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TEXAS PARKS & WILDLIFE

JANUARY 1992





TEXAS PARKS & WILDLIFE

January 1992, Vol. 50, No. 1

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Dedicated to the conservation and enjoyment of Texas wildlife, parks, waters and all outdoors.

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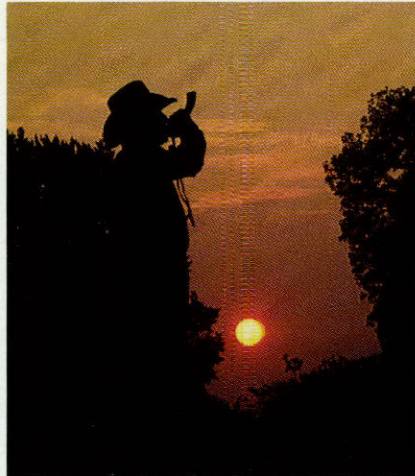
COVERS—Front: Well-known for its birds, Bentsen-Rio Grande State Park also is home to mammals such as this bobcat. (Story on page 6.) Photo by Steve Bentsen. Nikon F3, Nikkor 400mm lens, 1/500 second at f/5.6, Kodachrome 64 film. **Inside Front:** Roadrunner on ocotillo. Photo by Glen Mills. Nikon F3, Nikkor ED lens with 1.4X teleconverter, 1/125 second between f/5.6 and f/8, Kodachrome 64 film. **Back:** This rock art carving is doomed to destruction as water seeps through the crevice that dissects the drawing. (Story on page 28.) Photo by Wyman Meinzer. Canon F1, 50mm macro lens, 1/15 second at f/16, Velvia 50 film.



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At Issue

This winter I spent some time at Indian Hot Springs on the Rio Grande southwest of Valentine. We took the mineral baths and talked late into each night about conservation, politics and the wonders of a place that has provided opportunities for good health and lively conversation for thousands of years.

In this issue Dan Flores weaves the powerful tale of another ancient Texas place in "In Search of Kokopelli." The natural resources of Texas have invited, terrified and sustained peoples from throughout the Americas for millennia, and what later became our great state was a cosmopolitan land centuries before the Europeans came. Like our vast biological assets, these rich and culturally valuable treasures must be protected. Too many already have been vandalized or disappeared from neglect.

The systematic protection and interpretation of Texas's cultural resources is a facet of our responsibility that sometimes gets lost in the current groundswell of interest in the environment. It is an aspect of our stewardship that is critical to the understanding of our history and our sense of place.

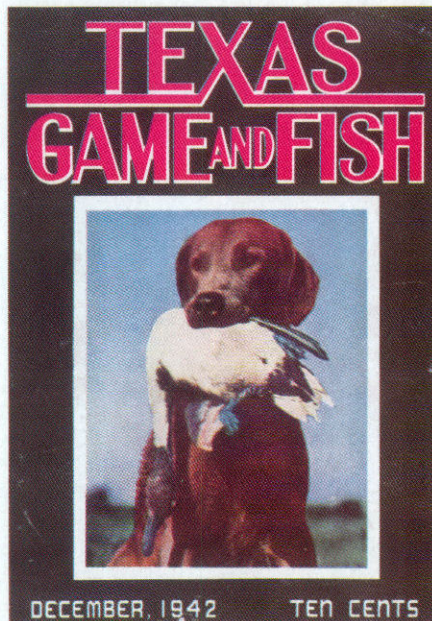
These pages have been interpreting the unique resources and cultures of Texas for half a century now. Our first issue was published in December 1942 as *Texas Game and Fish* by the Texas Game, Fish and Oyster Commission. The magazine has been published continuously since then, and has never missed a month. Early issues reflected wartime concerns—ads urging people to buy war bonds and articles extolling the relaxing virtues of fishing for returning soldiers. The focus was on hunting and fishing, but early issues featured nongame animals too and even an occasional environmental story on a topic such as pollution.

The Game and Fish Commission merged with the State Parks Board in September 1963. The magazine noted the change, but kept the name *Texas Game and Fish* until April 1965, when it became *Texas Parks & Wildlife*. Stories about state parks had appeared from time to time before the merger, but after the name change state park coverage increased considerably and stories on history and archaeology began to grace our pages as well.

In the 1980s, the magazine began to broaden its editorial scope to appeal to Texans' increasingly diverse interests in the out-of-doors and this tradition will continue to broaden our horizons in the coming years.

During 1992, our 50th year, we will give readers a glimpse of past issues of the magazine every month, and celebrate our Golden Anniversary with a special issue in December.

—Andrew Sansom, Executive Director



Our first issue, published in December 1942. The magazine was known as *Texas Game and Fish* back then, and the agency was the *Texas Game, Fish and Oyster Commission*. We'll bring you glimpses into the past all year.

Pumas Not Endangered

I always enjoy the magazine. However, a statement in the Fossil Rim story in the October issue is incorrect: "Other endangered Texas species targeted by the center include the jaguarundi, ocelot, jaguar, puma and Mexican bobcat."

The puma definitely is not endangered. If there were so few pumas that they were endangered, they would not be the scourge of livestock owners along the Rio Grande and Pecos Rivers that they are today. And they would not be moving into areas such as mine in Val Verde County in such numbers that we see them regularly. We saw three pumas (or perhaps the same puma three times) in two weeks.

Claudia Abbey Ball
Comstock

■ Ms. Ball is correct. The puma, or mountain lion, is not an endangered species. According to Gail Rankin at Fossil Rim, the center is planning to acquire a puma, since studies of certain non-endangered animals can provide useful information for captive breeding of closely related endangered species such as the Costa Rica puma, the Florida panther and the Eastern cougar. Rankin said the center's breeding of greater prairie chickens, which are not endangered, is allowing the staff to refine their captive-breeding management techniques and facilities in preparation for receiving endangered Attwater's prairie chickens this spring.

"With the increased environmental pressures on many species, early research and preparation could be their best hope to stay off the endangered list," said Rankin.

Try Bowhunting

A letter in the October issue from Mr. Ron Silliman stated: "Last year was the first year I have not hunted. I have some great memories from the hunting trips, but today there seems to be a hunter behind every tree. The leases have just about priced themselves out of business and hunting is



LETTERS

just not fun anymore.”

I'd like to suggest that he take up the sport of bowhunting. There certainly is more of a challenge, and if success is measured in terms of enjoyment afield rather than the kill itself, he might take home many more good memories.

Fewer hunters are competing for space and there are a lot more days available for hunting. He'll find that archers have a slightly different philosophy of hunting, which he might like.

He could obtain a nonresident license in one of the western mountain states and hunt in the vast public land areas of the National Forests for what it costs to lease private land in Texas.

R.S. Alexander, M.D.
Friona

Backyard Wildlife

I have solved the problem of squirrels in the bird feeder. A 1¹/₂-inch antenna pole with an empty half-gallon plastic liquor bottle snugly fitted upside down has done the trick. They can't seem to get over it.

This is our second year here feeding the gray squirrels and we have seen no young ones from these obviously overfed neighborhood critters. We have an owl or two, and we would like to know what kind of den to build to help defeat the predators so the squirrel population will increase.

We have a lot of blackbirds or brown-headed cowbirds that really do a number on the feed we put out for the songbirds and squirrels. What kind of trap or other measure can we take to discourage or get rid of these birds?

N.A. Gilchrist
Vidor

■ Subdivisions in many East Texas communities have limited den trees since most hardwoods have not at-

tained the height and size needed. Squirrel nest boxes can help. The boxes should be attached to trees 20 to 30 feet above the ground. Where possible, rest the box next to a limb. Boxes should be 10 to 12 inches wide and 14 to 16 inches long. Rot-resistant lumber such as cypress should be used, but don't use treated lumber. Drill a two- to three-inch entrance hole near the top and install a hinged bottom to facilitate cleaning.

Blackbirds and brown-headed cowbirds are protected by the Migratory Bird Act and cannot, except under special circumstances, be trapped unless you obtain a federal and state permit. Such birds are difficult to discourage. You might try restricting perching areas at the feeder or reducing the entrance area to the feed to birds smaller than the blackbirds. Try using bird seed that does not contain wheat; brown-headed cowbirds seem to prefer wheat but it is not readily consumed by other birds.

Pearl Harbor Memories

I enjoyed very much the article in the November issue, "The Gathering Storm." In the article was the statement, "Stillwell said that while Kimmel did not believe an attack on Pearl Harbor was possible, neither did anyone else." I would like in a small way to contradict this.

In 1941 I was a 2nd lieutenant with the 98th regiment (AA) stationed at Schofield Barracks. Earlier I had been with the 62nd Coast Artillery regiment (AA) at Ft. Totten, Long Island, and having become enamored of army life I had applied for a permanent commission. My interview for the appointment was held in November 1941 at Schofield Barracks. Three officers did the interviewing.

I told the officers that the mission of my regiment was the anti-aircraft defense of Wheeler Field. When they asked if my regiment could satisfactorily perform its mission I answered, "In no way." I explained that the only probable enemy we had was Japan. The

guns we had were designed to shoot at land-based bombers and, to my knowledge, Japan did not have any bomber bases close to Hawaii so they would have to attack with aircraft carrier planes.

"What would you do?" the officers asked.

I said I would spread out our planes rather than keep them parked closely together as they were for anti-sabotage protection. I would ring the field with automatic weapons and keep a 24-hour alert at all times, as I believed an attack by Japan was imminent.

"You think you know more than General Short?" they asked me.

"About anti-aircraft I sure do," I replied.

"Lieutenant," said one of the officers, "you are very close to insubordination for which you can be court-martialed!"

This pretty much broke up the interview. Needless to say, I was not recommended for a permanent commission. About three days after the attack I met up with one of the officers who had interviewed me. He said, "Lieutenant, I see what you meant."

So there was no agreement that Japan would not attack Hawaii. Basically, I predicted Pearl Harbor—its timing and method of attack—and almost got myself court-martialed for doing so.

Frederick H. McKinstry
El Paso

Correction

The dates for the winter segment of the mourning dove season for the Central and South Zones were incorrect in the Outdoor Datebook section of the December magazine. The correct dates are Jan. 3-12 in the Central Zone, Jan. 3-19 in the South Zone.

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. We reserve the right to edit letters for length and clarity.

Texas Parks & Wildlife

Dedicated

to the conservation

and enjoyment

Magazine

of Texas wildlife,

parks, waters and

all outdoors.

Celebrating Fifty Years



MAGAZINE

This war shall change many of our concepts and habits. One of the aims of "Texas Game and Fish" during the war period shall be to inspire in all of us the traditional love of Texans for hunting, fishing and nature. After the harshness, brutalities and sacrifices of the present conflict the Texas man and womanhood that has succeeded in winning the war should return to a pleasanter place in which to live, with the invigorating influence of the out-of-doors doing its full share to cleanse their spirits and temper their character. The immediate objective of "Texas Game and Fish" shall be for a realization of this objective.

Editorial

DECEMBER 1942

A Whooping Crane dance of joy at surviving the long, hazardous flight from the far northland was described by Joshua J. Harman, assistant manager of the Aransas National Wildlife Refuge.

Harman was checking in the majestic birds down on their Texas coast wintering grounds. Noting the arrival of Number 21 of the apparent 28 whoopers alive, Harman wrote: "One of the whoopers began to bow and pick up things to offer the other bird. It began to pivot and whirl and then leap into the air.... After this exhibition, the birds walked across the pond to where twenty-three sandhill cranes were standing, where-upon one of the sandhills did a short dance."

"Whoopers Show Joy at Reaching Refuge"

JANUARY 1957

A massive dam that will drastically alter fishing prospects for many Texans soon will span the historic Rio Grande River 12 miles north of Del Rio.... Since this great body of water will lie on our international boundary as a joint venture of the United States and Mexico, it has appropriately been named AMISTAD, which means "friendship" in Spanish.

"Reservoir of Friendship"

AUGUST 1964

Are you aware of disappearing wildlife habitat, more leisure time, new lakes, inflation, hybrid game birds and fish and overpopulated game ranges?

They're here, in 1973.

"Sportsmen Pay Their Way"

JANUARY 1973

TEXAS GAME AND FISH



APRIL, 1943

TEN CENTS



*Snow birds and rare birds flock to
Bentsen-Rio Grande State Park*

SANCTUARY

by Will Myers and Rusty Yates

To enter Bentsen-Rio Grande State Park is to glimpse subtropical woodlands enduring in the face of adversity. The park, adjacent to the Rio Grande near Mission, is an island of the natural set down in a sea of the unnatural. Because 99 percent of this region's original habitat has been lost to development, areas such as Bentsen-Rio Grande have become important sanctuaries for wild

plants and creatures.

