounds or more. The common snook and the little snook, or fat snook, are the two subspecies found in Texas waters. Vela said fat snook rarely grow large enough to reach the 20-inch minimum length for retention in Texas waters. The world record fat snook caught in Florida in 1984 weighed only six pounds,14

Photos from the 1930s provide evidence that large snook were fairly com-

A school of snook (opposite page) swirls around the rocks at Port Isabel's South Jetty. The striped fish in the upper part of the photo is a sheepshead. Port Isabel fishing guide Gilbert Vela (below) has found snook increasingly abundant in their traditional Lower Laguna Madre haunts.



mon in Texas waters. A monster snook of 57 pounds reportedly was caught on rod and reel in 1937 near Port Aransas before international angling records were kept. While snook of five feet and more in length and weighing 60 to 70 pounds have been reported in Mexican fish markets in recent years, the world rod and reel record common snook is a 53-pound, 10-ounce fish caught in Costa Rica in 1978. The fish was 54 inches long. Vela said he did not catch a snook last year shorter than 16 inches and he released several that exceeded 30 inches.

In addition to being excellent table fare, snook have a reputation with inshore anglers from the Everglades to Costa Rica for being barroom brawlers with a penchant for knocking the furniture around. Snook prefer to fight in close quarters, hanging around mangroves, bridge pilings and other underwater structure. They are known to attack a topwater lure viciously, run like a jackfish and jump like a tarpon.

Ambient water temperatures limit the geographic distribution of the species. Like tarpon, juvenile snook require a brackish to freshwater habitat. In U.S. waters, snook are most abundant in the southern half of Florida.

In Texas, the waters around Port Isabel are considered the extreme northern range of snook. Like orange trees, mangroves and oleanders, their distribution is limited to areas that stay warm year around. Water temperature below 70 degrees is hard on snook populations and temperatures below 60 degrees can kill them.

Consecutive years of unusually warm



Guide Gilbert Vela prepares to release a pair of snock near Port Isabel. Biologists believe mild wirters in recent years may have been the main reason for the Lower Coast snook rebound.

SNOOK RESIST CAPTIVE SPAWNING EFFORTS

It's a thought guaranteed to warm the hearts of saltwater anglers, tackle store owners and coastal guides. What if hundreds of thousands of hatchery-reared snook were stocked each year in selected Texas bays? Juvenile linesiders growing into 30-inch bruisers, all with an uncontrollable urge to attack Zara Spooks around pier pilings and jetty rocks from Port Aransas to Brownsville.

A decade ago, after studying early snook populations, Texas Parks and Wildlife Department biologists had a vision, or at least a belief, that a stocking program could help restore "fishable numbers" of the prized game fish in Texas waters. They worked diligently on the snook program for a number of years only to be stymied at every turn.

"Essentially what it came down to is that we couldn't come up with enough snook for a strong hatchery program because they are so difficult to spawn," said Bob Colura, a department fisheries biologist at the Perry R. Bass Marine Fisheries Research Station near Palacios and a leader in the snook project.

While the successful red drum and seatrout programs upstaged the snook effort in Texas, Colura said some valuable lessons were learned about snook that could be used in future efforts. TPWD researchers also were successful in rearing fry produced from the larvae of Florida fish, proving that pond culture would work with snook.

While a marginal snook population in Texas waters is showing some signs of recovery in recent years, the future of any Texas spawning program may depend on how successful similar programs are in Florida where snook are much more abundant. "If their (hatchery) program became really strong, we could routinely go down there and get brood fish and work from there," Colura said.

The TPWD effort to spawn snook began in the early 1980s after fisheries officials had completed research, developed spawning techniques and started producing red drum for stocking Texas bays. "Redfish and snook are both free spawners with eggs that float, and we thought there would be similarities." Colura said. He added that researchers also have learned from preliminary data from Florida that snook could be produced, if not through natural spawning, at least with hormones—the way biologists had started with redfish and trout.

"We wanted possibly to reestablish or supplement snook stocks in Texas ry to get them back up to good fishable numbers." Colura said.

With the cooperation of the Florica Department of Natural Resources, Colura and Jim Dailey, another fisheries biologist, traveled to the Tampa-St. Petersburg area to collect snock for the Texas program. The researchers collected about 30 fish, which were loaded into a tank truck and transported back to Texas. Unable to endure the stress of the trip, all the fish were lost to disease within 24 hours after arriving in Texas.

Colura and Dailey returned to Florida a week later to collect additional fish.

weather can allow snook to move northward in their range temporarily. Incidental catches of snook have been reported in recent years as far north as Galveston. In the 1920s and 1930s, large snook-or pike as they are called in Texas—were abundant enough in the waters around Port Aransas to be a prime target of commercial fishermen. Port Aransas resident Elda May Roberts, in her book "The Stubborn Fisherman," describes how her husband, Florida Roberts, a pioneer commercial fisherman in Texas, used to take a skiff out to the beacon at Klines Point to fish for reds and pike.

As recently as the early 1970s, said Port Aransas guide Gary Einkauf, snook occasionally would congregate in the nearby Fish Pass channel, which then was open from the Gulf to the bay. One

This time the fish were packed in bags of water, supplied with oxygen and flown back to Texas. They all survived. Despite doing well in hatchery tanks, efforts over the next few years to get the females to spawn naturally or through hormonal implants were not successful.

The TPWD biologists didn't stop there, however. They launched a study of the spawning habits of Texas's own snook population, collected native fish and made additional efforts to spawn them but encountered the same negative results.

"They live, they eat, they do fine in captivity, but we just have not discovered what it takes to get them to mature and develop (sexually)," Colura said. The Texas researchers were successful in raising snook in ponds from the larvae of Florida fish. "We got about 5,000 fish back," Colura said. "It wasn't super but it showed that pond culture would work."

Colura said Florida biologists have spawned snook in captivity on at least one occasion, but they also have encountered many of the same problems.

day on moving tide, Einkauf caught 15 snook under a bridge spanning the pass.

While snook are showing signs of rebounding from severe winters in 1983 and again in 1989, observers point out that snook, like tarpon, probably have been affected over the longer term by things such as increased boat traffic, pollution and the damming of rivers, which has restricted freshwater inflows into bays and estuaries.

Most conservation-minded anglers are more than willing to release snook of any size caught in Texas waters but the daily bag and possession limits are the same as for redfish—three per day, six in possession with a minimum length of 20 inches and a maximum length of 28 inches.

One reason so few snook are caught in Texas waters is that few anglers ever

> take the time to fish for them, Vela said. "Since I started looking for snook again and catching them last year, everybody is enthusiastic about them. But the fish may have been there the whole time."

> Knowing a few of the habits of snook greatly increases the chance for angling success. While snook are aggressive feeders, they are shy, extremely wary fish. Like other

game fish, snook are found where there is water movement and baitfish activity. They stake out their own territory and prefer not to compete for food with other game fish. If you see tailing redfish or concentrations of trout, look elsewhere for snook, Vela said. "Snook will sit in one place and ambush while the reds and trout will move along, milling and looking for food," Vela said. He said prime snook holes will have a little dropoff, a change in bottom from sand and grass to mud or scattered oyster shells and "always that little tidal flow."

Vela said drift fishing from a boat is an effective way to take snook, but wind conditions often make it difficult. The best approach is to park and wade. Vela said snook will take live shrimp and finger mullet but he prefers to throw a soft plastic shrimptail. His color choice is red with a white tail.

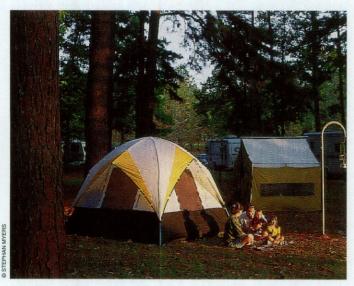
Anyone who fishes for snook soon learns how unpredictable it can be. In that respect, hunting snook in Texas waters has much in common with Costa Rica and Florida, Vela said. "You can get skunked on any given day."

Phil Shook is a freelance writer and avid fisherman from Houston.



Snook are prized by light-tackle anglers because they are known for aggressive strikes on artificial lures. The hard-fighting fish seek structure such as boat docks, pilings and mangrove swamps where a current is present.

PARKS & PLACES TO GO



Picnic areas, playgrounds and camping in scenic Pineywoods surroundings make Rusk State Park a great family weekend stopsver.

Rusk-Palestine State Park

A bit of 1930s America tucked away in the East Texas Pineywoods

Maybe it's the simple pleasure of hiking through the East Texas Pineywoods, fishing or meeting friendly people. Maybe it's the the whistle of the steam engine pulling out of the depot, or the sight of the small white church at the crest of the hill. But something about Rusk-Palestine State Park attracts anyone who wants to experience classic, small-town America.

The Rusk park is located three miles west of Rusk on Highway 34, and the Palestine park is located six miles east of Palestine. The two parks are joined by 25 miles of rails belonging to the Texas State Railroad, making Rusk-Palestine State Park the longest and skinniest in the state. Visitors relax in the friendly atmosphere, fish in the 15-acre lake, roam nature trails and climb aboard turn-of-the-century railroad cars to complete their journey into Texas's past.

"The best thing about our park is the people," said Thomas

Northcutt, park superintendent. "We have campers who come to stay for a night and end up staying for a week." The park's busy season begins in March. The dogwoods bloom around Easter and lace the woods with white and pink petals. Bright green lilypads float on the lake's surface. "The lilypads create a good bass habitat," said Northcutt. "We've had 24-inch bass caught in that lake, so we have many visitors who come here just to fish."

A short nature trail cuts through the mixed hardwood forest and signposts identify native species such as loblolly pines, sweetgums, dogwoods, redbuds, and several species of oaks. Visitors may encounter white-tailed deer, squirrels, raccoons and rabbits.

"We also have a wonderful bird viewing area on the nature rail "acded Northcutt. By standing behind a protected wooden patrier and looking through observation portholes, visitors can observe cardinals, blue jays and chickadees that flock to the feeders placed near the observation area. Overhead, the loud, staccato hammering of pileated woodpeckers echoes through the forest, and along the bank of the lake a belted kingfisher patiently watches for its afternoon snack.

On the opposite side of the road from the nature trail stands the Sacred Heart Church, the county's first Catholic church built in 1906. The altar, the Way of the Cross on the walls of the church, and all but seven of the stained glass window panes are part of the original structure. Owned and maintained by the Rusk Chamber of Commerce, the church is used during the warmer months by the park for nondenominational, old-fash-

ioned gospel services on Sunday mornings. The chapel also is available for weddings.

Down the hill from the church is the Victorian-style railroad depot, constructed from native iron ore stones. The railroad runs from March through October and attracts up to 1,000 passengers per day. The railroad was completed in the early 1900s by prisoners to transport charcoal to the prison's iron ore smelting furnaces. In 1913 the furnaces were closed, and in 1917 the penitentiary was converted to a state mental hospital. After intermittent use over the next several years, the line was turned over to the Texas Parks and Wildlife Department in February 1972.

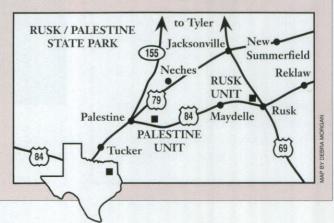
Blair Lavell has been with the Texas State Railroad for 18 years,

Rusk State Park is located three miles west of Rusk on Highway 84. Facilities include 32 campsites with full hookups, 46 group trailer sites with water and electricity and 16 tent sites with water and electricity. Day-use picnic sites also are available.

Equipment for tennis, volleyball, basketball and horseshoes is available to guests at the park headquarters. Fishermen are welcome on the 20-acre lake, but only boats without gasoline-powered engines are permitted. Pedal boats are available for rent.

The Palestine unit of the park, located six miles east of Palestine, is primarily a day-use park. Facilities include two group picnic pavilions and 12 campsites with water. Sites are available on a first-come, first-served basis on the honor system.

For park information write Rt. 4, Box 431, Rusk, Texas 75785, or call 903-683-5126. Reservations for camping or other park facilities must be made by calling 512-389-8900.



and serves as the general mechanical superintendent. Lavell appreciates classic railroad cars the way other people appreciate classic automobiles, and he enjoys the challenge of restoring the antique cars. "When I was a kid, I fell in love with trains," said Lavell. "Back then, instead of wanting to be an astronaut, you wanted to be an engineer."

Lavell tours the train yard, pointing to cars currently in use and others waiting for restoration. "We've grown from five cars to 13," he said. "We run seven cars on one train, six on the other, and we run two trains a day. We've got seven old commuter cars from Chicago that will seat 100 people." Lavell walks past a library car, a hopper car, and stops near a wooden baggage car. "The baggage car was rebuilt in the late 1930s and was used until the 1960s. We sometimes use it when we have a group of bicyclists who want to ride the train one-way and ride their bikes back to the park," he said.

The trains depart from both the Rusk and Palestine depots and passengers travel through 25 miles of scenic woods and meadows before arriving at the opposite depot. In spring, the landscape blooms with dogwoods and redbuds, and tiny wildflowers last well into the summer. In fall, the changing leaves paint the landscape in subtle hues of orange, lemon and cinnamon, as brisk temperatures weaken summer's warm grasp.

During the hour-long stopover, guests arriving at the Palestine depot enjoy a picnic lunch and shop for souvenirs, while energetic guests at the Rusk depot can enjoy pedal boat rides across the lake before boarding for the journey back to their point of origin.

"There's a certain romance about the railroad," said Lavell. "It's what helped build the country, and almost every family has



Restored railroad cars pulled by steam locomotives carry up to 1,060 visiters per day on the 50-mile round-trip between Rusk and Palestine. Euring the summer season, May 39-August 31, the trains run each Thursday through Monday

somebody who was in the railroad business. The great thing about this job is the fact that people come here and get away from the rat race in all the cities, and they are so happy. Everybody's having fun."

by Elaine Acker Albright

Texas State Railroad State Historical Park

The Texas State Ralroad's 1994 season opened in March and runs through October. The schedules are as follows:

Spring March 12-May 29, Saturday and Sunday only; Summer, May 30-July 31, Thursday through Monday; Fall, August 6-October 30, Saturcay and Sunday only (except that the train will run on Labor Day.)

Trains depart from both the Rusk and Palestine depots at 11 a.m. and arrive at the opposite deporat 12:30 p.m. At 1:30 p.m., the trains return to their points of origin, arriving at 3 p.m. The gates for boarding the trains are opened 45 minutes before the scheduled departure. One-way fares are \$10 for adults and \$6 for children 3-12. Round-trip fares are \$15 for adults and \$9 for children.

Reservations are recommended and may be made in person, by mail or phone from 8 a.m. to 5 p.m. daily. For reservations and information, write P.O. Box 39, Rusk, Texas 75785, or call 903-683-2561, or 800-442-8951 (in Texas only).

While You're There

Memories of home often are tied to the senses: the smell of the pasture after a warm summer rain; the sound of children playing under the big oak tree in the back yard; the taste of home-cooked food. For many East Texas natives, the taste of "home" can be found in Bodacious Bar-B-Oue.

Featured in Southern Living. Texas Monthly, and the Dallas Morning News, Bodacious Bar-B-Que has earned a reputation for serving East Texas's finest beef, turkey, ham, and inks, and was voted East Texas's Best Bar-

B-Que in the Longview News Journal's 1993 Reader's Choice Awards. Hours are Monday through Saturday, 10-8, and Sunday, 11-6. Write 1006 S. Dickinson (Hwy. 69 South), Rusk, Texas 75785, or call 903-683-2611.

In the spring, Bill and Barbara Bradshaw, owners of Eastex Farms (located four miles north of Rusk), invite you to sample their farm-fresh jelly and syrup available at their country store. They offer ready-picked fruit, or you may choose to pick your own blueberries and blackberries from their fields. Write Rt. 5, Box 427, Rusk, Texas 75785, or call 903-683-5726.

Local potter David Hendley sometimes conducts demonstrations at the park, but you can shop at his Old Farmhouse Pottery for a variety of gifts and stoneware. Located on Highway 84, one mile west of Maydelle (between Rusk and Palestine) his hours are 1-5 p.m. Thursday through Monday, and by appointment. Call 903-795-3779 for more information.

Herring's Wilderness northeast of Rusk features zebras, deer, Vietnamese potbellied pigs, buffalos, ostriches, llamas, antelopes and many other species that roam the 167-acre ranch. The park features drive-through tours (\$4 per person), or guided tours (\$5 per person), and a petting zoo. Group rates are available. Herring's Wilderness is open seven days a week, from 9 a.m. until dark. Write Box 173, Gallatin, Texas 75764, or call 800-762-5991 or 903-683-5358.

Two blocks east of the town square is one of Rusk's most popular historical sites-Footbridge Garden Park. Originally built in 1861, the footbridge enabled residents of the east valley to walk to town during the rainy season. The 546-foot-long bridge is the longest in the United States and

Continued on page 53

Quail on the Mend

Scotty Parsons spent the usual portion of his post-graduate schooling at Stephen F. Austin State University scratching down lecture notes and pondering text-books. But he also logged countless hours in the field, traipsing through dense woods and briar thickets with a little black box strapped around his waist and a television-looking antenna in his hand—not your average college laboratory.

Parsons, who earned his master's degree in forestry with an emphasis on wildlife management, did so by lending a helping hand in an intensive bobwhite quail study that came about as a cooperative effort between Temple-Inland, SFA and the Texas Parks and Wildlife Department. The three-year venture, which ended December 1992, took place deep in the heart of Temple-Inland's South Boggy Slough Hunting Club in Trinity County.

While the objectives of the study were many, the goal was to piece together a cost-efficient plan for both large and small private landowners to restore native bobwhite populations on their property. In order to do so, however, researchers first had to answer several questions about quail and their management in East Texas.

Bobwhites, which flourished in the Pineywoods until the late 1950s, have declined steadily in numbers as the direct result of changing land-use practices across the region—mainly the elimination of row crop farming and a move toward more lucrative land management strategies such as cattle ranching and timber production.

Populations now are spotty at best, with most birds being found

in young "regeneration sites," better known as clearcuts. The problem is, those regeneration sites will support quail for only a few years before a canopy blocks out the sun, thus wiping out quail habitat on the forest floor.

Hence, researchers such as Temple-Inland wildlife biologist Don Dietz, SFA professor of forestry Dr. Monty Whiting and professional wildlife consultant Brad Mueller wanted to determine if poor quail habitat such as upland pine plantations could be manipulated to support stocked wild quail. They also wanted to find out if those quail could survive and reproduce to a satisfactory level over a given period.

The biologists also wanted to know if wild quail trapped in South Texas and relocated in East Texas could interbreed with the native subspecies. Predation and its impacts on East Texas quail populations was another issue of concern.

The effort began three years ago with a walking census count and trapping operation on South Boggy Slough, which resulted in the capture of a meager 17 native bobwhites. Those quail, used as "control birds" because they were born on the study area, were equipped with transmitters and released on the 1,500-acre area, which previously had been manicured to simulate an Alabama or Georgia quail plantation.

Later, wild-trapped bobwhites from South and East Texas (50 from each) were blood-typed and released onto the study area. Those birds, also equipped with beepers, were referred to as "relocated birds" because they had been transplanted from outside study area boundaries.

Trapping efforts the following year indicated the birds had an excellent nesting season; 77 "young of the year" control birds were collected, equipped with transmitters and released on the study area. More wild-trapped South and East Texas quail (50 more of each) then were introduced onto the study area, bringing the total number of relocated quail to 200.

Trapping efforts in the second year showed evidence of another banner nesting season, leading the biologists to believe the quail population within the restoration area was 400 to 500 birds in early 1993. That's about one quail to every three acres—a substantial increase over the ratio of one quail per 88 acres of three years before.

"We have what I'd call a very huntable population of birds," said Dietz. "But you have to realize that 'huntable population' is an open-ended term. What is a huntable population to one person may not be to the next. I would say a quail to every 10 acres is a huntable population."