Before agriculture and urban development quenched their thirst from the Rio Grande, the river's course was continually shifting. Seventy miles below the San Juan River, where Bentsen State Park now is located, three channels separated and reached for the salt water like a three-fingered claw. One finger pointed northeast, with its brackish water flowing into the Laguna Madre;

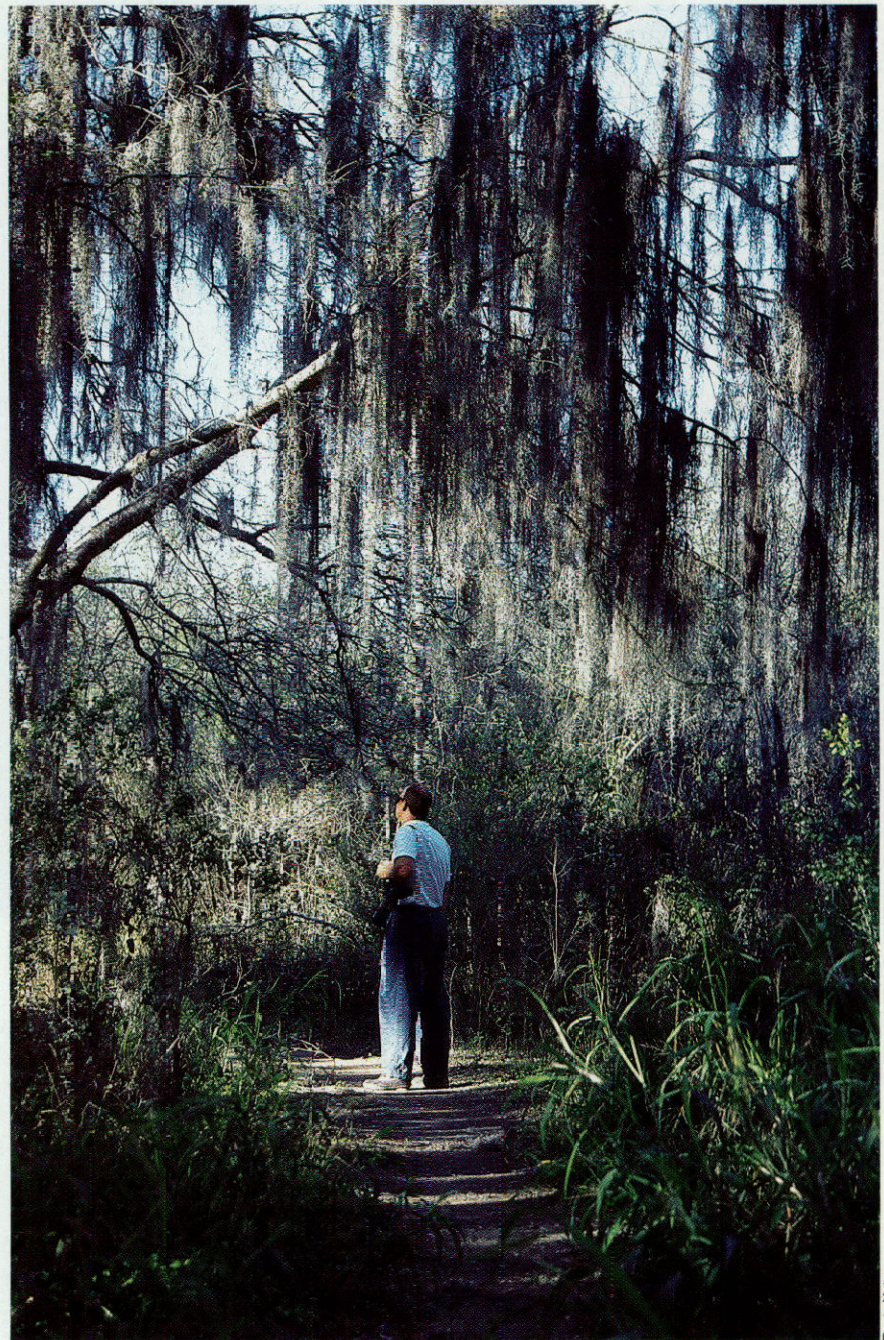


Laurence Parent



Glenn Hayes

Photography enthusiasts have discovered that Bentsen-Rio Grande is one of the best spots in the state for bird photos thanks to year-round residents such as the Altamira oriole (left) and a host of visiting species.



Rusty Yates

another gouged scars into a series of silted basins and lakes called resacas, while the southernmost flowed placidly by the lomas of South Bay before reaching the Gulf. These flexures built a deltaic plain of rich, alluvial soils.

Above this plain, located just three degrees north of the Tropic of Cancer, arid, temperate air meets moisture-laden air to create a subtropical climate with a 320-day growing season. Into



Glenn Hayes



Glenn Hayes



Jim Cammack

The park's bird checklist contains 296 species, including the cactus wren (top), the great-tailed grackle (above) and the green jay (above right), found only in the southernmost part of Texas.

this receptive substrate, which includes one-half of the Mexican State of Tamaulipas and the four southernmost counties of Texas, is stitched a patchwork of 11 biotic communities. The collective tapestry is a part of the Tamaulipan Biotic Province.

Bentsen State Park's 587 acres are a fragment of this biological tapestry. It includes remnants of the penetration of two of the 11 biotic communities, the

riparian woodland and the mid-delta thorn forest. This habitat is found no farther north than this particular region along the Rio Grande. Where water is most available, along resacas and the river bank, woody species intrude upon the more arid adapted brush species. These interlopers include the cedar elm, sugar hackberry, Rio Grande ash and black willow. In localized areas of the park, Spanish moss drapes the trees,



Rusty Yates

corridor includes the Santa Ana and Lower Rio Grande Valley National Wildlife Refuge System; Bentsen-Rio Grande, Falcon and Resaca de la Palma State Parks; the Las Palomas Wildlife Management Area; the Audubon Society's Sabal Palm Sanctuary and a preserve recently acquired by The Nature Conservancy and The Valley Land Fund, along with local parks and other private preserves.

According to Larry Ditto, manager of the Lower Rio Grande Valley National Wildlife Refuge, long-range plans call for the corridor to stretch from Falcon Dam to the Gulf of Mexico. "Federal acquisition expenditures have

A pet cockatoo that escaped has been thriving in the park, adding one more unusual species to Bentsen-Rio Grande's avian population.

filtering the sunlight in a way reminiscent of the Big Thicket of East Texas.

The brushland species are dominated by thicket-forming thorny shrubs and small trees such as retama, colima, huisache, honey mesquite and anacua. The interweaving of these species forms a dense canopy which, terrariumlike, helps maintain moisture in the face of variable rainfall and high evaporation.

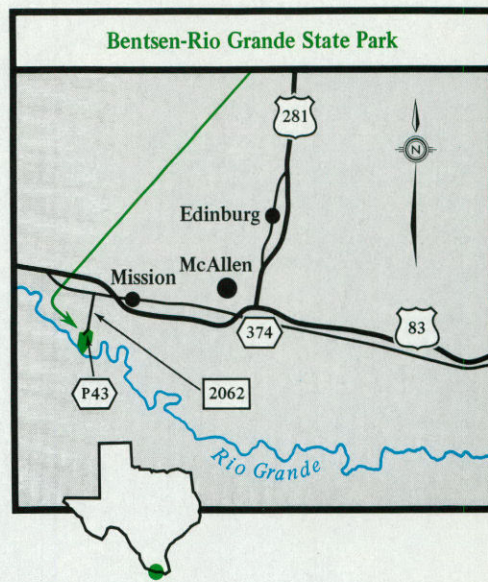
This botanical richness coupled with water availability provides the park with the habitat necessary to sustain a wealth of animal life. Peering low into the brush one might find 11 species of amphibians, 34 species of reptiles and 35 species of mammals. Some of the more unusual indigenous residents include the Rio Grande lesser siren, the giant toad (up to seven inches long), the Texas tortoise and the least shrew. This region is famous for the sightings of two rare cat species—the jaguarundi, a housecat-sized weasel-like cat, and the ocelot, a medium-sized (20 to 25 pounds) spotted cat.

But to gaze up into the capped light of the canopy is to search for Bentsen's true drawing card, its birds. Some 296

species provide the park an abundance of opportunities for birders to fill out their checklists. Year-round residents include paurauges, green jays, chachalacas, white-tipped doves and Altamira orioles. Visiting species such as the groove-billed ani and the elf owl may be found during migratory periods, and rarities include the hook-billed kite, rose-throated becard and the ringed kingfisher. (See birding box.)

The confluence of two major flyways—Central and Mississippi—funnels migratory species to the region, while tropical species are at the northern limit of their range here, making it difficult for birders to carry enough field guides on their forays. This abundance of birdlife shows vividly how the region's remaining refuges function as internationally significant biological sanctuaries.

Realizing how little of this fragile ecosystem is left, state and federal agencies along with conservation organizations and citizens' groups have established a series of parks and refuges along the Rio Grande collectively referred to as the wildlife corridor. The



Location: Hidalgo County, three miles west of Mission. Take U. S. 83 to Loop 374. Travel west on Loop 374, then south on FM 2062 for 2.6 miles. Enter on Park Road 43.

Facilities: Regular campsites, \$6; campsites with hookups, \$10. Daily entry fee is \$3.

For reservations or information: write Bentsen-Rio Grande State Park, P. O. Box 988, Mission, Texas 78572, telephone 512-585-1107.

been \$9 million annually for the last four years," said Ditto, "making this our highest priority acquisition program in the United States." He also pointed out that funding for the acquisitions is provided by the Land and Water Conservation Fund, which is financed by offshore leasing revenue and not tax dollars.

Most of the corridor stretches along the Rio Grande—an area of maximum biological diversity and density as well as limited commercial use since flood insurance is not available. Today this string of natural habitat islands is all that stands between many plant and animal species and local extinction.

Land for the Bentsen-Rio Grande State Park was acquired between 1944 and 1953 through gifts from the Lloyd M. Bentsen family and purchases by the Texas State Park Board, precursor to the Texas Parks and Wildlife Department. According to Park Superinten-



Rusty Yates

The park's RV loop has the atmosphere of a small town. Many of the visitors return year after year and seem to enjoy each other's company as much as they enjoy the tropical surroundings. The park staff reports that the winter tourists help look after the park.

dent Rey Ortiz, most of the park development occurred in 1968 and 1969. This development was designed to accommodate a variety of recreational uses while preserving the natural beauty and habitats of the park.

An inner loop for RV camping features underground utilities, bathhouses and a waste-treatment facility. From December to April these campsites are in demand by winter Texans, many of whom return every year from throughout the U. S. and Canada.

A zone of thick vegetation surrounds this inner RV loop, providing privacy for campers while screening the area from the outer parts of the park. This thick vegetation is excellent habitat for wildlife. Many of the RV campers keep bird feeders full, making the campground an excellent area for viewing the park's abundant birdlife. The RV loop resembles a small town neighborhood: peaceful, quiet and friendly, making it



Rusty Yates

easy to understand why so many of the campers return year after year. These regular visitors add a special dimension to the park. Park Ranger Robert Rodriguez enjoys the park regulars. "I look forward to their return every year," he said, "I feel like they're family and when they don't arrive on schedule I worry about them." Ortiz shares Rodriguez's appreciation. "The winter tourists care about the park, look after it, help keep it clean and report problems that need attention," he said.

The RV loop and its surrounding native vegetation zone are encircled by a driving loop that provides access to the park's other points of interest. Along this drive are picnic areas, pavilions, restrooms, additional campsites, and one of the park's two resacas. A boat ramp provides access to this 60-acre lake where anglers can cast for bass, sunfish and catfish.

Two hiking trails provide access to the park's more remote areas. The two-mile Rio Grande loop winds its way past the other resaca and down to the river,



Steve Bentzen

Hiking trails provide access to some of the more remote areas.

and the 1½-mile Singing Chaparral trail is located on the east side of the RV loop. Along with a huge variety of birdlife, there is a fascinating mixture of flora along both trails.

Because of extensive damming and

flood control along the river, much of this flora is in decline. Especially disturbing is the loss of many of the park's cedar elm and Mexican ash trees. Elimination of periodic flooding is drying out the area, making it difficult for many of

BIRDING AT BENTSEN

Bentsen-Rio Grande State Park's bird checklist, available at the park office, contains 296 species sighted within the park. Camping in the park allows early morning, evening and night birding. Reservations are recommended during the peak season of December to April. A reservation system was devised to balance the availability of the park's 167 campsites between long-term campers and area residents who typically camp for only a day or two. Reservations can be made for up to 14 days with the stipulation that this period can cover only one weekend. This limitation requires long-term campers, who may reserve as many 14-day periods as they desire, to leave the park at least every other weekend, making campsites available for the weekends when demand

from area residents is highest.