CHARGO TO A CONTRACT OF THE CO

Bobwhites were fitted with radio transmitters (above), then tracked on the study area (right) to provide information about nesting, predation and other factors relating to East Texas quail management.

While relocation of birds played an integral role in the success of the study, the biologists say it was habitat manipulation that allowed the birds to flourish. Dietz, who was in charge of habitat and trapping in the project, said quail will do well on small parcels of property if the habitat is managed to suit them.

On timbered areas, landowners can create good quail habitat by thinning mature pine stands. This will allow sunlight to reach the forest floor, promoting the growth of natural quail forage and cover.

"Quail do well in pine plantations until the trees reach a certain age," said Dietz. "A peak time is two to 10 years of age. These plantations are like quail factories during that time because they get overgrown in green briars, dewberry and blackberry vines. It's great habitat because it leaves bare ground beneath it and it offers some protection from predators.

"What we tried to do on our



study area was simulate a Georgia or Alabama quail plantation," he continued. "We thinned out mature pines to get 30 to 50 percent sunlight on the forest floor. We also have controlled burns in our woods each year to check brush and grass."

Everyone may not be able to follow Boggy Slough's plan because of limited funds. But according to Dietz, there are some fairly inexpensive things a small landowner can to do improve his property for quail.

Allowing fencerows to grow up around coastal bermuda fields has been proven to help quail. Landowners also can disk strips around perimeters of fields in winter or early spring. This promotes the growth of weeds and other woody plants considered important for quail habitat.

"At Boggy Slough we did the maximum you could do in terms of timber and food plot management," said Dietz. "We've got 10 percent of the area in food plots and 20 percent in cover

blocks, which is something anybody can do because a cover block is just an area protected from fire during burn-offs.

"If a landowner has 150 acres, he can sell a little of his timber and plant food plots-that would help tremendously," he added. "We feel that anybody who has any decent, well-drained soils should be able to have a quail to two to three acres without any problem."

In addition to providing valuable information regarding habitat manipulation, the study stressed that a high percentage of a given quail population falls victim to predators such as sharpshinned and Cooper's hawks.

"Those hawks are the number-one predators of quail," said Dietz. "About 80 percent of birds in a covey are young-ofthe-year birds. Anywhere from 80 to 90 percent of the quail in a wild population will die each year, either because of natural causes or predation."

Another predator on quail,

according to the study, is snakes. Through their observations, biologists concluded that snakes are to blame in a high percentage of nest predation, when eggs mysteriously disappear. Snakes, especially rat snakes, also eat adult quail.

"One of the things that really surprised me in this study is the amount of snake predation on nests," said Whiting, who coordinated the research. "When you radio track a hen on a nest one day and everything is fine and then the next day you go in and find out she's a half-mile away, you know the nest has been broken up."

Whiting recalled several occasions when he found vacated nests to be in perfect condition, except that as many as 10 to 15 eggs were missing.

Parsons has evidence to support both the hawk and snake predation theories. While conducting his daily radio telemetry research, the 26-year-old graduate student was led to snakes, hawk nests and armadillo holes. "During the last year of the study we found three transmitters beeping inside rat snakes," said Parsons, who along with SFA doctoral student Xia Gwen Liu and wildlife biologist Richard Capps handled most of the radio tracking efforts. "We also found them in hawk nests and in armadillo holes-probably taken in there by pack rats."

The cooperative quail study has allowed researchers to gather much other valuable information regarding quail management in East Texas. And it is through those findings that they have produced an East Texas quail management guide now available to the general public. For more information, call Dietz at 409-831-2805, Whiting at 409-568-3301 or Darryl Stanley at 409-829-1471.

by Matt Williams

"Get Hooked On Fishing" Program **Needs Volunteers**

The "East Texas Get Hooked on Fishing-Not Drugs" annual program and youth fishing tournament continues to grow,



Some 1,300 youngsters are expected to participate in the May 7 fishing tournament on Sam Rayburn Reservoir.

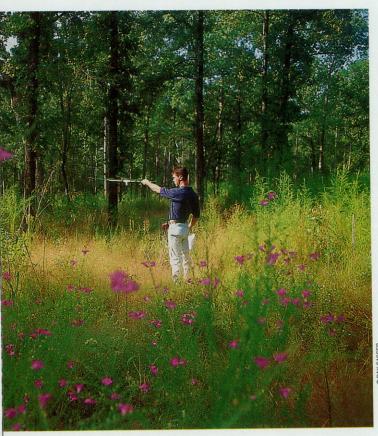
and its sponsors said more volunteers with boats are needed to take kids fishing on Sam Rayburn Reservoir on May 7.

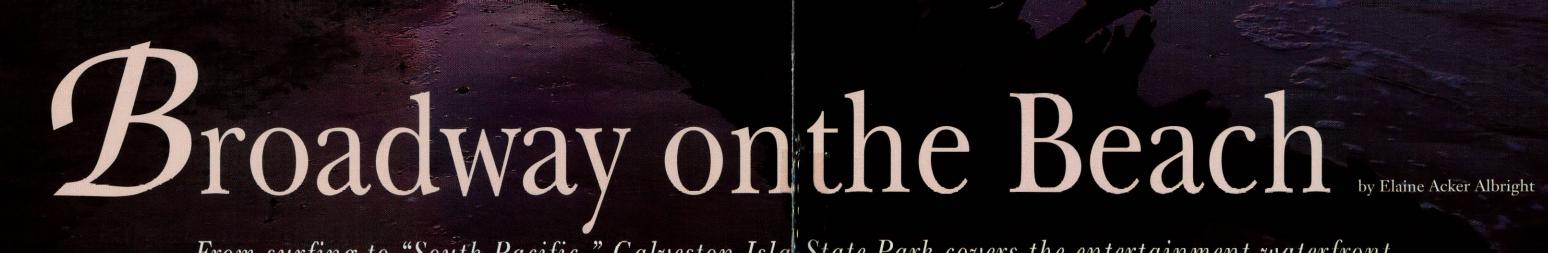
An estimated 1,300 youngsters are expected to participate in the fishing tournament and other events that include appearances by fishing and sports celebrities.

Organizer Paul Hinton said since its inception in 1987, more than \$130,000 worth of donated fishing equipment has been distributed to youths, and about \$25,000 in fishing gear will be distributed this year.

Celebrities will go to area schools on Friday, May 6 to give anti-drug programs and distribute poster contest awards. Among the guests will be Catherine

Continued on page 52

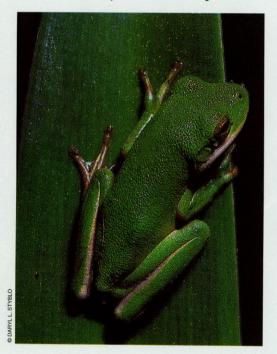




From surfing to "South Pacific," Galveston Isla State Park covers the entertainment waterfront.

HE SUN TOUCHES THE HORIZON behind me as I walk along the boardwalk. I pause for a moment, watching as an owl flies low over the estuary, returning from an apparently successful twilight hunt. Small fish splash in the shallow, brackish pond beneath my feet, and black skimmers slice the water's glassy surface. As the warm salt air brushes my face, I breathe deeply and relax in the company of nature.

This estuary system is a quieter, less-traveled section of Galveston Island State Park. The 2,000-acre park bridges the Gulf of Mexico and West Galveston Bay. Family entertainment includes sandy beaches, four miles of hiking trails and summertime productions of hit Broadway musicals. Superintendent Jake Dameron notes that the



A tiny treefrog, more frequently heard than seen, is one of the many inhabitants of Galveston Island State Park's estuary. Shelters and observation decks are good spots to watch birds and other wildlife.

park's visitation is consistently one of the top five in the state park system. "Most people are here to escape and relax by the ocean," said Dameron. "But we also have 1,500 acres of natural habitat. We're trying to take it back to true coastal prairie. Raccoons, opossums, bobcats and coyotes all roam this area. We also have small carnivorous animals, marsh rabbits and nutria that weigh up to 30 pounds. Birders especially enjoy the natural area."

Throughout the estuary, fingers of water and land mesh, and trails cross the marshes and cut through thick, three-foot-tall spartina grasses. Along the paths, shelters and observation decks provide opportunities to study birds in their natural habitat. "We have a rookery of gulls nesting in brush near the far platform," said Dameron. "The nests are far enough from traffic not to be bothered." I roamed the area with binoculars and sighted red-winged blackbirds nesting near the cattails.



Roseate spoonbills, great blue herons, Louisiana herons and cattle egrets waded in the shallow waters. According to Dameron, black-shouldered kites nest on the bay side.

The herons always seem to know the best fishing holes and, unlike many secretive sportsmen, they're undisturbed by humans who encroach on their territory and share the bounty. "Wade fishermen catch redfish, trout, croakers and flounders," said Dameron. The estuary also is popular with fly fishermen, canoeists, and kayakers. "We have canoe and kayak clubs from Houston who use the estuaries," he said. "Some of the paddlers fish, and some of them paddle out on the Gulf side through the surf."

The Gulf side of the park, with its narrow ribbon of sand, attracts most of

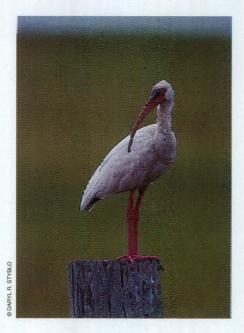


the park's visitors. At 6:30 a.m., I wander toward the beach, savoring the first rays of sunlight. The foredunes are decorated with morning glory, goatsfoot, sunflowers and sensitive briars, all of which stabilize the dunes. Especially pretty are the beach evening primrose flowers—yellow blossoms resembling buttercups—whose petals open at night and remain open throughout the morning hours.

Ghost crab tracks lead me onto the beach where I soon discover a nearly



The beach is abuzz with activity during the day, but sunrise offers a quieter atmosphere for surf fishing or beachcombing.



Park officials are working to restore 1,500 acres of the estuary to coastal prairie vegetation. This will provide habitat for a variety of birds and aximals including the white like (above).



perfect shark's eye shell. Many park visitors enjoy beach combing, and early morning beach excursions sometimes are rewarded with white cockles, coquinas, sand dollars or lightning whelks. I settle onto a driftwood log to watch the sunrise, while 100 feet off-

shore, schools of small fish jump in the gentle tide. Farther away, fins roll across the surface as three bottlenose dolphins feed on the silver baitfish.

Later in the day the beach becomes crowded and colorful. Families colonize the beach with nylon tents, broad

GALVESTON ISLAND STATE PARK

Galveston Island State Park is located on the west end of Galveston Island. From Houston, travel south on Interstate Highway 45 to



Galveston. Turn right on 61st street, turn right on Seawall Boulevard (FM 3005), and continue west to the park entrance.

Park facilities include 150 campsites with water and electricity; 20 trailer campsites with grill and fire pit; 10 screened shelters and 60 roofed tables with grills and drinking water for picnicking.

During the 1994 season, each of the Galveston Island Outdoor Musicals will run nightly for one month. "Phantom" begins Thursday, May 26 and runs through Saturday, July 2. "Show Boat" begins Monday, July 4, and runs through Saturday, August 6. "Man of La Mancha" runs from Monday, August 8 through Saturday, September 3. All performances

start at 8 p.m. Ticket prices range from \$20-\$24 for adults and \$10-\$12 for children. Group rates are available and there is a \$2 discount for seniors.

The Spotlight Restaurant, adjacent to the amphitheater, is open to groups of 15 or more. Arrangements must be made in advance, and the menu may include barbecued chicken, ribs or other entrees.

For park information, write Route 1, Box 156 A, Galveston, Texas 77554 or call 409-737-1222. Call 512-389-8900 to reserve campsites or other park facilities.

For show information, contact the Galvestor Island Outdoor Musicals. Write P.O. Bex 5253, Galveston, Texas 77554, or call 409-737-3440 or 1-800-54-SHOWS.



umbrellas, quilts and towels. They inflate plastic floats or body surf; they gather around volleyball nets or build elaborate sandcastles, and they launch sailboats and kayaks into the waves.

In an atmosphere of tropical fun and summer vacations, it is easy to forget there are dangers associated with the ocean, and Dameron urges all visitors to use caution when swimming in the Gulf waters. "Use good judgment around water," he said. "If you're more than waist-deep in the ocean, you need to head back toward shore." Natural currents occur where there is wave action, and the water on the Gulf side has a rolling bottom with cuts. When the tides produce strong wave action, the surge runs down these cuts and creates a current that moves water outward from the beach. So the higher the waves, the stronger the currents.

After an active day at the beach, the Galveston Island Outdoor Musicals provide a night of Broadway entertainment. In the nearby amphitheater, audiences gather under the starlit sky for musical productions such as "Showboat." Cool gulf breezes soothe sunburns, as strains of "Old Man River" echo into the night. In the background, a chorus of crickets and cicadas accompanies the singer's rich vocals.

"This is our 18th season," said

"Oklahoma!" (above) has been one of Galveston Island Outdoor Musicals's most popular shows in past seasons. This summer's musicals include "Showboat," "Phantom" and "Man of La Mancha."

Michael Vita, director of publicity. "Most of the people who come here come back because of the quality of our shows and because it's such a pleasant evening." Professional actors from the stages of Chicago, Los Angeles, New York and Houston star in each season's musicals. Past productions have included popular favorites such as "Oklahoma!," "South Pacific," and

Galveston Island State Park's 2,000 acres lie between the Gulf of Mexico (foreground) and West Galveston Bay. The amphitheater, which can be seen near the bay side of the park in this photo. presents musical productions each summer.



Remember Your First Fishing Buddy This Father's Day



If you're like many people, your dad is the person responsible for your love of the outdoors. Remember how he beamed with pride when you caught your first sunfish, and the way he patiently explained how to use a shotgun. Well maybe you don't get out with your dad as much as you'd like to anymore, but you can show him how much those years meant to you with a subscription to TEXAS PARKS & WILDLIFE magazine this Father's Day. It's the perfect way to remember your first fishing buddy.

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"The Sound of Music."

Part of the Lone Star Performing Arts Association, the Outdoor Musicals's 1994 show schedule includes "Showboat," "Phantom," and "Man of La Mancha." "The big news is 'Phantom' by Tony Award winners Maury Yeston and Arthur Kopit," said Vita. "Phantom" is a new musical thriller based on Gaston Leroux's 1911 novel, "The Phantom of the Opera," in which a masked musician who lives in the underground of the Paris Opera House falls in love with a young singer. Vita describes "Man of La Mancha" as the "impossible dream musical," an adaptation of "Don Quixote."

The Lone Star Performing Arts Association will offer a total of five musicals during the 1994 summer season. "It is possible to attend our Outdoor Musicals production on Friday; to see a show at The Grand 1894 Opera House in Galveston on Saturday; and finally see a show at the Strand Street Theater on Sunday-a full weekend of theater," said Vita.

The Grand 1894 Opera House will offer "Little Shop of Horrors," written by Alan Menken, who has ridden the crest of fame as the Oscar-winning composer of "Beauty and the Beast,"

"The Little Mermaid" and "Aladdin." The Strand Street Theater will offer "Ruthless!," a spoof of the antics of an ambitious, eight-year-old girl who aspires to take over the lead in her school

As the lyrics of familiar showtunes float into the evening, I remember my twilight walk through the estuary. I wonder for a moment if the owl is somewhere nearby, listening to the vibrant sounds of human voices, and relaxing in the company of man.

Elaine Acker Albright of Houston is a regular contributor to the magazine.



Sunset is a time for introspection and reflection for people and nature.

by Arturo Longoria

A Taste

BRUSH COUNTRY BEEKEEPER

he brushlands of South Texas produce some of the best honey in the world. With a rich plant diversity and long flowering season, the area is an ideal environment for natural honey production.

Plants such as mesquite, anacua, cenizo, guayacan, nopal cactus, guajillo, palo blanco and cat-claw produce their own distinctive honey, each with a unique color and taste. Of them all, many consider mesquite honey the best—perhaps the most flavorful in the world. Ultra-clear, with an ambrosia-like taste that wisps delicately across the palate, once you try it you may never be satisfied with anything else.

For those under its spell, mesquite honey replaces maple syrup on pancakes and waffles. It ennobles oatmeal. It livens pastries and enriches breads. And it gives salads an ethereal touch.

Eut acquiring pure mesquite honey—void of contamination from other plant species—takes patience. The process is tedious, drawing only a handful of honey connoisseurs to the South Texas brushlands each spring.

"You've got to be ready, or you'll miss out," explained Joe Martinez, a devoted mesquite honey afficienado. Martinez, who keeps three bee colonies on his small ranch near Alice, has turned his hobby into an obsession. Likewise, a few local professional beekeepers now focus on cultivating honey from the mesquite and other native brushland plants.

"Since the bees can't be trained to concentrate on mesquite nectar, you must set the hives so they won't be inclined to go after anything else,"



© STEVE BE

of South Texas

ARGET NATIVE PLANTS FOR THEIR WINGED MINIONS.

Martinez said. "And that," he added, "requires a constant vigil."

Even before mesquite trees sprout their first spring leaves, Martinez and other beekeepers have staked out the best locations and have cleaned the hives carefully, forcing the bees to produce fresh honey. A centrifuge extracts the honey stored in the hives during winter. And if combs are inadvertently destroyed, new waxed paper comb-building inserts are installed. Once readied, the wait begins. "You need to time it just right," Martinez said. "And then be there exactly when the mesquites start blooming."

Beekeepers carefully monitor the bloom period, which begins in early spring and can extend into late summer. To ensure that only mesquite nectar is acquired, beekeepers carefully place their hives in dense mesquite thickets.

"Bees will try to do the least work," Martinez said. "So by putting the hives in a thick mesquite patch you can get at least 95 percent purity." He adds that excluding other flowering brush from the immediate area assures that the bees will concentrate on mesquite flowers.

Because of a general quarantine on South Texas bees (brought on by the influx of Africanized "killer" bees), professional beekeepers aren't allowed to move their hives into other areas of the

state for agriculture use—traditionally their main income source. A newfound market in brushland honeys, however, may provide enough earnings to weather the problems brought on by the Africanized bee. (See "Bad News Bees," *Texas Parks & Wildlife*, August 1991.)

Edwin Walker, a Mission-based professional beekeeper with more than 60 years of experience, sees a future in what he calls "exotic brushland honey."

"There are some beekeepers in Arizona and California who are producing pure mesquite noney. And they've been doing it in Mexico, too," said Walker. He added that South Texas beekeepers are starting to take advantage of the exotic honey market. And although he agrees with Martinez that the richest exotic honey comes from mesquite-flower nectar, he's quick to point out that other native plants also produce exceptional honey.

"Guajillo, cat-claw, huisache, palo blanco and purple sage (cenizo), when you can isolate them, make wonderful honey," said Walker. He also noted that the black mangrove, which grows along the lower Texas Gulf Coast, produces an exceptionally light and smooth-tasting honey. To get mangrove honey, beekeepers place their hives on barges, then wait for the honey to be produced.

"Still," Walker said, "the best is mesquite honey. That's what I prefer."

Martinez has "played around" with cenizo and anacua honey.

"Cenizo will bloom soon after it rains, so you can pinpoint the harvest easily. In fact, in the brush, nothing blooms as fast as sage. It's only a matter of locating an area where there's lots of it, then placing the hives in the middle."

Some beekeepers cultivate purple sage crops, planting them around large bee colonies. "They water the sage continuously and specialize in that market," Martinez explained.

Anacua honey, on the other hand, isn't as easy to obtain. The dark green,

Continued on page 39

Mesquite blooms (left) produce what many people consider the best honey in the world. South Texas beekeepers carefully monitor the bloom period, which begins in early spring and can last into late summer.