Try not to limit your visit to one day, for this region presents the opportunity to sight up to 370 bird species. A three-day visit could include excursions to Laguna Atascosa National Wildlife Refuge, located on Laguna Madre approximately one hour from the park, and Santa Ana National Wildlife Refuge located 20 minutes southeast of the park.

You can use field guides of both North and Central America since the northern limit of the range of more than 30 tropical species extends into this region. Sightings of endangered species include the peregrine falcon, brown pelican, piping plover, bald eagle and least tern. And at Bentsen-Rio Grande State Park you can add the cockatoo to your life list without making a trip to some exotic location. Two years ago J.R., a pet cockatoo, escaped. Refusing overtures by his former owner and his female companion to return, he has been thriving in the park ever since.

Pack light clothing and a hat, insect repellent, binoculars or a spotting scope, a camera and lots of film. You might find some of the following books useful in making identifications:

"Birders' Guide to the Rio Grande Valley of Texas," by James A. Lane.

"Texas Birds, Where They Are and How To Find Them," by Edward Kutac. Gulf Publishing Company, Houston, Texas, 1990.

"A Field Guide to the Birds of Mexico and Central America," by Irby L. Davis. U.T. Press, Austin, Texas, 1972.

"A Field Guide to the Birds of Texas and Adjacent States," by Roger Tory Peterson. Houghton Mifflin Company, Boston, Massachusetts, 1963.

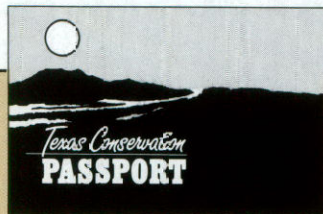
"A Field Guide to Mexican Birds," by Edward L. Chalif and Roger Tory Peterson. Houghton Mifflin Company, Boston, Massachusetts, 1973.

"The Bird Watchers' America," edited by O. S. Pettingill, Jr. McGraw-Hill Book Company, New York, New York, 1965.



Rusty Yates

Farmlands surround the park (above) making Bentsen-Rio Grande's woodlands important to wildlife in the area. A boat ramp provides access to one of the park's two resacas (right), where anglers can fish for bass, sunfish and catfish.



OTHER BIRDING OPPORTUNITIES IN TEXAS

Texans are fortunate to have the greatest variety of birds in the nation within their state's borders and to have places such as Bentsen-Rio Grande State Park in which to watch them.

Last fall, a host of new birding opportunities all across the state opened to holders of the Texas Conservation Passport. Initiated in September, the \$25 passport allows access to the Parks and Wildlife Department's wildlife management areas, many of which are some of the best birding spots in the state.

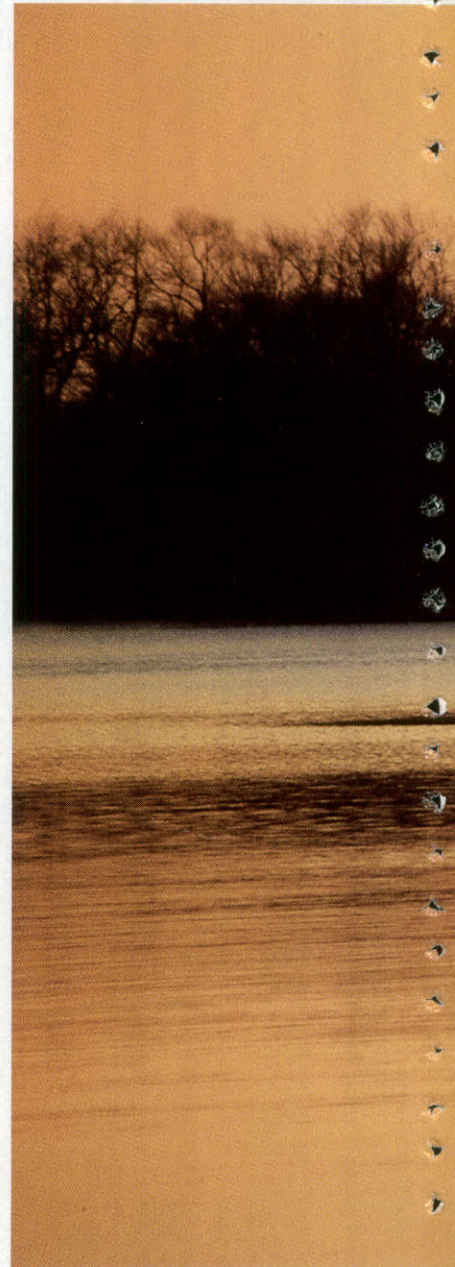
In addition, passport holders can take advantage of special activities and tours led by knowledgeable wildlife biologists. Coming up this spring and summer are a number of birding activities on wildlife management areas. Atkinson Island and Candy Abshier WMAs on the upper coast are planning migrant bird-watching tours this spring as thousands of song-

birds head north to their summer homes. Black Gap WMA in far West Texas will offer guided birding tours in March and April, and Chaparral and Las Palomas WMAs in South Texas will give passport holders a tour of birds in that part of the state. Richland Creek WMA in East Texas is planning a tour focusing on wading birds. Self-guided tours are available at wildlife management areas such as Gus Engeling, Kerr, Lower Neches and Redhead Pond.

Other benefits of the Conservation Passport include access to undeveloped state parks and natural areas, free entry to state parks where an entrance fee is charged and discounts on overnight facilities and department products.

The \$25 Texas Conservation Passport is available at all state parks, law enforcement field offices and the Austin Headquarters. For more information call 1-800-792-1112.

the native plant species to survive. Concern about this led to an encouraging cooperative effort. In November 1990, a large irrigation project was undertaken involving two-thirds of the park's acreage and a portion of an adjacent tract managed by the U. S. Fish and Wildlife Service. The complex water rights exchange was made possible with cooperation from area water districts and efforts by state and federal agencies, along with support from area citizens. In a genuine show of concern one



area farmer loaned the project use of his irrigation pump and allowed access across his land to the river.

Ortiz and Ditto are pleased with the results and are planning future irrigation projects. Signs of new growth are already visible and the park's resaca along the hiking trail, which had almost dried up, was refilled along with a reservoir on the U. S. Fish and Wildlife Service land. Ortiz feels the local cooperation and support is indicative of an increasing interest in the park. "Unlike

20 years ago when I started work here," he said, "people today are better informed, and are more willing to become involved. After all, the whole idea is to bring some of it back for future generations to enjoy."

Places like this park and the wildlife corridor are more than refuges for plants and animals, more than repositories of natural biological information. Parks and wilderness areas are also human sanctuaries, places we can find relief from modern stress long enough to con-

sider how we are part of the natural world and how our actions collectively and individually affect it. These are places where we find it easy to contemplate our spiritual lives. It is no wonder we use the word sanctuary to describe holy places as well as to describe refuges for plants and animals. ★

Will Myers of Austin and Rusty Yates of Crockett are lifelong friends who share common interests in hunting, fishing, conservation and observing the natural world.



Rusty Yates



Great Plains Digger

by Suzanne Martin

Mention the Panhandle and one of the images natives of the Lone Star State likely will conjure up is prairie dogs. The little rascals symbolize that sparse part of the state as much as its long, lonesome stretches of highway.

Prairie dogs still congregate on the Staked Plains, although not in the numbers they once did. And folklore surrounding the little rodents sounds a soft echo compared to the vivid tales once told on the western range.

When prairie dogs roamed and burrowed at will on the Great Plains, some Indians called them "wishtonwish." They spoke the name in a high, piercing tone, imitating the prairie dog's sound. The French based the creature's name on its diminutive size and persistent barking, calling it *petit chien*, meaning little dog. Captain Meriwether Lewis of the famous Lewis and Clark duo first labeled the rodent a barking squirrel, then a burrowing squirrel. He finally captured the spirit of the animal with the name used today, prairie dog.

Even before history settled upon a name, Indians had a legend about the prairie dog's creation. Many years ago, famine descended upon the once plentiful forest. Both man and beast faced sure starvation. The Indians' Great Spirit came to the rescue, planning a fine feast and preparing a highly seasoned meal. The guests arrived, but at

the first bite they tasted a bitter seasoning and began to cough. The loud and continuous coughing offended the Great Spirit. In a rage, he turned the guests into prairie dogs and promptly threw them into the desert where, the Spirit said, their coughing would disturb no one.

And so prairie dogs came to live in the plains, building underground burrows in far-reaching dog towns and generally enjoying an active social life. When cowpunchers and longhorns appeared, the dogs once again found themselves the focus of legend.

Prairie dogs grew unpopular on the early cattle range. Not only did they eat tender grasses desired by the cattle, but the burrows they left behind also caused much consternation for cowboys who often blamed prairie dog burrows for one of the most dreaded occurrences on a trail drive, the stampede.

With the cattle bedded down for the night, men on horseback slowly circled the herd in the darkness, keeping the animals calm and settled. But the simple sinking of a horse's hoof in a dog's burrow created enough commotion to set the cattle wildly running.

Even in daylight prairie dog holes could be dangerous for a cowboy's horse. Riding an unruly horse in dog country asked for trouble, so cowpokes learned to choose a steady mount. They also learned to let horses take a loose rein

when traveling through dog land. A good horse could sense dog holes and avoid a fall that would be dangerous to both horse and rider.

For all the misfortunes blamed on prairie dog burrows, the animal itself lent humor to tall tales told around night fires at Texas cow camps. Cowhands working in the South Plains claimed that during sandstorms, when the wind blew unmercifully, prairie dogs could be spotted ten feet in the air, digging as fast as they could, trying to get back into their burrows. After a windstorm, with the sand swept away, some cowmen swore they saw crooked dog holes sticking 40 feet in the air.

The burrowing prowess of prairie dogs was not their only characteristic committed to legend. Some sharpshooters told of the critter's quickness. Legend holds that a prairie dog could get shot between the eyes yet still be fast enough to jump in a hole and get away. One man, the tale goes, shot a dog clean in two. But before the shooter could claim his prize, the front end of the dog snatched up the hind end and headed down the hole.

The tallest tale of all brings prairie dogs together with Pecos Bill, that wild and colorful legend of the west. Folklore tells that Pecos Bill once used badgers to dig fence post holes, but the varmints strayed from a straight line. He solved the crooked fence-line prob-

Prairie dogs are part of frontier folklore.

lem by switching to prairie dog labor.

People who keep legends alive say that Pecos Bill rounded up prairie dogs, then turned them loose wherever he wanted the fence. The digging dogs went to work and when they got to a depth of two feet, Pecos Bill yanked the rascals out by their tails and stuck a post in the fresh hole. The working partnership continued down the line until the task was done.

Most likely, prairie dogs contributed less to the fencing-in of Texas's wide open spaces than the legend of Pecos Bill would have folks believe. With the wire came more ranchers, and with the ranchers more cattle and prairie dog eradication programs. Soon prairie dog colonies diminished, and dog tales told by Indians or trail-driving cowhands disappeared from the grasslands.

Today most prairie dogs stay rounded up in isolated dog towns. They seem to be adjusting. They still burrow just as deep and often as ever. They still chatter and scatter to their holes just as quickly at the threat of danger. And for folks traveling the long, lonesome stretches of Panhandle highway, prairie dogs, or wishtonwish, still echo the lore of the old taletelling West. ★

Suzanne Martin is a freelance writer who lives in the country near Wills Point, Texas.



Although burrowing owls could do their own digging, they move into the prairie dogs' tunnels whenever they find one.



Despite the name, prairie dogs aren't dogs at all. The French named these chunky ground squirrels "petit chien," meaning little dog, for the animal's small size and persistent barking

Where to See Prairie Dogs

To get a good, long look at modern-day prairie dogs, visit Mackenzie State Park or Muleshoe National Wildlife Refuge.

The 500-acre Mackenzie State Park in Lubbock devotes about 7½ acres to the prairie dog town. On the average, 500 black-tailed prairie dogs make their homes here. Although surrounded by a concrete fence, the town is maintained in a natural environment. Visitors can get within six to eight feet of the prairie dogs.

Mackenzie State Park is open during daylight hours and charges no entrance fee. For information call 806-767-2660, or write to Lubbock Parks and Recreation, City

Hall, Lubbock, Texas 79408.