Beekeepers Prepare Defense Against Africanized Queens

Will the influx of Africanized bees into Texas affect the production of mesquite honey and other native plant honeys? Dr. Stormy Sparks of the Texas A&M Agriculture Extension Service in Weslaco believes not. But he warns that beekeepers may have to intensify their management efforts to prevent damage to their colonies.

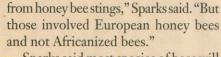
Africanized bees reached Central Texas in early 1993, after entering the Lower Rio Grande Valley in fall 1990. The bees apparently are continuing a northward migration, following a course that started in the late 1950s after their being released accidentally in Brazil.

Sparks said numbers of Africanized bee colonies may increase in a wide area of Texas. By early 1994, the bees had reached as far north as an imaginary line drawn between Midland County in West Texas and Bell County in Central Texas and eastward. They also have been documented in parts of New Mexico and Arizona, he said.

A strict statewide quarantine remains in place, and only after inspection and certification can any bee colonies be

shipped across quarantine lines. Sparks said beekeepers now are stepping up efforts to mark queen bees in their colonies to detect any intrusions by Africanized queens.

Deaths attributed to Africanized bee attacks have occurred in South and Central America and in Mexico, and one fatality attributed to Africanized bee stings was reported in Starr County during 1993. "In recent years, two other fatalities have been reported in Texas



Sparks said most species of bees will attack if provoked. Africanized bees, however, require much less encouragement. "Certain factors seem to increase the probability of a bee attack," Sparks said. "The nectar flow in flowers, whether the bees have been disturbed recently and weather conditions all play a part." He added that all honey bees defend hives that contain young bees and stored food, but Africanized bees are especially aggressive.

"Bees that are swarming are no problem," said Sparks. "Swarming bees, even Africanized bees, tend to be gentle because there aren't any young bees, nor is there any stored food. The bees are not aggressive at those times."

What do you do if you are attacked by bees? Sparks advises simply running away, or seeking adequate shelter. "There have been about six mass stingings in Texas so far," he said. "The people just didn't know what to do."

In one case, a man sought cover under his car instead of running into his house. He was stung severely. Other mass stingings have been provoked by loud sounds from lawn mowers or heavy machinery. The noises apparently aggravate the bees.

"Keep running until the bees stop their attack," said Sparks. He added that bees will keep attacking as long as you stay near their colony. Elderly people and others who may not be able to run should take extra precautions when entering an area known to harbor



Bees are collected in traps (left), then studied to determine the extent to which Africanized bees are expanding their range. Africanized bees and European bees are so similar in appearance that they usually can be distinguished only by comparison and analysis of several body measurements (above).





South Texas beekeepers stake out good locations

The European honey bee, Apis mellifera, is not native to the Americas. It became widely distributed in the New World after being introduced by European settlers in the 17th century.

Africanized bees, Parents should instruct their older children what to do in case of an attack, and keep a close eye on younger children when in the woods.

The Africanized bee is a little smaller than European bees, and field identification is difficult. To make positive identification, at least 10 bees must be removed from the hive. Then 25 measurements are taken from the samples and the information is entered in a computer. Only after the data are carefully analyzed can scientists state positively that the bees are the African variety.

"Sometimes the bees from a hive are obviously smaller and it's easier to conclude they are Africanized. And sometimes the bees are so large, they can't be anything but European. But in general, measurements must be taken," said Sparks. He reiterates that careful management of colonies should prevent any disruption of the production of goodtasting mesquite honey.

Continued from page 37

raspy-leafed trees, which can reach heights of 25 feet near abundant water sources, usually do not grow in patches. "I've found a few areas near some stream teds or along the Rio Grande where there are small clumps of anacua," Martinez said. "If I'm lucky I can get relatively pure anacua honey, but it's very hard to do. Anacua honey tastes a lot like the anacua berry, although it's still heavier than mesquite honey."

True honey bees have a pollen-carrying basket on each of the bind legs.



Unfortunately, the availability of

and clear the hives before placing them in the

fiela, forcing the bees to produce fresh honey.

mesquite and other South Texas honevs has decreased with destruction of the brush. Martinez, Walker and other beekeepers lament this loss of habitat.

"The brushlands are being rootplowed at an alarming rate, and that really worries me." Martinez said. "Mesquite's the source of the best honey in the world. I remember when there used to be large tracts of mesquite. New every year they're harder to find."

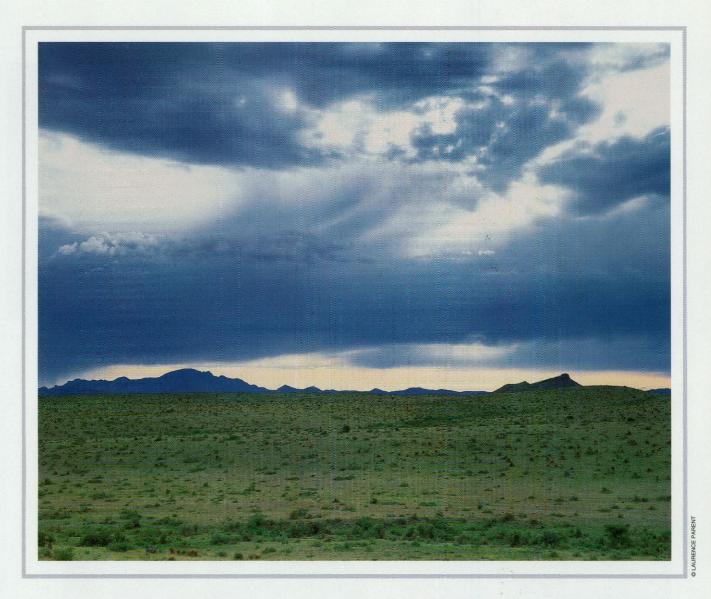
Hard-core honey lovers don't stop at eating it. Some tout it as a cure for everything from sunburn to arthritis.

Nonetheless, beekeepers warn that the availability of these South Texas honeys depends on the brushlands. As Martinez observed: "It's too precious to lose—the brush, the mesquites, and the world's finest honey."

Arture Longoria. a freelance writer from Mission, is a frequent contributor to the magazine.

Spring is the rainy season in most of Texas. Gray skies and thick clouds announce the approach of precipitation which, as Texans know, can be anything from a gentle shower to a flood-producing deluge. The world smells fresh and clean while the rain is falling, and as the showers depart they leave in their wake brilliant green landscapes that are a welcome contrast to the browns of winter. May is the wettest month over the eastern two-thirds of the state, with the Trans-Pecos and High Plains getting most of their rain in the summer. The southeastern part of the state has the highest average annual rainfall at more than 56 inches. El Paso gets the least rain of any spot in the state, an average of just eight inches a year.

A look at fresh and rejuvenated Texas landscapes during and in the wak



Virrus, attocumulus and stratus clouds gather over the Chinati Mountain: near Marfa (above). Right, a yellow-billed cuckoo, also known as a rain crow, sits on its nest following a South Texas shower.

f springtime rains.

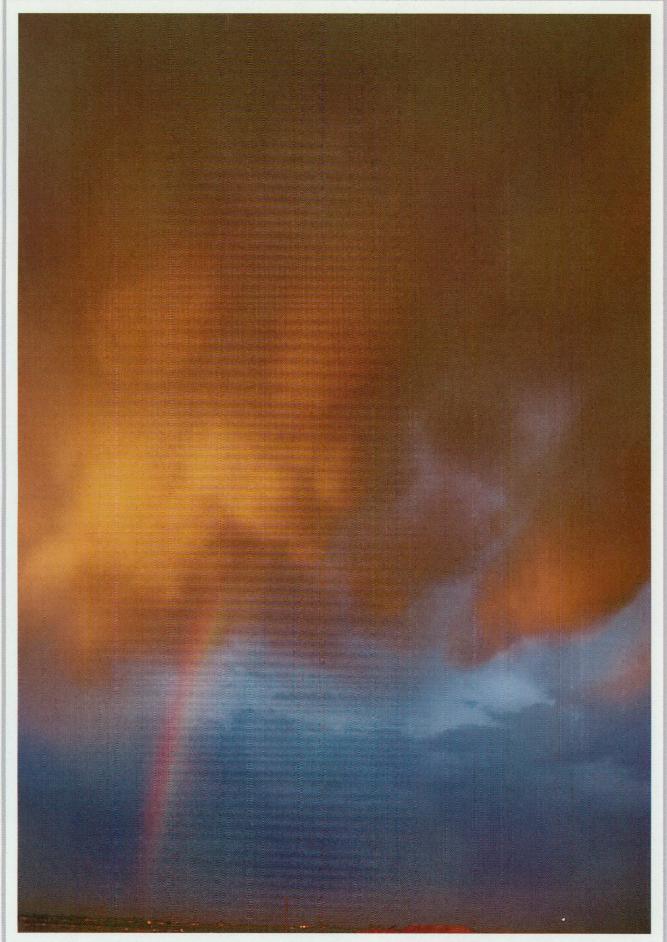


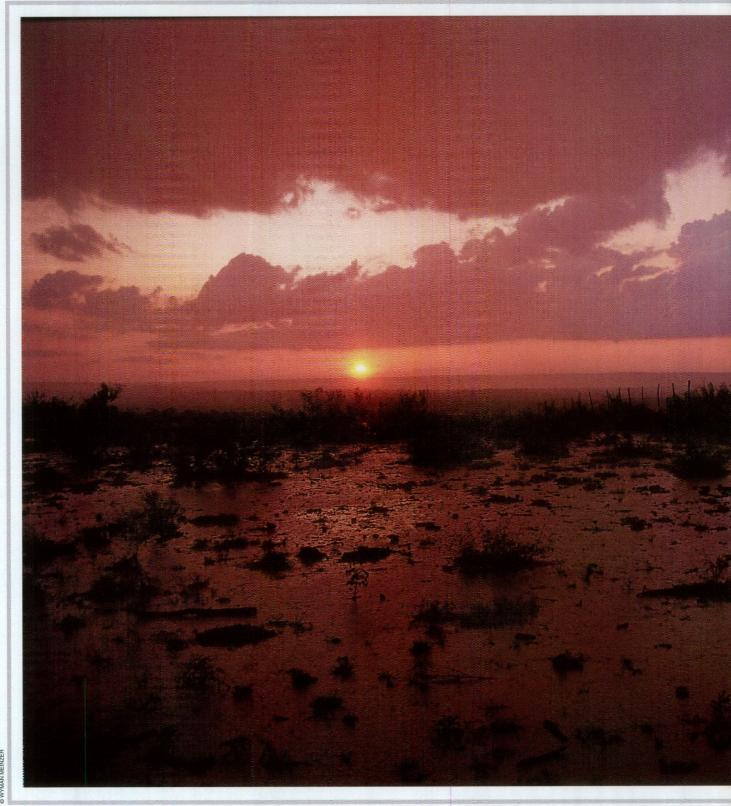
Jammatus clouds reflect the orange glow of the svn near Spearman, in the northern Texas Panhandle. These clouds indicate severe turbulence in the atmosphere.