The Muleshoe National Wildlife Refuge offers a more natural environment for the black-tailed prairie dogs. The 500 inhabitants at the refuge occupy about five towns and wander freely around the primitive campsites. Visitors can get only as close as the prairie dogs will allow.

The refuge is located about 20 miles south of Muleshoe on Texas Highway 214. It is free to visitors and the headquarters is open from 8 a.m. to 4:30 p.m. weekdays only. For information call 806-946-3341, or write to Muleshoe National Wildlife Refuge, P. O. Box 549, Muleshoe, Texas 79347.



William H. Clay

Wyman Meinzer

Gregarious and social, prairie dogs inspired legends throughout the history of the West. Cowboys and ranchers cursed them, but others have found their antics entertaining.





Farming for Waterfowl

Article by Pat Johnson and Grady Allen
Photos by Grady Allen

When a flock of travel-weary snowgeese alights on a Texas Coastal Prairie field or pond on a crisp November day, chances are 100-to-1 that they are visiting private, rather than government-owned, land.

Because of that fact, wintering ducks and geese are at the mercy of private landowners—especially farmers whose agricultural practices can make or break waterfowl habitat. Some species, such as mottled ducks, depend on these wetland habitats the year around.

Waterfowl's dependence on private land has become even more acute during the past half-century because of the

thousands of acres of freshwater wetlands that have been drained, filled or contaminated.

In an organized effort to combat this trend, a group of Gulf Coast area landowners and sportsmen have mounted an effort to restore or replace as many of these lost wetlands as possible. Biologists of the Texas Parks and Wildlife Department are playing an important advisory role in this project, but the actual field work is being done by the landowners, in many cases at considerable personal expense.

One example of this new landowner movement can be seen near El Campo.

Wharton County ranks near the top of rice-producing counties, with about 80,000 acres under cultivation. This crop acts as a magnet for migrating waterfowl.

Richard Raun is a third-generation rice farmer in the El Campo area. His father Norris, in his 70s and still farming, developed many modern farming techniques and innovative irrigation practices. Both father and son agree that farmers are the logical group to restore surface water for waterfowl. "One of the most important jobs a rice farmer has is to control water," said Richard Raun. "It has to be continu-

Gulf Coast landowners are creating wetlands for waterfowl such as pintails (left) to replace the thousands of acres of freshwater wetlands that have been drained, filled and contaminated.

White-fronted geese (right) are among the dozens of waterfowl species that spend the winter on the Texas coast.



ously held on rice during the growing season. The experience a farmer gains by doing this year after year on the same farm gives him the knowledge to maintain wetlands in the most cost-effective way for his particular farm."

Water is more available to farmers than any other group in the area, Raun said. All rice farmers, and many row crop farmers, have access to water from irrigation wells and relift pumps that can move large volumes of water from creeks and rivers to fields.

"Equipment needed for construction and irrigation is expensive. A great deal of that used by farmers in their operations can be used to build and maintain wetlands at a much lower cost than government agencies would have to spend for buying and operating new equipment," said Raun.

The Raun family has pumped water to areas for waterfowl use for more than 20 years. Most of the habitat they provide is flooded rice and soybean fields.

Billy Gadeke and his brother Paul, also of El Campo, have 10 years experience building waterfowl ponds on their farms. They developed a respect for waterfowl as children, hunting with their father at a time when ducks and geese were a major source of winter meat for

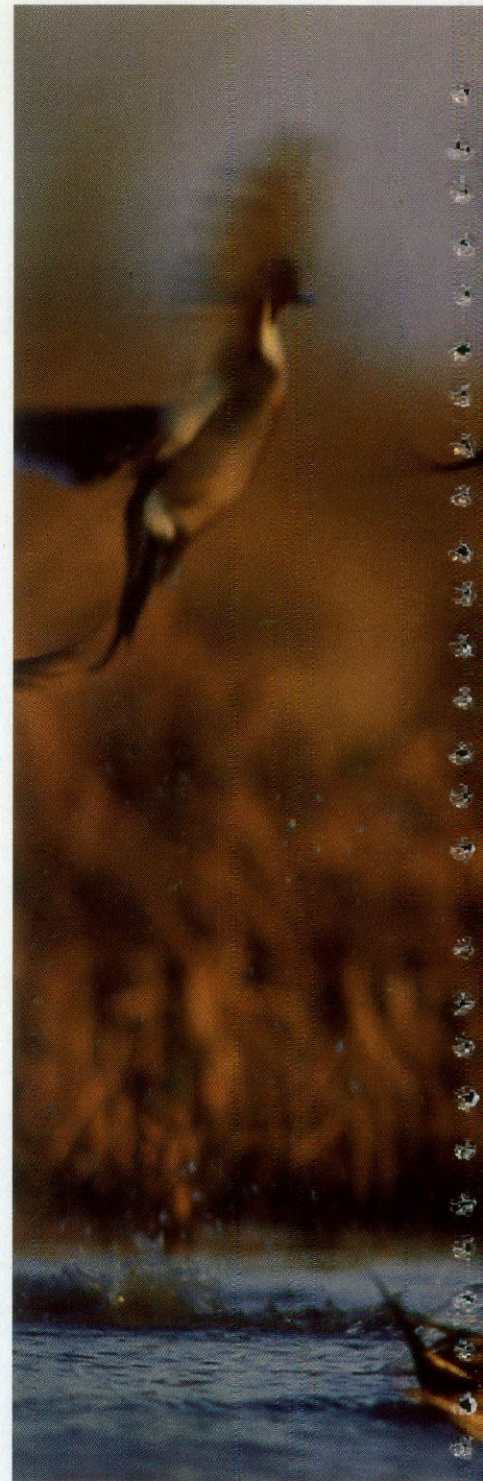
the family. Today, waterfowl habitat for hunting leases supplements their farming operations but probably never would have occurred without a sincere love of nature.

Billy enjoys sharing the sight of thousands of ducks and geese that winter on their farms. Many late afternoons during hunting season, you can find him with an out-of-town hunter, sitting on the tailgate of his truck, just watching the birds come to roost.

Although he's seen it hundreds of times, he says, "I still get excited as flights of geese glide over so low you want to touch them; this is satisfaction enough for all the expense and hard work."

The Gadekes have become expert at providing winter ponds for waterfowl. They have leveled many of their fields and built oversized levees to ensure that a minimal amount of water is lost. Since they live close to their farms, they are able to monitor the water level of their ponds daily. Ample supplies of fresh water have proven to be an effective

Coastal Prairie landowners who have created good wetlands can lease their land for waterfowl hunting, supplementing their income from farming operations.



control against the spread of cholera and other transmittable avian diseases.

In addition to pumping water, they have been successful at diverting rain runoff. This reduces the cost of pumping while conserving needed ground water. They provide more than 100 acres of wetlands each winter. An unexpected benefit was the discovery that they needed less fertilizer on areas that had been used as ponds.

Another area landowner and dentist,



Dr. John Richards, also is active in the preservation of wetland habitat. His family uses a slightly different method of creating wetlands than the Rauns or Cadekes, who flood grain fields on land that is in production. Richards takes acreages out of production to create permanent impoundments.

The development of Richards's wetlands has been directed by Texas Parks and Wildlife biologists Charles Stutzenbaker and David Lobpries.

Stutzenbaker helped the Richards select the location for their lake and was instrumental in its design and construction. "The construction techniques were similar to those in rice farming," said Richards. "We use levees and water gates to control the level of water. The big difference between our pond and a rice field is that the outer perimeter's banks and inner levees are wider to reduce maintenance and loss of water.

"The three major requirements for

A landowner who has taken agricultural land out of production to create permanent wetlands reports seeing flocks of pintails two weeks earlier than in surrounding locations.

good waterfowl habitat are water, food and seclusion. With this in mind, we keep water in at least half of the 100-acre pond at all times. By holding water during the summer, between 200 and 300 mottled ducks are raised every year. Blue-winged teal and wood ducks also



Ducks and geese such as this Canada benefit from the seasonal roost ponds near El Campo. Before the ponds were there, the birds roosted on the coast in the evening, then flew inland to feed. Thanks to the ponds, the birds now can feed near their roosting areas.

Ducks Unlimited. Since then, various state chapters of DU and numerous similar groups have risen to the cause.

Wetlands Habitat Alliance of Texas, (WHAT Ducks), helped control an avian cholera outbreak during the winter of 1988-1989. Dick Tinsley, past president, says the private sector contributed money to pump fresh water, clean old ponds and build new ones where the epidemic had spread. About 1,500 acres of water was pumped into 10- to 30-acre ponds east and west of Houston. The disease subsided almost immediately. Area biologists agree that the fresh water helped avert a major loss. Lobbpries said most of the volunteers who assisted him in gathering the sick and dead birds were hunters, either members of hunting clubs or hunting retriever clubs or individual hunters.

Game Warden Richard Herzog said the hunting clubs in his district are doing a good job policing their businesses, which in turn conserves waterfowl. They direct clients to observe all game laws and adhere to bag limits by correct species identification before shooting.

Another way clubs promote conservation is by ensuring that ducks and geese have time to feed and are not disturbed on their roosting areas. Clubs have a self-imposed rule not to hunt geese past 12 noon and hunting usually is not allowed within 200 yards of the roost. Occasionally a few afternoon duck hunts are conducted over small natural ponds.

Five hunting clubs near El Campo are responsible for more than 700 acres of seasonal roost ponds. Lobbpries estimates there are 75 such ponds on the coastal prairies. These ponds are primarily grain fields that have been flooded for the winter. He has found the majority of ducks and geese in this area roost and feed on or near these seasonal ponds. Only a few years ago, many birds were forced to make long evening flights to the coast to roost and return to the grain fields the next morning to feed.

Lobbpries says that in recent years hunters and farmers have replaced much of the lost habitat. But most of this is

have been observed summering and nesting."

The first ducks to make the migration already have learned to depend upon the sanctuary in spite of its relatively brief history. Flocks of pintails usually can be found there two weeks earlier than in surrounding locations. Other wildlife, including deer, also utilize Richards's wetlands area.

According to Lobbpries, a managed wetland maximizes food supply for wa-

terfowl and will produce 4,000 to 5,000 pounds of food per acre annually. Unfortunately, most of the land with access to water is being farmed. In most cases, taking farmland out of production cannot be economically justified, but the costs of creating wetlands can be offset through hunting leases.

Hunters long have been the driving force behind wetland and waterfowl conservation. They first organized nationally in 1937 with the creation of

available only through January and there still is a shortage during the spring and summer. The flooded grain fields are drained to prepare the land for planting. Some ponds are drained to disperse waterfowl in hopes of reducing damage to land already prepared for planting and in many cases, to growing crops.

Winter cover crops such as rye grass, oats and wheat are especially hard hit. Waterfowl that linger into late spring often are detrimental to early planted rice and feed grains. "The spring migration of ducks and geese has been getting later in recent years," said rice farmer Richard Raun. "We have had some geese staying on our farm as late as April." If continuing efforts to expand wetlands are successful, a solution to the crop damage problem needs to be found.

This year, for the first time, federal farm legislation included funds for wet-

lands habitat. This is a step forward for the preservation and development of wetlands throughout the United States. That portion of the 1991 Farm Bill is referred to as the Wetlands Reserve. This program will be coordinated by the Texas Parks and Wildlife Department, U. S. Soil Conservation Service, U. S. Fish and Wildlife Service and Ducks Unlimited.

The Small Prairie Wetlands Development will have staff assigned to the SCS office in Victoria. A full-time employee will analyze applications for leases to landowners and farmers. Under the Act, the SCS will provide engineering, the TPWD, DU and USFWS will provide funding and technical assistance.

Long-term cooperative agreements that set aside land for the creation, enhancement and maintenance of wetlands are available. In addition to the Wetlands Reserve, other funds are avail-

able through the USFWS, WHAT Ducks and DU. Richards, with Lobpries's assistance, has applied for a grant from DU to construct additional wetlands on his property.

Still another recent development that will be valuable to future wetlands creation is a 2,500-acre demonstration area near Brazoria. This experimental farm and ranch is a research venture by Texas A&M University. The demonstration area will be opened for tours in 1992. The tours will be sponsored by the TPWD, USFWS, Agricultural Stabilization & Conservation Service and County Extension Services. The purpose will be to show farmers and ranchers various techniques used to create and maintain wetlands. ★

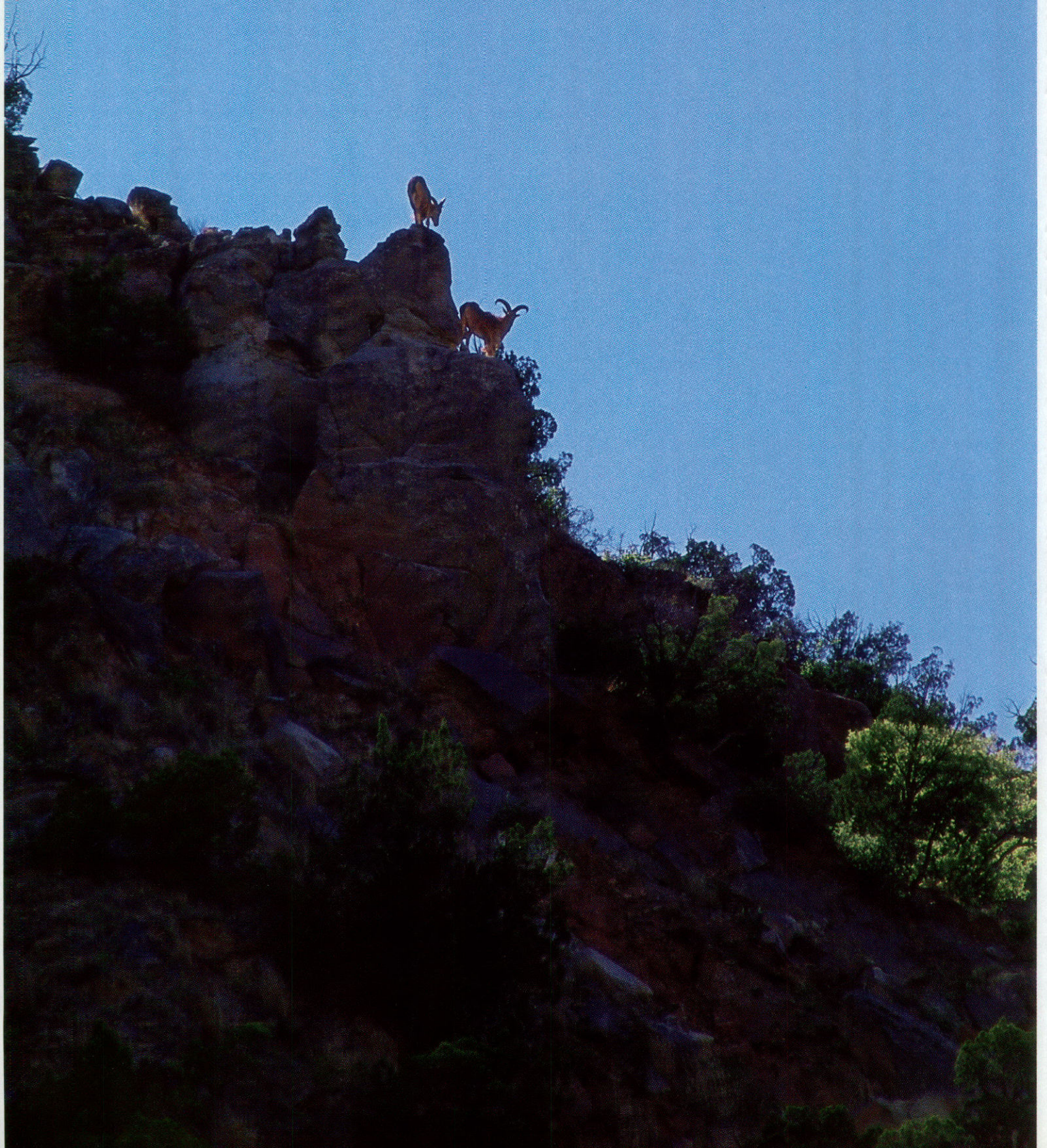
Grady Allen is a freelance photographer from El Campo. Pat Johnson, also from El Campo, owns a goose hunting club.



This year, for the first time, federal farm legislation included funds for wetlands habitat.

Sand Goats

Article by Fred C. Bryant, Photos by Wyman Meinzer



Imported aoudads are wearing out their welcome.

The aoudad is a biological paradox.

Why? Because intriguing and controversial questions always surface whenever this sure-footed, shaggy-chested critter comes up in campfire conversation. Is its nickname Barbado, or Barbary? Is it a sheep or goat? Is it a plus or a minus as an exotic on our Texas rangelands? Answers to these questions don't come easily.

The nickname for the aoudad may be easiest to address. Some people confuse it with the Barbado. But because aoudads were introduced into this country from the Barbary Coast of North Africa, it could be called Barbary, but certainly not a Barbado.

According to Dr. Tom Bunch at Utah State University, Barbado sheep are a domestic breed, evolving from a cross of Middle East hair sheep and European wool sheep on the Caribbean island of Barbados; thus they are of completely different geographical origin than Barbary. Barbado sheep also are from a different genus, the genus *Ovis*. Aoudad or Barbary are *Ammotragus*. So either aoudad or Barbary will do, with aoudad being the preferred name.

Now that we've cleared up popular names, the most interesting riddle about aoudads is that scientists can't agree on *what* they are. Some say they are close to a sheep. But they lack several glands found in true sheep. Further, attempts at crossing aoudads with sheep have failed. But the chromosome count of aoudads is a more precise way of distinguishing it from physically similar animals. An aoudad's chromosome count is $2n=58$. Chromosomes are reported as diploid, that is, the number of chromosomes times two. In the case of the aoudad, it has 58 diploid chromosomes; a sheep's diploid count can range from 42 to 52, 56 or 58.

Aoudads prefer steep, rough terrain (left) which is similar to their native habitat in the Middle Atlas Mountains of Morocco.



If they're not a sheep then they're a goat right? Well, maybe.

Ammotragus is an Arabic term meaning "sand goat." So it looks as if the Arabs thought they were goats. Moreover, crosses between aoudads and goats occasionally have produced fertile offspring. However, such hybrids are rare even under the most controlled conditions. But even though the aoudad is anatomically closer to goats (genus *Capra*), goat chromosomes are $2n=60$ not 58. So with the facts we have today it's probably safe to say aoudad is neither a sheep nor a goat—it's an aoudad.

Now that we have names and classification out of the way, let's turn to the most perplexing issue: whether this exotic is a boon to sportsmen and ranchers, or a headache for game managers and Texas Parks and Wildlife Department biologists. Let's explore both sides of this issue.

Free-roaming aoudads in North America can be found in Mexico and the states of California, New Mexico and Texas. The first came from zoos and were released on a private ranch in Cali-

Aoudads were stocked in Palo Duro Canyon in the 1950s to provide hunting opportunities.

fornia in the 1920s. In the 1940s a New Mexico rancher near Pecos procured some from zoos. They reproduced well enough to become one source for later transplants to the Canadian River drainage in northeast New Mexico. In 1955, another transplant was made in Canyon Largo near Farmington, New Mexico, by the New Mexico Game and Fish Department.

Until the 1950s, Palo Duro Canyon in the Texas Panhandle had few big game animals. The remnant mule deer herds were sparse, and a mule deer stocking had not really taken off by the mid-50s. So landowners requested the Texas Game and Fish Commission, forerunner of today's Texas Parks and Wildlife Department, to find and stock some animals to provide recreational opportunities. In response to that request, the commission released 44 aoudads between 1957 and 1958.

As of 1988, the aoudad population in Palo Duro Canyon was around 500 to

700 animals. In addition, aoudads now occur in huntable numbers in the Hill Country and Trans-Pecos regions of Texas. Most of the Hill Country aoudads reside behind high fences; in the Trans-Pecos region, privately released stock have broadened their range through active dispersal. The statewide population is probably in the 15,000 range. Private releases are occurring even today.

Where they occur, aoudads prefer the steepest, roughest terrain available. I have seen their native habitat in the Middle Atlas Mountains of Morocco in North Africa. The rocky, precipitous slopes formed on reddish soils are found in both Morocco and the Texas Panhandle; this provides the perfect backdrop for the reddish-colored aoudad to blend in with his surroundings. Home range for males in Texas can be four to six square miles, according to researchers at Texas Tech University. Females' home ranges were found to be about half that size.

On the positive side of the aoudad controversy, these creatures probably challenge hunters as much as any big game animal in the United States. They live in the roughest terrain they can find and they are extremely wary. Whether in the rugged canyons of the Palo Duro or the thick cedar of the Hill Country, aoudads head for cover at the first hint of danger. Once, while on a midsummer hike, I watched about 20 of them hightail it over a rimrock in Caprock Canyons State Park where they haven't been hunted in 10 years. So to the true sportsman, they are among the most sporting of game animals. Moreover, with males weighing as much as 300 pounds and having beautifully arched, wide-curving horns, they make a bona fide trophy.

To the rancher, aoudads represent a potential source of income. Most package hunts in the Panhandle fetch anywhere from \$500 to \$1,500. On exotic game ranches in the Hill Country, an aoudad hunt might bring \$1,000 to \$1,500. So a harvest of only five per year could net a landowner at least \$3,000, badly needed cash these days.

From here on, though, the picture



becomes a lot less clear. Native mule deer do not mix well with the aoudad in the Trans-Pecos or the Panhandle. Many ranchers I've talked to say that whenever the two species come in direct contact, the mule deer shies away. I have seen mule deer leave a wheat field as soon as a group of aoudads arrives for a morning meal of fresh green shoots.

Furthermore, a few years back, two Texas Tech University graduate students trekked through about two square miles of some of the best-looking mule deer habitat in Palo Duro Canyon. They jumped 18 head of aoudad and not a

single mule deer. The point is that it seems where we find dense concentrations of aoudads, mule deer are usually absent.

As mentioned above, we don't really know if social behavior is the sole reason for their apparent incompatibility. Research at Texas Tech, supported by research from the New Mexico Division of Game and Fish, has shown that the diets of the two species overlap about 50 percent on a year-around average. Hypothetically, this means that if the habitat is at carrying capacity for both species and the plants they share



become limited, one mule deer is replaced for every two aoudads present. Obviously, this is very difficult to verify in nature.

Although we don't know much about mule deer/aoudad interactions in the Trans-Pecos, we do know that some ranchers are beginning to see a potential problem. A few would like to shoot every aoudad in sight.

The real rub, however, could come where the Texas Parks and Wildlife Department is trying to reestablish the highly sensitive, native desert bighorn. If the mobile and prolific aoudad dis-

perses and occupies classic desert bighorn habitat, we could have a real conflict on our hands. Of all the exotics introduced into Texas over the past 30-odd years, the aoudad would come closest to displacing one of our rarest big game species.

So you make the call. Is the Barbary or aoudad a boon or an albatross? These are the kinds of problems our wildlife biologists face. ★

Fred Bryant is a professor of range and wildlife management at Texas Tech University in Lubbock.

Their fondness for inaccessible spots and a tendency to run for cover at the first hint of danger make the aoudad a challenging game animal. But aoudad populations appear to displace native mule deer populations, making the North African import undesirable in many places.

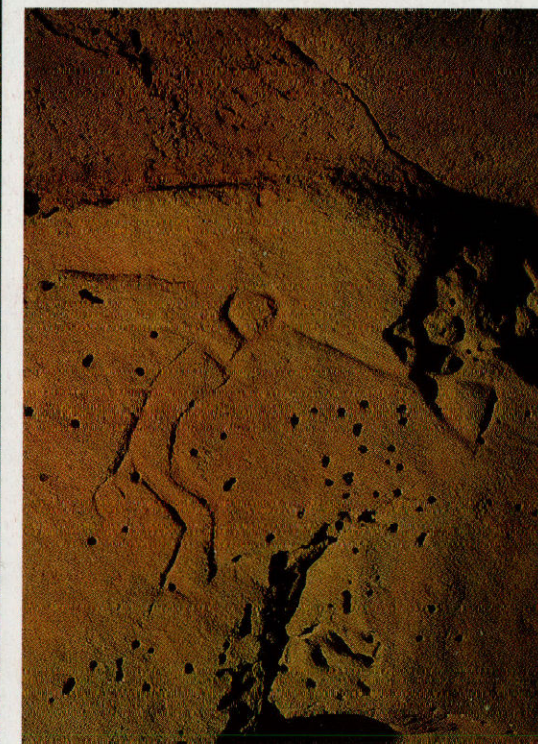
In Search of Kokopelli

Article by Dan Flores, Photos by Wyman Meinzer

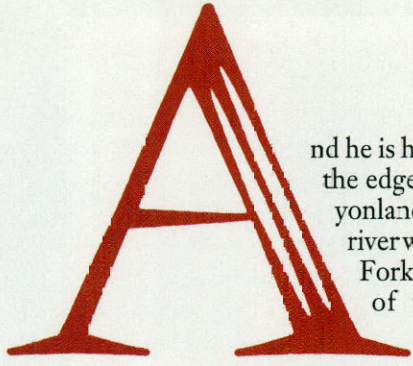
*Vanishing rock art of
the Texas High Plains*

The trick is teaching yourself to think like an Indian. It's not an easy thing to do here at the end of the 20th century. Our dependence on technological gadgetry gets in the way. Urban living and a lack of connection with nature dull the senses from knowing what to look for. But this is how you find rock art sites when you suspect they're there, but don't know exactly where.