Rain shafts play against the setting sun in Big Bend National Park.

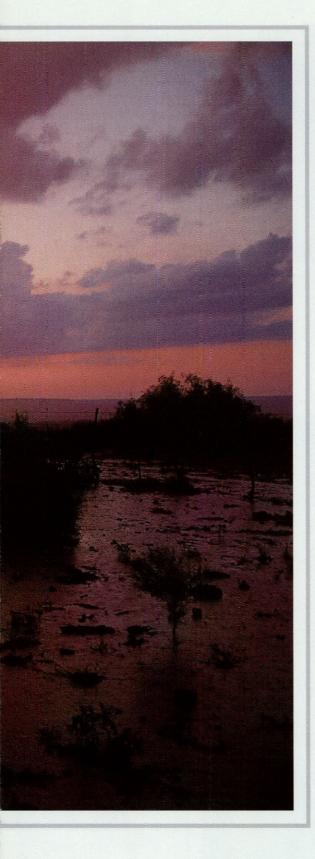


A rainbow seems to emerge from a cumulonimbus cloua painted gold by the sun's reflection.





Barly morning stratus clouds spread across the sky in Knox County.





A spring shower in East Texas created this waterfall surrounded by lush greenery near Crockett.



A whitetail buck is arenched during a South Texas rainfall.

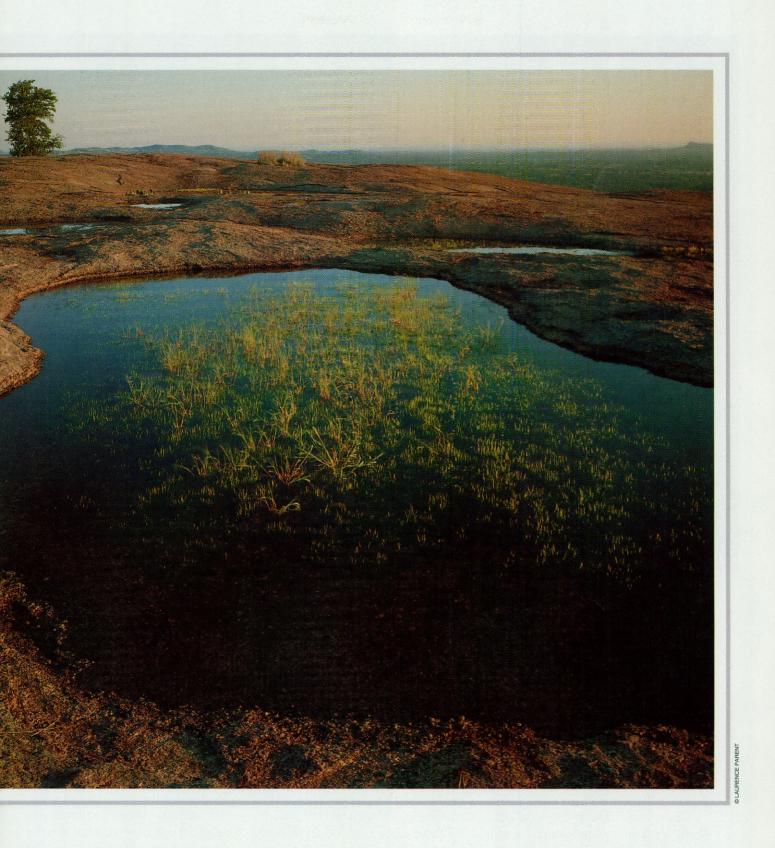
DENIE DINIE



Dunlight falls across a rocky West Texas landscape as a storm approaches (above). Below, towering cumulus clouds build over Pale Duro Canyon.







A pool of rainwater is all that remains of a springtime shower at Enchanted Rock in the Hi!! Country.



Photographing Lightning

Article and photos by Leroy Williamson

One of the most fascinating photographic subjects is lightning. True, the blast from a bolt of lightning is short-lived, but photographing lightning at night is relatively easy.

Texas is thunderstorm country and there are many opportunities each spring and summer to record those brilliant bolts of light that dance across the sky. We often have lots of thunder and lightning preceding thunderstorms, and

before the rain starts is an ideal time to make those lightning photographs.

You will need a tripod or other firm support for your camera, a locking cable or electronic release to keep the camera's shutter open and the film of your choice. Although a relatively slow film works fine, 100 or 200 ISO film for color negative and 50 to 100 ISC for color slides is best. A wide aperture will make the lightning bolts appear thick

and heavy while a small aperture creates thinner bolts that aren't quite as bright.

The procedure is simple. Place your camera on a tripod or other firm support, select the aperture, focus the lens and open the shutter. If there is a tremendous amount of lightning, an exposure of a minute or two might be sufficient. If some time elapses between bolts, exposure times can extend to five or ten minutes. When you think you have all the lightning you need to make a dramatic picture, you can close the shutter and start another exposure.

One mistake many photographers make when photographing lightning is

using a wide-angle lens to cover more sky. Unless the lightning is extremely close, a wide-angle lens will reduce the lightning bolts to a small portion of your picture, resulting in a loss of impact. A telephoto lens in the range of 100mm to 200mm will create some dramatic lightning photos.

Getting your camera pointed toward the lightning can be frustrating. It seems that no matter how much lightning there is, it moves to another area of the sky as soon as you open the camera's shutter. Be persistent and you will succeed.

There are, for safety's sake, a few things to think about when photographing lightning. Is your metal tripod going to act as a lightning rod? How

The photo at left is the result of a five-minute exposure at f/5.6 with a 70-210mm lens at 125mm. But extended shutter speeds during the daytime can result in overexposed pictures. For the photo below, the exposure time was 20 seconds. To further restrict the amount of light, a polarizing filter was used, as well as a smaller aperture-f/16. The 70-210mm lens was used at 70mm.

close is the lightning? If it is close enough to use a wide-angle lens, work from a sheltered area. Even if the lightning is some miles away, are you the tallest object in your surroundings?

Chances of being struck by lightning are slim, but never tempt nature. If the storm moves too close or rain begins, it's time to close shop unless there is a protected area to work from.

For some reason, approaching storms seem to provide the best opportunity for lightning pictures. However, there are times when a fast-moving storm will provide picture opportunities as it leaves your area.

Photographing lightning during the day is a little more difficult because extended shutter speeds result in overexposed pictures. Using a slow film, a small aperture and polarizing or neutral density filters to further restrict the transmission of light will provide shutter speeds perhaps as long as one or two seconds. If you have to use shutter speeds as fast as one-eighth or one-fourth second, be prepared to expose lots of film to catch one daylight lightning bolt.

Maybe you'll get lucky and catch a bolt after few exposures but, believe me, luck does enter the equation during daylight

Also, it's almost impossible to leave the shutter open long enough to catch more than one lightning bolt in the daytime. Even so, it's fun to try, and if there is lots of lightning, you may get two or three bolts on one frame.

Watch for the next thunderstorm with a good lightning display and expose a few frames of film. Try some long night exposures and create a lightning storm that looks much more ferocious than it actually was.

Leroy Williamson retired as Texas Parks & Wildlife magazine's chief photographer in 1992.

PHOTO CONTEST REMINDER

Don't forget our state parks photo contest.

We're already getting some entries, and also a few questions. The rules in the March issue stated that entrants must not have had any photos published. Specifically, you may not have received payment for any published photo. So if you've had your photos published in a club newsletter, a yearbook, or even in a newspaper or magazine, but you were not paid for your published photos, you're eligible to enter our contest.

For complete contest rules see the March 1994 issue or call 512-707-1833.

Mail your entries to: State Parks Photo Contest Texas Parks & Wildlife Magazine 3000 South IH 35, Suite 120 Austin, Texas 78704



OUTDOOR DATEBOOK

MAY

May: * Bird banding observation each Tuesday, Thursday and Saturday, Davis Mountains State Park at Fort Davis, 915-426-3337

May 1, 7, 14, 21, 28: ** Painted bunting tour, McKinney Falls State Park at Austin, 512-243-1643

May 1, 8, 15, 22, 29: ** Birdwatching tour, Pedernales Falls State Park in Blanco County, 210-868-7304

May **5, 14, 27**: **★** Bird banding observation, Kickapoo Cavern State Natural Area near Uvalde, 210-563-2342

May **5, 12, 19**: ***** Bat flight observation at Green Cave, Kickapoo Cavern State Natural Area near Uvalde. 210-563-2342

May 7: "Save Our American Raptors" program by Doris Mager, the "Eagle Lady," Fort Richardson State Historical Park near Jacksboro, 817-567-3506

May 7: ★ Bird walk and native plant tour, Cedar Hill State Park at Joe Pool Reservoir, 214-291-3900

May 7: "East Texas Get Hooked on Fishing-Not Drugs" fishing tournament for kids Shirley Creek Marina on Sam Rayburn Reservoir, 409-564-7521

May **7**: **★** Photography tour, Dinoscur Valley State Park near Glen Rose, 817-897-4588

May 7: ★ Black-capped vireo workshop, Black Gap WMA in Brewster County, 915-376-2216

May 7: * Birding walk, Somerville WMA at Lake Somerville, 409-279-2048 or 903-566-1626

May 7: * "Call of the Wild," Fairfield Lake State Park at Fairfield, 903-389-2216

May **7**: **★** Aquatic ecology tour, Honey Creek State Natural Area near Bulverde, 210-438-2656

May **7**: ***** Bus tour, Fort Leaton State Historical Park at Presidio, 915-229-3613

May 7: Special Olympics Motorcycle Tour, Caprock Canyons State Park at Quitaque, 806-455-1492

May 7, 14, 21, 28: * Nature tour, Honey

* The activities marked with this symbol are available to people who have a Texas Conservation Passport, which may be purchased for \$25 at most state pcrks, Parks and Wildlife offices, Whole Earth Provision Co. locations in Austin, Houstor and Dallas and REI in Austir.



Creek State Natural Area near Bulverde, 210-438-2656

May 7, 14, 21, 28: * Nature tour, Pecernales Falls State Park in Blanco County, 210-863-7304

May, **7, 14, 21, 28**: **★** Birdwatching and ecosystem tour, Caddo Lake State Park and WMA, 903-884-3833

May 7, 21: ** Plant identification and birding tour Lake Mineral Wells State Park at Mineral Wells, 817-328-117

May **7, 21**: **★** Boct rour of coasta marsh, Sea Rim State Park near Sabine Pass, 407-971-2559

May 8: * Worbler weekend, Gene Howe WMA near Canadian, 806-325-8642

May 8: * Horseback tour Hill Country State Natural Arec in Bandera Country, 210-796-3984

May 11, 25: * "Discover South Texas Wilderness Arecs," Be atsea-Rio Grande State Park, 210-585-11C7 or 210-585-0902

May, **12, 19**: ****** Primitive cavern tcur, K.ckapoo Cavern State Natural Area near Uvcldε, 210-563-2342

May 14: * B rding and hatchery tour, GECA-CPL Marine Development Center at Corpus Christi, 512-935-7784

May 14: * "Wings on the Wind," Fairfield Lake State Park at Fairfield, 903-389-2216

May 14: ★ Desert birding, Black Sap WMA in Brewster County, 915-376-2216

May 14: * Wildflower walk, Eiserhower State Park at Lake Texoma, 903-465-1956

May 14: * "Stroke and Float," Angelina-Neches WMA at B. A. Steinhagen Lake, 409-383-4343

May 14: * Aquatic ecology tour, Honey Creek State Natural Area near Bulverde, 210-433-2656

May 14: ★ Mountain bike ride, Choke Canyon State Park North Shore Unit near Three Rivers, 512-786-3363 May 14, 28: * Nature/ecosystem boaring four, Caddo Lake WMA, 703-679-3743

May 15: * Historical tour, Maragorda Islanc WMA. 512-983-2215

May 15: ** Birdwatching tour, Honey Greek State Natural Area near Bulversle, 210-438-2656

May 18: * WildFlower and native plant tour, Lubbock Lake Landmark State Historica Park or Lubbock, 806-765-0737

May 19: * Freshwater fish identification Bonham State Park at Borham, 903-583-5022

May 21: * Beachcombing and shelling tour Matagorda Island WMA, 512-983-2215

May 21: ** Bus tour of Big Bend Ronch, Bartor Warnock Environmenta Education Center at Laitas 915-424-3327

May 21: * Fistory (cut, Penn Farm Agricultural History Center, Cedar Hill State Park at Jce Pool Reservoir, 214-291-3900

May 21: * Nature walk, Pct Mayes WMA near Paris, 903-884-3833

May 21: ** Birding tour, Kerr WMA near Hunt. 210-238-4483

May 21: * "Bird_ife in a River Convon," Black Gap WAA in Brewste: County, 915-376-2216

May 21: * Ncture four, Honey Creek State Nctural Area neor Bulverde, 2: 0-438-2656

May 21: * "Birding in the Brush," Chaparral WMA near Artesic Wells, 210-676-3413

May 21: * "Have You_ost Your Senses?," Fairfield Lake State Park at Fairfield, 903-359-2216

May 21: * Widtlower and native plant tour. M. O. Neasloney WMA near Luling, 210-875-5230

May 21 * Observation of sir knole and bat fight, Devil's Sinkhole State Natural Area recr Eracket ville 210-563-2342

May 21: Night safar, Fassil R m Wildlife Center near Glen Rose, 817-897-2960 Biraing and wildflower tour: abound in May and June, with firewheels (left) and the rufous-sidea trwhee (below) two of the many species likely to be seen.



May 22: * Nature walk, Caddo Grasslands WMA near Bonham, 903-834-3833

May 22: * Pre-season pool day, Abilene State Park at Abilene, 915-572-3204

May **26-29**: **★** Texas-Mexico Hunting & Fishing Expo at Houston's Astro Hall, (See page 52.)

May 28: * "We've Got the Blues!," Jasper State Fish Hatchery at Jasper, 409-384-2221

May **28**: ***** "A Tale of Tilapia," Fcirfield Lake State ³a k at Fairfielc, 903-389-2215

May **28** Reptile cbservation, Guadalupe River State Park near Bulverde, 210-438-2556

May 28: ★ Culp Branch native prarie walking tour, Ray Roberts Lake WMA near Denton, 817-637-2250

May 28 * Nature and birdwatching tour, Lake Tawakoni State Park, 903-425-2332

May 29 * Marine tour, Matagorda Island State Park and WMA, 512-983-2215

I U N E

June: ** Bat emergence tour each Thursday and Saturcay, Old Tunnel WMA near Fredericksburg 210-868-7304

June: Sorman Fclls tour each Saturday and Sunday, Colorado Bend State Park near Bend, 915-628-3240

June: * Wild cave tours each Saturday and Sunday.
Colorcdo Bend State Park near Benc, ?15-628-

June 1: ** Flora and Fauna of the Southern Plains Lubbock Lake Landmark State Historical Park at Lubbock, 806-765-0737

June 2: * Bat flight and interpretation at Green Cave, Kickapoo Cavern State Natural Area near Uvalde, 210-563-2342

June 3-5: Frontier Festival living history presentation, Fort Richardson State Historical Park. Jacksboro, 817-567-3506.

June 4-5: D-Day plus Fifty, marking the 50th anniversary of the invasion of Europe at Normandy. Battleship Texas at San Jacinto Historical Complex, LaPorte, 713-479-2431.

June 4: * Birdwatching, James E. Daughtrey WMA at Choke Canyon Reservoir, 512-786-3868

June 4: * Photography tour on Caddo Lake, Caddo Lake State Park and WMA, 903-679-3743

June 4: * Texas horned lizard and tortoise tour, Chaparral WMA near Artesia Wells, 210-676-3413

June 4: * Big Bend Ranch bus tour of Fort Leaton, Big Bend Ranch State Natural Area, 915-229-36131

June 4: * Birdwatching tour, Caddo Lake State Park and WMA, 903-884-3833

June 4: "Back to Rath's Trail" historical festival, Hamlin, 915-576-3493 (days) or 915-576-2325 (evenings)

June 4: * Heart of the Hills tour, Heart of the Hills Fisheries Research Station near Kerrville, 210-866-3356

June 4-5: Texas Endangered Species Conservation Convention, Fossil Rim Wildlife Center near Glen Rose, 817-897-2960

June 4, 18: * Observation of sinkhole and bat flight, Devil's Sinkhole State Natural Area near Brackettville, 210-563-2342

June 4, 9, 18, 23: * Boat tour of coastal marsh, Sea Rim State Park near Sabine Pass, 409-

June 4, 11, 18, 25: * "Calling All Predators," Eisenhower State Park at Lake Texoma, 903-465-

June 4, 11, 18, 25: * Painted bunting tour. McKinney Falls State Park at Austin, 512-243-

June 4, 11, 18, 25: * Nature trail tour. Abilene State Park at Abilene, 915-572-3204

June 4, 11, 18, 25: * Nature walk, Pedernales Falls State Park in Blanco County, 210-868-7304

June 5: * Hills Sport Shop bike race, Palo Duro Canyon State Park near Canyon, 806-488-2489

June 5: * Colonial waterbird tour, J. D. Murphree WMA at Port Arthur, 409-736-2551

June 5, 12, 19, 26: * Birdwatching tour, Pedernales Falls State Park in Blanco County, 210-868-7304

June 11: * "Redfish, an Inland Oddity," Fairfield Lake State Park at Fairfield, 903-389-4514

June 11: * Bird walk and hatchery tour, GCCA/CPL



TEXAS CONSERVATION PASSPORT TEXAS PARKS & WILDLIFE

SM

Marine Development Center at Corpus Christi, 512-939-7784

June 11, 25: * Ecosystem boat tour, Caddo Lake State Park and WMA, 903-679-3743

June 11, 25: * Bird tour, Balmorhea State Park and Phantom Cave Springs at Balmorhea, 915-375-2370

June 12: * Horseback tour, Hill Country State Natural Area in Bandera County, 210-796-3984

June 16: * Seining demonstration, Lake Ray Roberts State Park Isle du Bois Unit near Denton, 817-686-2148

June 16: * Fisheries survey techniques, Lake Ray Roberts State Park Isle du Bois Unit near Denton. 817-686-2148

June 17: * Bus tour, Big Bend Ranch State Natural Area, 915-424-3234

June 18: * Photography seminar, Caddo Lake State Park and WMA, 903-884-3833

June 18: * Beachcombing and shelling tour, Matagorda Island State Park, 512-983-2215

June 18: * "The Nature of Fire." Fairfield Lake State Park at Fairfield, 903-389-4514

June 18: * Wildlife track identification, Choke Canyon State Park Calliham Unit, 512-786-3868

June 18: * Penn Farm Agricultural History Center tour, Cedar Hill State Park at Joe Pool Reservoir. 214-291-3900

June 18: * Bird walk, Lake Brownwood State Park at Brownwood, 915-784-5223

June 18: * Bus tour, Big Bend Ranch State Natural Area, 915-424-3327

June 25: * "Trot and Drop," Martin Dies, Jr., State Park at Steinhagen Reservoir, 409-383-0144

June 25: * Bird and nature tour, Lake Tawakoni State Natural Area, 903-425-2332

June 25: * Marine ecosystems tour, Matagorda Island State Park and WMA, 512-983-2215

June 25: * "Canyon Rumblings," Caprock Canyons State Park near Quitague, 806-455-1492

Emmy Award Winning Series

TELEVISION SCHEDULE

Watch for our companion television series, "Texas Parks & Wildlife," on your local PBS affiliate. All times p.:n. unless otherwise noted.