It is Kokopelli I am looking for. Kokopelli is a Pueblo Indian mythological figure. He is the humpbacked flute player, a combination of symbols that is meant to convey seductiveness (the flute) and traveling salesman (the "hump" is actually a pack of trade goods). Kokopelli is the Pan of the Southwest, the graphic symbol of the Pueblo traveller and emissary who journeyed far and wide in search of people to trade with — and women to seduce.



A variety of cultures has occupied the mesas around the Canadian River and its tributaries (left), leaving rock art hidden among the cliffs and canyons. Above, the mythological Kokopelli.



nd he is here, somewhere on this mesa at the edge of the Texas High Plains canyonlands, on the west bank of a little river with the euphcnious name North Fork of the Double Mountain Fork of the Brazos. While Wyman Meinzer and Emmett Shedd are inspecting a panel of rock art elsewhere on this breadloaf-shaped formation, I can't resist going in search of Kokopelli. So I am trying to think like an Indian.

First of all, a group of Pueblo traders



Comanche petroglyphs along the Brazos portray a shaman reaching skyward, perhaps to instill fear or a sense of power to those looking on (left). Caverns, sandstone cliffs and horizontal sandstone blowouts are just a few of the places native people chose to incise their symbols (above).



wouldn't have gone far from water in such a baking semidesert. Either incising petroglyphs or painting pictographs takes time, shade and shelter. A suitably smooth sandstone face was essential. And the place might have to reflect that mysterious combination of aesthetics and unusualness that whispered "sacred power spot" to an Indian.

Ten minutes and a couple of hundred yards later I push through a clump of agarita to find myself 50 feet above an overhang, an interesting-looking amphitheater overlooking the river, and know at once that this is it. When Wyman and Emmett finally arrive, I've had half an hour to contemplate Kokopelli's most easterly appearance on the North American continent. He isn't much—just a 12-inch "anthropomorph" carved into the sandstone, the old-fashioned, bell-end gourd flute still



visible, but his hump almost eroded away by time, the ravages of erosion and burrowing insects pointing towards his certain eventual oblivion. But he represents a rich and disappearing legacy: the time capsule images and messages of thousands of years of Indian occupancy of the Texas High Plains. Unless we allow it to be destroyed, the rock art of the Southern High Plains stands as one of the state's unique monuments to 12,000 years of Native American interaction with a landscape that became part of Texas.

Considered for two-and-a-half centuries a part of New Mexico, the Texas High Plains remains for most Texans the most poorly known and underappreciated region of the state. At a glance, the plains would seem an unlikely region for Indian rock art. Yet on the eastern and northern escarpments of the immense Llano Estacado plateau in Northwest Texas there exists an "edge" country, a region of deep canyons and brightly colored badlands. Hundreds of springs leak water from the Ogallala Aquifer, and there are cottonwood and Rocky Mountain juniper groves that once made ideal Indian camps. There is lush, sheltered pastur-

age that once fed thousands of Indian porpies at a time. Four geological epochs are exposed in the cliffs, including the blocky rocks of the Triassic, which in several geological groups create tan, green and brick-red sandstone walls.

This country was not merely the core of the bison range and last stronghold of the historic Southern Plains Indians. It was occupied successively by a variety of cultures during 12,000 years. Ranald Mackenzie finally ran the Comanches, Kicwas and Cheyennes out of these canyons after the Battle of Palo Duro Canyon in 1874. He noted of this canyonland country, "There was a belief, a few years ago, that the edge of the Staked Plain would not support for any length of time a large body of Indians. This is a mistake as there is no country...better adapted to all the wants of the Indians."

For at least 400 years, from about 1450 until 1874, the High Plains canyons also served as the favored trading spots for caravans of traders from New Mexico. Texans who saw the tail end of this trade called the traders Comancheros and thought of them as Mexican rabble who encouraged the Plains Indians to raid.

In fact, most of the New Mexican traders were Pueblo Indians. Ever since these descendants of the Anasazi settled along the upper Rio Grande, they had pushed out onto the plains, exchanging horticultural products with plains bison hunters for meat and hides.

So intertwined were the economies of the two groups that one scholar has referred to the relationship as "mutualism." Eventually speaking Spanish as the language of trade, the New Mexican traders gave the rivers and canyons the names most of them still bear: Colorado, Brazos de Dios, Rio Roja (Red), Canadian, Palo Duro, Blanco, Tule, Casa Amarilla (Yellow House).

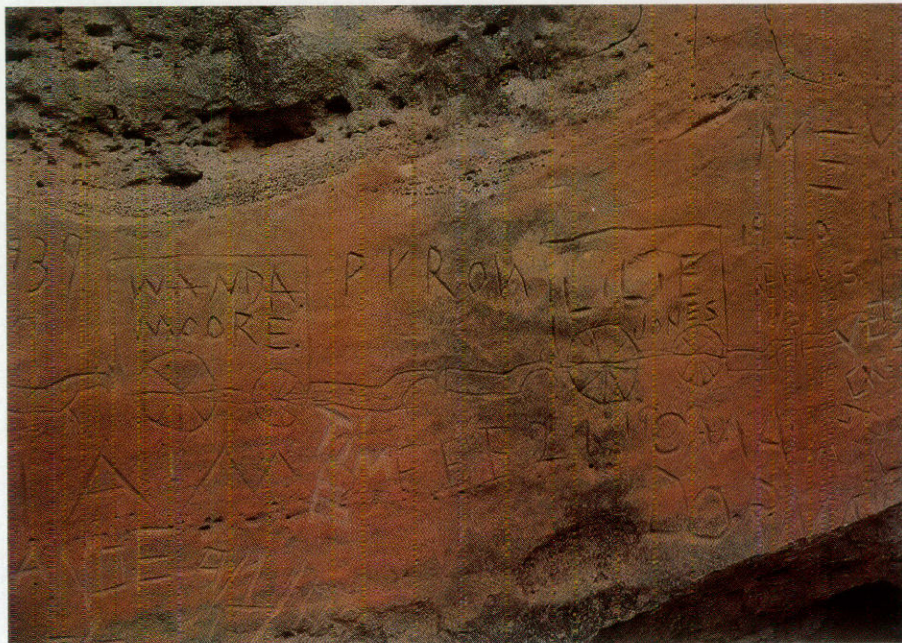
For uncounted generations native peoples lived in this country, and the most visible, enduring legacy they left of themselves they carved into or painted onto the sandstone walls of the canyons. High Plains rock art is the peculiar geographical expression of an ancient and worldwide form of communication. Most rock "art" was not actually intended as art in the sense that we think of art, even though some of the pictographs (painted figures) and petroglyphs (figures incised or pecked into rock) are wondrously artistic in effect.



Sandstone bubbles appear as the rock absorbs moisture (above). In time the bubble will crumble and destroy the petroglyph. Reservoir construction along rivers and creeks has created unnaturally high humidity in this normally dry environment, hastening the destruction of the petroglyphs.

Although the term has not caught on among professional archaeologists, one or two writers (notably LaVan Martineau in his book "The Rocks Begin to Speak") insist that rock art should more properly be called "rock writing." He believes that many rock art symbols were derived from Indian sign language, because a considerable number of historic-era rock art sites seem to tell a narrative whose details jibe with historical accounts of the same events.

In fact, rock art seems to have had several purposes, and commemorating historical events is only one of them. Much rock art seems to have been spiritual or religious, and probably was done by shamans. The symbols and figures duplicate those associated with dieties or clan totemic animals, or seem to depict a shaman's interaction with the Indian world of spirits and the forces of nature that controlled hunting success and the harvest.



Vandals have defaced this petroglyph that depicted oxen pulling wagons. This petroglyph is at the site of the proposed Justiceburg Reservoir on the upper Brazos and some day could be covered by water.

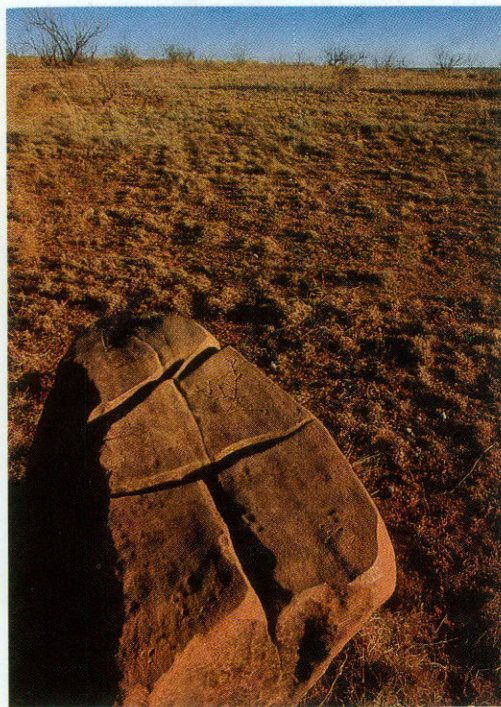
Sometimes the purpose seems to be the consecration of a particularly powerful or sacred spot on the landscape. There is mounting evidence that among historic Plains Indians, some rock art sites functioned as regularly visited "coup counting" stations, where the deeds of warriors were celebrated. Occasionally the purpose may have been entertainment, a kind of "Kilroy Was Here" statement. And there are designs whose meaning no one knows, although their worldwide distribution points to phosphores, patterns inherent in the wiring of the human brain and "seen" behind tightly closed eyelids or released through dream, vision or drug states.

Examples of all these kinds of rock art exist on the Texas Plains. Correlating rock art with specific cultures is far from an exact science, but several different cultural traditions seem to be represented as well. But because of the susceptibility of the High Plains sandstones to erosion, most of the rock art here is not more than 700 to 800 years old. A great deal of it, as evidenced by post-European designs (horses, longhorn cattle, guns, churches), dates from the 16th through the 19th centuries. While archaeological excavation can give Native American specialists a great deal of valuable information about the tools and cultural techniques of past Indian

cultures, rock art offers something else altogether: a view of reality, or at least the symbols used to represent reality, through the minds of Indian people who lived hundreds of years ago. Seen first-hand, that can be a very powerful and moving experience.

At least it has moved Wyman Meinzer and me on more than one occasion since we decided a couple of years ago to see and record as many of the High Plains rock art sites as we could get to. Our reactions have ranged from stunned awe and reverence at the feelings emanating from some of the images and symbols we've seen, to frustration and rage at those who have all but destroyed many of these sites.

An afternoon at Rocky Dell, in the Canadian Breaks northwest of Amarillo, leaves few such emotions untapped. Rocky Dell is the most famous rock art site on the Texas Plains, one of only three or four spots where painted pictographs are found. It is also one of the first rock art sites ever discovered and described in the state. In 1853, while exploring the 35th parallel route for the Pacific Railroad Surveys, Lieutenant Amiel Whipple came across Rocky Dell and not only left a written description but included sketches of it in his report to the War Department. Whipple also had an experience most of us only dream about today. While he was investigat-



A rock found along a tributary to the Salt Fork of the Brazos depicts an elk or a deer (above). Perhaps the long-ago artist was recording the sighting of such an animal.

ing the canyon where the rock art is located, a group of Indians from Santo Domingo Pueblo near Albuquerque arrived to camp there, and obligingly answered Whipple's questions about what the symbols meant.

What Whipple saw and puzzled over, I also have seen. There is a small side canyon cut vertically into gray sandstone by a tiny thread of a stream. A handful of cottonwoods scatter beside the pools, their leaves backlit by the afternoon sun. In the deepest part of the drainage, which is almost too shallow to be a true canyon, is an overhang, a rock shelter perhaps 40 feet long and 20 feet deep. A single step is all it takes to leave the late 20th century.

It is, in fact, a place that stands outside time. On the rock wall before you is a creature right out of myth and legend, an immense, fork-tailed, humpbacked, horned serpent 13 feet long, outlined in red ochre and black charcoal. Beside its open mouth is a large, human-like figure with outstretched arms, painted solid in red ochre. The mind sifts through possibilities. Is this a warrior fending off an attack by a supernatural serpent? A shaman making magic to conjure the beast? Or something else entirely?