In stereo where available

CITY/STATION	DAY	TIME
Amarillo KACV, Ch. 2	Sunday	4:00
Austin, KLRU, Ch. 18	Saturday	5:00
College Station KAMU, Ch. 15	Tuesday	7:30
Corpus Christi KEDT, Ch. 16	Thursday Friday	7:30 10:30 a.m.
Dallas/Ft. Worth KERA, Ch. 13 Also serving Abilene, Denton, Longview, Marshall, San Angelo, Texarkana, Tyler, Wichita Falls, Sherman	Friday	6:30
El Paso KCOS, Ch. 13	Sunday	7:00
Harlingen KMBH, Ch. 60 Also serving McAllen, Mission	Tuesday	8:00
Houston KUHT, Ch. 8 Also serving Beaumont/Port Arthur, Galveston, Texas	Monday	7:30
City, Victoria Killeen KNCT, Ch. 46	Tuesday	3:00
Also serving Temple Lubbock		
KTXT, Ch. 5	Saturday	7:00
KOCV, Ch. 36 Also serving Midland	Saturday	7:30
San Antonio KLRN, Ch. 9	Thursday	12:00
•		

Programming schedules are subject to change, so check your local listings.

Look for these stories in the coming weeks

MAY 1-8: Ecological concerns of the Gulf Intracoastal Waterway; sal line fishing: rattlesnake roundups.

MAY 8-15: The original Kings Highway, Los Caminos Reales; the armadillo; rock

MAY 15-22: Outdoor recreation for the physically disabled; binoculars one family's closeness with nature

MAY 22-29: Game wardens in the East Texas Pineywoods; habitat preservation for the Rio Grande turkey; the Edwards Underground Aguifer.

MAY 29-JUNE 5: Comal Springs; an unusual sports tournament; mountain rescue...

Continued from page 27

Teague, Miss Louisiana of 1993.

Boat owners interested in participating should call Tommy Tucker at 409-564-7521. For information about the event, call Hinton at 409-787-3110.

Fisheries Branch Plans Expo Programs

If you're planning to visit the 1994 Texas-Mexico Hunting & Fishing Expo on May 26-29 at Houston's Astro Hall/Astrodome complex, be sure to stop by Texas Parks and Wildlife Department's coastal fisheries area.

Youngsters especially should be interested in fish printing, marine animal drawing stations, marine touch boxes and saltwater touch tanks. There also will be displays on fisheries history and programs, catch-and-release techniques with video, artificial reef program with video, coastal fishery sampling boat and gear, an ecosystem mural and a wide variety of printed information. Bass Tubs also will be there with live saltwater fish. The department's booth is co-sponsored by the Gulf Coast Conservation Association.

Sportsman's Extravaganza Draws a Crowd In Tyler

Texas Parks and Wildlife Department and Texas Forestry Association officials said their third annual Sportsman's Extravaganza held recently in Tyler brought in more than 6,000 visitors and produced revenue for several conservation efforts.

One of the most popular features of the show was a new 4,500-gallon fishing tank, where youngsters caught more than 900 of the 1,200 rainbow trout stocked during the show. The tank was purchased with funds raised at the previous year's event.

Displays and events at the show spanned the outdoor spectrum, with more than 60 display booths, fishing demonstrations, boats and sporting goods.

Proceeds from the show help fund outdoor recreation and education projects in East Texas. Past Extravaganzas contributed to the purchase of night-vision equipment for game wardens, a weigh station for Purtis Creek State Park Lake, wildlife posters and a 4-H educational display module that can be loaned to schools.





Eyes of Texas

(signed, softcovers)

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Continued from page 25

is shaded by century-old trees, offering a cool stroll through the pine woods.

For further information on local attractions and accommodations, contact the Rusk Chamber of Commerce, P.O. Box 67, Rusk, Texas 75785; 903-683-4242 or 800-933-2381.

Caddo Indians To Dance At Caddoan Mounds

For the first time in recorded history, members of the Caddo Indian tribe will dance at the site of their ancestral village, Caddoan Mounds State Historical Park near Alto in Cherokee County.

This special performance by members of the Caddo Adais, descendants of the original Texas tribe, will begin at 1 p.m. Saturday, May 21.

Dressed in traditional Caddo costumes, the group of some 15 men, women and children will perform a series of social and ceremonial dances, as well as a Cherokee dance with visitor participation. Tribal Chief Rufus Davis of Houston will describe the history and symbolism of the dances.

Caddoan Mounds, located six miles west of Alto on State Highway 21, offers a look at Caddo village life with a museum, replicas of Caddo houses and walking trails. The park is open Friday through Monday each week from 10 a.m. to 6 p.m., and on Thursdays by appointment. For further information, call the park at 409-858-3218.

Commemorative Envelopes to Benefit Fort Davis

An organization called Friends of Fort Davis National Historic Site is offering a set of two second-day-issue envelopes commemorating the Buffalo Soldier Stamp, with proceeds dedicated to continued restoration and preservation of Fort Davis.

One envelope's cachet features a Buffalo Soldier with the restored military post in the background. The other depicts the guidons of the 9th and 10th U.S. Cavalry. The artwork was rendered by Western artist Bill Leftwich of Fort Davis.

To order, write to Friends of Fort Davis, Box 1023, Fort Davis, Texas 79734. Send \$3 for one envelope or \$6 for both, along with a self-addressed, stamped envelope.

500 miles from nowhere, it'll give you a cold drink or a warm burger...

NASA space flights inspired this portable fridge that outperforms conventional fridges, replaces the ice chest and alternates as a food warmer.

By Charles Anton

ecognize the ice cooler in this picture? Surprisingly enough, there isn't one. What you see instead is a Koolatron, an invention that replaces the traditional ice cooler, and its many limitations, with a technology even more sophisticated than your home fridge. And far better suited to travel.

What's more, the innocent looking box before you is not only a refrigerator, it's also a food warmer.

NASA inspired portable refrigerator.

Because of space travel's tough demands, scientists had to find something more dependable and less bulky than traditional refrigeration coils and compressors. Their research led them to discover a miraculous solid state component called the thermo-electric module.

Aside from a small fan, this electronic fridge has no moving parts to wear out or break down. It's not affected by tilting, jarring or vibration (situations that cause home fridges to fail). The governing module, no bigger than a matchbook, actually delivers the cooling power of a 10 pound block of ice.

From satellites to station wagons.

Thermo-electric temperature control has now been proven with more than 25 years of use in some of the most rigorous space and laboratory applications. And Koolatron is the first manufacturer to make this technology available to families, fishermen, boaters, campers and hunters- in fact anyone on the move.

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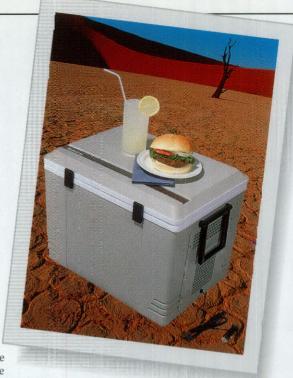
You're cruising comfortably in your car along a busy interstate with only a few rest stops or restaurants. You guessed it... the kids want to stop for a snack. But your Koolatron is stocked with fruit, sandwiches, cold drinks, fried chicken... fresh and cold. Everybody helps themselves and you have saved valuable vacation time and another expensive restaurant bill.

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upside down. Empty, the large model weighs only 12 pounds and the smaller one weighs just seven. Full, the large model holds up to 40 12-oz. cans and the smaller one holds six.

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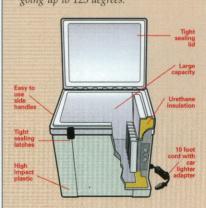




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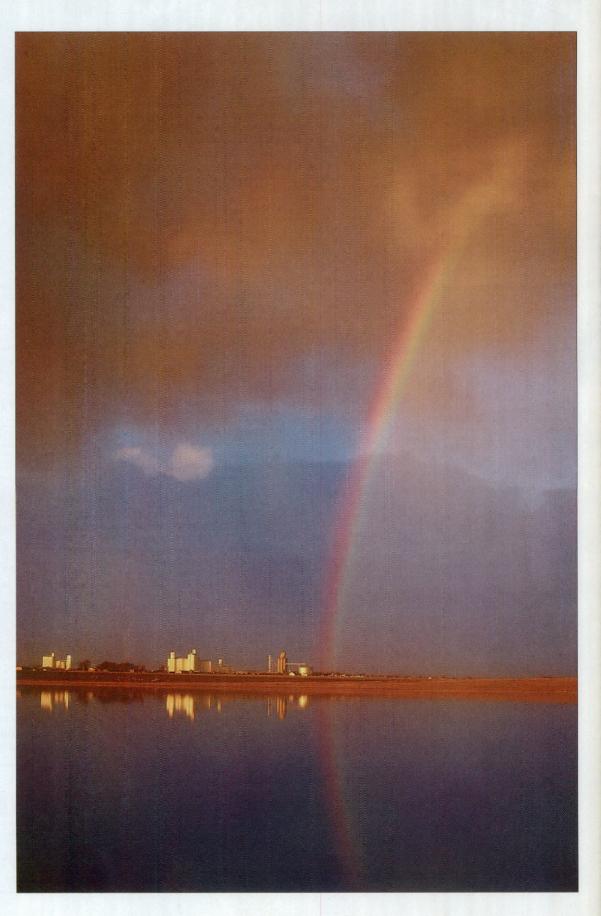
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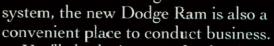


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