According to the Pueblo Indians whom Whipple encountered here almost a century and a half ago, "something else" is the correct answer. The Pueblos credited their ancestors, who had long journeyed to the plains to hunt buffalo along the Canadian, as the consecrators of this spot. As for the human-like figure, he was none other than the deity "Montezuma, placed there to sanctify the spot and secure a perpetual supply of water," while the serpent was "the great watersnake, created by Montezuma to give rain."

There are many other scenes here—at least two charcoal bulls that look like the fighting bulls that are annually turned loose in the streets of Pamplona, Spain; a man on horseback being pursued by a bison with a huge hump, both done in charcoal. There is a group of red ochre human figures, and handprints in white and red. And there are numerous incised petroglyphs that seem to have been done by later Plains Indians, including one figure that reminds me of a medicine wheel, a type of stone calendar that designates seasons by marking solstice sunrises.

But for all its ancient power, Rocky Dell is instructive in another way. The illusion of standing outside time can't be sustained for long even here. Cowboy, rancher and sightseer graffiti intrude everywhere. Petroglyphs have been ruined by idiots with too much ammunition and too little brains, and Indian buffs going after plaster cast artifacts. And most heartbreaking, the archaeologists of past eras have damaged the major petroglyphs at Rocky Dell for all time by outlining them in chalk to photograph them.

The primary pictographs at Rocky Dell are Puebloan. But rock art from other cultures also graces this country, mute reminders of ancient people who no doubt once felt as much ownership and permanence about their occupation as any modern rancher does.

One brilliant spring afternoon Wyman and I climbed Landergin Mesa, a stunning peak rising out of terra cotta badlands just north of the Canadian River, atop which the Antelope Creek people had a pueblo of stone-slab houses some 800 years ago. Probably Eastern and Caddoan in origin, the Antelope Creek culture occupied pueblo complexes along the Canadian. Some of the



Protected by vegetation, this site along the Red River retains good detail. This rock art depicts the movement of men and animals to a destination known only to the artist.

rock art sites in the region may belong to this culture. The sites are small, featuring petroglyphs of turtles, footprints and other oddities.

Then there are the real mysteries. Who covered the ceiling of a cave overhang in the Muchaque Valley, at the head of the Colorado River, with white pictograph handprints? A Jornada band from the Mogollon culture of the desert Southwest? The so-called Garza hunters? Or maybe the ghostly folk the early Spanish chroniclers called the Plains Jumanos, who seem to have vanished into thin air? Even stranger, in a white-walled box canyon in an upper section of the spectacular Tule Canyon are a pair of red pictographs unlike anything else in Texas. The largest seems to be a highly stylized and abstracted human figure with four dim handprints nearby. Weapons—a spear and a bow—are recognizable within the spidery compositions. As to the cultural affiliation of these pictographs, no one knows. Faded and eerie, their mystery is suggestive of

the spirit of this place: this box canyon was where American troopers killed some 1,400 Indian ponies in 1874, an act that broke the Indian resistance on the Southern Plains.

Most numerous of all in these canyonlands are the petroglyphs that unquestionably were done by the last native peoples to occupy the High Plains—the Comanches, Kiowas, Apaches and Southern Cheyennes. Incised with knives onto sandstone boulders or the vertical faces of cliffs, the subject matter of these petroglyphs often mirrors that found on painted tipis, bison robes and parfleches. Horses, bison and cattle were preoccupations in the world of the historic Plains tribes. So was the relentless avalanche of whites from every side, what 19th-century Indian artist George Catlin called the “hustling, whistling, hopping, exultant” advance of Euro-

American civilization.

At any rate, there are dozens of these petroglyph sites, many of them only recently discovered, still hidden away in the remote and tangled High Plains wildlands that served as the final sanctuary of the Plains Indians. In 1989 an archaeological reconnaissance of a proposed reservoir site on the Double Mountain Fork of the Brazos River found more than three dozen petroglyph panels, only a handful of which had been known before. Some historic Plains Indian rock art seems to be basically signature. Others may have been coup counting stations. Perhaps that was also the function of at least one of the sites on the north rim of Palo Duro Canyon, overlooking a favorite Plains Indian camp where Cita Creek joins the Prairie Dog Town Fork of the Red River. Here, on the sandstone floor of a small overhang, an incised figure on horseback fires his gun at unseen enemies. Nearby are what appear to be a shaman figure and a garfish.

What has long struck me as the most compelling rock art left by the historic horse tribes are panels that appear to be narrative, Indian descriptions of events of historic importance to them. Near the Palo Duro site just mentioned is another, larger panel that is etched into a sandstone cliff face. It is dominated by beautifully incised horses, almost all facing the same direction. Some appear to be rearing and pawing. Turkey or heron tracks appear, and there are human figures in dresses, along with a square house with humans inside. The entire panel suggests movement. Its precise meaning is not ascertainable now, but the site is on the trail the Kiowas are supposed to have taken when—their lodges burned and their pony herds destroyed—they fled the Battle of Palo Duro Canyon and surrendered themselves to reservation life in Oklahoma.

Farther south, in the canyon at the head of the Double Mountain Fork of the Brazos, there are two petroglyph panels that take Plains Indian rock art even farther towards narrative. The so-called Wagon Train panel could be an advertisement for a 1960s Western. Stretching some 20 feet across a tan box canyon wall are nine Conestoga wagons



Cliff swallows have built nests above art depicting the longhorn cattle that roamed the plains. Few clues are available to indicate why certain spots were chosen as sites for the art.



Perhaps it was a 19th-century Comanche or Kiowa who etched a man on horseback and other human figures on the floor of this shallow cave. Dirt covering the cave's floor has protected the artwork.

drawn by oxen. In two instances human figures sit astride the oxen; one of them apparently is firing a gun. Dogs or pigs cavort beside the wagon train, and an incised slope evidently portrays the Caprock Escarpment, which looms a few miles to the west. There is even a collection of buildings conveying the sense of a town. You may have to take my word for this, however, because the original wagon train panel is presently beneath roughly the same amount of graffiti that covers the subway walls of Grand Central Station.

The other site contains some of the best-done and unquestionably the most moving petroglyphs on the Texas High Plains. It is called Cowhead Mesa, be-

cause the panel is found on the sheer face of a free-standing mesa of that name in the beautiful upper canyon of the Double Mountain Fork. The glyphs are numerous and varied. There are bear paws and turtles, tipi frames and a rosy-tailed longhorn, and many abstract lines and tally marks. There also is a large human figure generically known as a calendar figure, holding a cross-hatched shield or hide.

To the point, there are scenes of personal combat as well, including one featuring a warrior mounted on a beautiful, arch-necked horse that is rendered with Picasso-like grace. Significantly, most of the combat scenes take place around two multistory squared build-

ings topped off by crosses to leave no doubts that they are Christian missions. Zigzag lines conveying flames lick through the structures, and nearby are figures portrayed in the robes of Franciscan clergy. Looming over this stunning array of symbols is the most powerful figure of the panel: his arms outstretched as he calls forth the medicine to make things happen, a large shaman figure wearing a buffalo-horn headdress still vibrates like a tuning fork with energy and intensity as he presides over the scene.

What does it all mean? The safest answer is, no one knows. But the accuracy of the details makes it almost impossible not to suspect that this is an Indian version of the Comanche destruction and sacking of the San Saba Mission, near present-day Menard, in 1758.

Contemplating Kokopelli's fading image on a cloudy winter day in 1991, the thought came to me that none of us knows how long these images will continue to resonate from the canyons and badlands of the High Plains. Unless completely sealed and protected from weathering, all rock art exists only a relatively short time. Water erosion, patination by desert varnish, destruction by lichens and burrowing insects, the crumbling away of cliff faces is inexorable and essentially irreversible. The sort of vandalism and rampant megalomania that has ruined so many rock art panels with gunfire and graffiti is harder to accept.

I have a theory that at least some of the people who left us these time capsule messages were trying desperately to tell us something. I don't know what, yet, and when I envision a dozen rock art sites at once disappearing beneath the proposed Justiceburg Reservoir on the upper Brazos, as present plains culture casts about frantically for sources of water to keep itself going, I wonder if I ever will. ★

Dan Flores is professor of history at Texas Tech University in Lubbock where he teaches Native American and environmental history. His most recent book was "Caprock Canyonlands: Journeys into the Heart of the Southern Plains" (University of Texas Press, 1990).

Slide Sandwiching

Article and Photos by Leroy Williamson

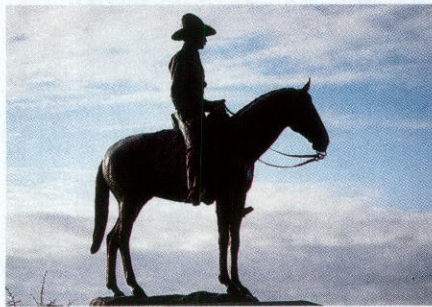
Sandwiching color slides usually means combining two slides to create a stronger photograph than either of the individual slides. While this technique can be used to create dramatic or surreal effects, Texas Parks & Wildlife magazine does not publish such manipulated photos. Should we ever use a sandwich or other manipulated photograph, we will explain the manipulation, whether mechanical or electronic, so you will know how the picture was created.

Perhaps the following article will inspire users of color slide films to try sandwiching. You already may have slides that will make perfect sandwiches, or you may want to expose some film specifically for sandwiching. Whatever your method, get ready for fascinating results.

Photographers frequently encounter lighting problems. No matter how hard we try to get to a site at the perfect time for the best light, often it is far less than perfect—or even desirable.

Then there are those times, especially at sunrise or sunset, when the colors are so good that a few exposures have to be made to record the event. Many of my sunrise-sunset pictures hap-

pen when I'm traveling down a highway and there is nothing in sight to use as a point of interest—no windmill, no barn, no farmer on a tractor. And there's no time to drive any farther in hopes of finding any object that will make the colorful sky more interesting. So I stop the car, jump out, and snap a few frames. I may use any lens from 15mm to 600mm, depending upon the situation and what I want to create. In the back of





This pair of blue-winged teal was photographed on the upper Texas coast against an uninteresting sky. The sunset is at Lake Belton, but there is no point of interest. Combining the slides by sandwiching them creates an interesting picture. In this case, instead of putting the slides directly over each other, the flying ducks have been adjusted to fit into the sky area, making a narrower than normal picture.

my mind, in such situations, I know that I could sandwich two mediocre slides to make a more desirable photograph.

When sandwiching slides, the density of each slide should be such that, when combined, the resulting image is not too dark. The density of both slides together should approximate that of a proper exposure.

Sandwiching slides is not difficult. However, care must be taken to make

The cowboy statue was photographed in Parapa against a colorless, washed-out sky. Is the slide worth keeping? Only to sandwich it with something appropriate. A couple of days later I photographed the sunset in Vega. Combining the cowboy and sunset creates what was originally desired but not attainable because of lighting conditions. Notice how the highlighted areas of the statue pick up color from the sunset.

sure the slides are suitable matches. Unless you are creating surreal effects, you'll want your sandwiches to be believable. It's best if only one of the slides has a strong subject, with the second slide providing the color of a sunrise, sunset, or perhaps a misty scene. Textures and patterns make good secondary images also.

Photographers with slides that need sparkling up a bit can create sandwich slides specifically for certain pictures, or to be used with several slides. A sandwich library of colors, textures, scenes, etc. can save your pictures from mediocrity and create some unique, extraordinary photos.

If your sandwiched slides are to be projected, it will be necessary to re-mount them into one slide mount.

Although it is possible to sandwich color negatives, the result is not as obvious as in sandwiching slides. ★



Texas Parks & Wildlife Photo Contest Rules

- 1) A maximum of three slides, 35mm or larger, may be entered by one contestant. This entry coupon or facsimile thereof must accompany your slides. Mail to: Wildlife Photo Contest, Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, Texas 78744.
- 2) Entries must be color slides, made by the contestant, of genuine Texas wildlife. Slides may be any format, 35mm or larger.
- 3) Entries will be judged for content and photographic quality by a panel of judges whose decisions are final.
- 4) Submissions must be accompanied by a stamped, self-addressed return mailer. While every effort will be made to return submissions after judging is complete, we accept no responsibility for damaged or lost submissions.
- 5) Freelance photographers whose photos have appeared in any issue of *Texas Parks & Wildlife* magazine are ineligible to enter. Previously published photos are not acceptable.
- 6) Employees of Texas Parks and Wildlife Department and their families are ineligible to enter.

WINNERS WILL BE ANNOUNCED IN THE DECEMBER 1992 50TH ANNIVERSARY ISSUE OF TEXAS PARKS & WILDLIFE MAGAZINE. ALL ENTRIES MUST BE RECEIVED NO LATER THAN 8-15-92.

NAME _____ PHONE _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

NUMBER OF SLIDES SUBMITTED: _____

Technical Information:

Subject ID	Location	Film	Shutter Speed	Aperture
1)	_____	_____	_____	_____
2)	_____	_____	_____	_____
3)	_____	_____	_____	_____

I enclose my entry for the Wildlife Photo Contest. The slides submitted by me are my own and I hereby give permission for *Texas Parks & Wildlife* magazine to reproduce them.

SIGNATURE _____

Blueticks in the Night

“Hound music” still serenades Texas coon hunters.

A white January moon casts a pale glow through barren tree limbs as several human forms stand motionless, their boots squishing into the bottomland ooze.

Only the soft exhalations of breath, crystallized into brief clouds, and the distant stirrings of unknown animals disturb the frozen silence.

Suddenly, a single “yip” echoes through the bottom.

“Could be” a muffled voice intones.

“It’s Suzy. Could be something,” replies a voice in the gloom.

The men cock their heads, trying to make aural connection with the unknown. Another high-pitched bark, then a mellow “aaarrow-w-w” booms through the East Texas night.

“Sam’s on ... they’re over by Millers, sounds like.”

“That gyp’s gonna holler any minute, now,” says another anxious hunter, swinging his arms in a concession to cold and anticipation.

The canine concert builds momentum as other yelpings and barkings raise the decibel level.

“It’s a race. Let’s go,” is the official-sounding order, and the half-dozen set off single-file, their flashlight beams bobbing crazily through the woods. They are headed for a rendezvous with their prized coonhounds and one nervous raccoon.

After stumbling across a few shallow



Coonhounds like this bluetick are true American originals, bred especially to trail and “tree” the crafty raccoon.

creeks and getting slapped in the face by low-hanging tree branches, the marchers are called to a halt. The lead hunter listens intently. “He’s treed,” comes the declaration. The hunter analyzed the sound of the barking hounds as easily as a mother picks out her child’s voice on a noisy playground.

A 40-foot sweet gum tree near a creek

bank is the end of the chase. The dogs, spurred on by the appearance of their masters, set up an even more raucous din, complete with jumping, tree-clawing and other canine theatrics.

The merry clamor is what dog men call “hound music.”

A carbide lantern beam probes the tree’s upper branches, from whence two sets of eyes glow in the brightness. “Looks like a sow and a yearling,” says the light operator.

After a few minutes of shining lights on the shadowy forms, the hunters round up their dogs and unceremoniously trudge off in a direction calculated to take them back to their vehicles. Back there, the chase would be reviewed in a brief tailgate seminar, the hunters joshing each other over the perceived performance ratings of their various hounds.

There would be no fur harvest tonight. When fur prices are good and a cold winter produces thick pelts, coon hunters still may kill mature raccoons to defray costs of maintaining dogs all year. But that’s not why men and women leave the comfort of hearth and home to face the discomfort, and even possible danger, of this nighttime obsession. “It’s a love for the dogs, just hearing those bugle voices is the main thing,” said Joe Stevens of Clifton, former fur-bearer program leader for the Texas Parks and Wildlife Department and

by Jim Cox



Grady Allen

The baying of coonhounds is music to the ears of coon hunters who think nothing of staying out all night listening to "bound music." This hunter is using a traditional cow horn to call his dogs in at daybreak.

admitted lifelong "dog man."

"People often ask me about my 'hobby' and I just have to correct 'em," Stevens laughs. "It's not a hobby; it's a way of life." Trailing dogs, both coon dogs and foxhounds, have been a part of Stevens's family for more than three generations, and the ancestry of many of the dogs in his kennel can be traced back that far.

Stevens, 71, has parlayed his love for the chase and his own showmanship into a one-man program that has delighted audiences for decades. With lights dimmed, Stevens re-creates the sounds of a coon chase, complete with baying hounds and sometimes-frustrated hunters. "It shows the fascination of the sport, because a lot of folks who never saw a coon dog in their life come up and tell me how much they liked it.

Some of 'em are laughing, and some of them have tears running down their faces."

What is this "way of life," of which Stevens speaks so fondly? It could be argued that of all the outdoor sporting pursuits, the "treeing dog" phenomenon may be one of the most exclusively American. "Trailing dogs were developed in Europe," Stevens explained, "and they were used mainly to run foxes and larger game. When they were brought into this country, their owners saw a need for a different kind of hound that would be suited to different game and different terrain."

In short, these early houndsmen needed a dog that could pick up and follow a cold trail through rough country, "tree" the animal, and then announce its location by barking. The

famous Walker brothers of Kentucky were pioneers in the genetic manipulation of English foxhound strains after the Civil War, creating the treeing Walker dog that is still a dominant breed in coon-hunting events across the nation.

To the casual observer most coonhounds are cut from the same mold. Their lean, angular bodies and long legs are suited to cross-country chases; their long noses, floppy ears and wistful expressions reflect their intelligence and gentleness. The Walkers usually are white with distinctive brown, gold or black patches; the black-and-tan is jet black, with brown feet, chest and eyebrows; blueticks are dark with a myriad of speckles, and redbones are a cinnamon hue.

But the characteristics that are the

benchmarks of coonhound values are the nose and the voice. Like the somewhat similar bloodhound, coon dogs have marvelous olfactory powers. A good dog can unravel an hours-long trail, picking up scent from the ground, vegetation and the air as it goes. Like people, each hound has its strengths and weaknesses. "When you go hunting, you try to have at least one 'cold-nosed' dog, or strike dog to pick up the trail," Stevens said. "Then other dogs with what we call 'warmer' noses are faster once the dogs get closer to the coon. Other dogs may not be that good at trailing, but they raise such a fuss at the tree they make up for it."

In general, the Walker dogs tend to be the faster trailers, and the black-and-tans and blueticks are colder-nosed breeds, Stevens said. The solid-black

"The sound of a race really gets into your blood."

Plott dogs and English (also called redtick) hounds seem to have compromise characteristics between the hot- and cold-nosed breeds.

A good "bawl-mouthed" dog is a thing of beauty to a dog man. "The mouth, or ability to bay, is the most difficult trait to maintain in a stock of dogs," said Stevens. That characteristic was one of the main things that separated Ameri-

can coonhound breeds from their European ancestors. The vocal characteristics of individual hounds tell their handlers exactly what's going on in a hunt, even across wide distances.

"A dog may start out making one kind of sound, and change several times as the hunt progresses," said Stevens. "They can crow like a rooster, bawl like a bull, squeal like a pig, or when things get really exciting, they sometimes make a 'tearing' sound like a tablecloth being ripped apart. Now that will make your hair stand on end!"

"The sound of a race really gets into your blood," said 75-year-old I. B. (Bogie) Price of Atlanta in Cass County. A retired sporting goods store owner, Price has followed coon dogs around East Texas virtually all his life. He recalls what it was like during his child-

Grady Allen



hood when coon hunts were the prime entertainment during winter after crops were harvested and other outdoor activities were limited. "People would come from all around the area with their dogs, and hunt two or three nights straight," said Price. "I remember riding on horses and mules on those hunts, and about the only cars we rode in were Ford Model Ts. Nobody got much sleep, but it sure was fun."

Coon hunting was then, and remains today, largely a rural tradition in East Texas and across its stronghold in the Southeastern United States. "We didn't have any deer to speak of, but there were plenty of coons, rabbits and such along the creeks," said Price. "We caught coons for food and the pelts, and also because they raided our corn," he continued, "but mainly we chased 'em because we loved the race."

During the early part of the century, coon hunters in East Texas had almost total access to the farm countryside, since raccoons were abundant and often raided farmers' crops. "Nowadays it's harder, because of trespass laws and because so much more land has been leased for deer hunting," Price analyzed. Nevertheless, the coon hunting sport has survived, conducted on private lands including paper and timber company holdings, national forest lands and some wildlife management areas. Perhaps that is why coon hunting remains a sport of the rural countryside and small towns, since it requires an intimate knowledge of the area where the dogs are allowed to hunt.

The trespass problem is not to be ignored, as wide-ranging coonhounds (and other trailing dogs as well) are subject to crossing property lines when hot on the trail. But Capt. Larry Williford, TPWD regional law enforcement director at Rusk, says while problems still occur, they are fairly uncommon in Northeast Texas. "I think



Grady Allen

The intelligence and widespread range of raccoons makes them a popular quarry for trailing dog aficionados, especially across the Southeastern United States. Coon hunting is still a mainstay in the culture of rural East Texas.

that, by and large, coon hunters make an effort to get permission from landowners," Williford said. "And a lot of coon hunters run their dogs on land they already lease for deer hunting. Coon hunting has not been a law enforcement problem except in some isolated cases."

The backwoods flavor of coon hunting might lead one to believe that its

practitioners are few in number. Surprisingly, about 100,000 coonhounds of six breeds are registered annually by the United Kennel Club, the largest registry organization for trailing dogs. UKC President Fred Miller of Kalamazoo, Michigan, said his organization registered 5,131 hounds in Texas during 1990. "Registration slipped a bit a year ago," Miller said, "but from all indications it is growing again."

Registry organization officials believe there are well over a million registered coonhounds, plus an undetermined number of unregistered dogs.

In addition to being numerous, coonhounds need not take a back seat to other breeds in terms of value, either. Champion male coon dogs have sold for as much as \$25,000, and females often fetch prices in the \$5,000 range.

What makes a coonhound worth that much? While many are hunted recreationally, the high-dollar hounds accrue their value by performance in coon dog meets. These gatherings combine bench shows, where dogs are graded in the traditional manner by judges, and in a variety of staged contests designed to gauge the dogs' trailing and treeing abilities. Winners of major meets often earn large cash prizes, and some of the meets have raised considerable sums for charity (see page 44).

Coon dog meets have undergone a change for the better from a humane standpoint. A half-century ago, field trial



Leroy Williamson

A pack of Walker hounds jumps eagerly from a pickup, left, at a coon dog meet in East Texas. The "coon in a tree" event, right, allows judges to grade each dog's baying ability as it "trees" a caged raccoon.



There are lights, cameras and action, but no guns, at a sanctioned coon hunting meet in Cass County last winter. Coon dog enthusiasts believe the chase, rather than the kill, is paramount in this tradition-filled nighttime sport.

Leroy Williamson

events sometimes included such bloody events as "coon on a log," where a collared raccoon was tethered to a log in the middle of a small pond. Two or three dogs would be released, and the winning dog was the one that was able to drag the animal off the log and drown it. Variations on that theme included placing live coons in barrels to be dragged out by hounds.

Live raccoons still are used in meets, but Miller points out that the events are arranged so as to make contact between dog and raccoon impossible.

In the "coon in a tree" event a raccoon, usually a pet that is accustomed to the company of people and dogs, is placed in a small wire cage and hoisted about 15 feet into a tree. Each competing dog is given a chance to "tree" the coon. A judge grades the dog's performance, based mainly on the number of times it barks up the tree in a timed period. A similar event is a "water race," where a caged raccoon is placed on a

DAWG TALK: A GLOSSARY OF COONHOUND TERMS

Practitioners of the "treeing dog" sport have their own way of talking, a vocabulary full of terms that would be almost unintelligible to outsiders. Here are a few offered by long-time trailing dog raiser and hunter Joe Stevens:

Back Trail: When a dog takes the wrong direction following a trail.

Bark: A hound's voice at a tree or den.

Babblers: A hound that barks when not on any particular trail.

Carry the line: When a dog follows the scent well.

Cast: When released hounds spread out in search of a scent.

Cold trail: When an animal's trail is old enough to give only a faint scent to be followed.

Cry (the voice or tongue): The musical sound a hound makes when trailing or running an animal.

Dog: male dog.

Double: When an animal turns back on its course.

Den: When an animal goes into a

hole in the ground or in a tree.

Fault: When a hound barks too much before striking a trail, or barks up the wrong tree.

Full cry: Chorus of hound voices together at full speed.

Giving tongue: Barking on trail.

Gyp: female dog.

Heads up: When hounds search for the scent by raising their heads up from the ground.

Honest: A hound with no noticeable faults.

Jumped: When a hound or the pack moves closely enough to the quarry to make it attempt to escape at full speed.

Line: The track or scent of an animal running from hounds.

Loss: When hounds temporarily lose a line.

Mouthy: When a hound uses his voice excessively.

Mute: A hound that remains silent on the trail.

Nose: Scenting ability.

Pack: A group of hounds that has regularly hunted together.

Pack sense: When individual dogs in a pack learn how to honor each other as a team while trailing game.

Quarry: The animal hunted.

Quitter: A hound that leaves the chase and comes in too soon.

Run: Hounds pursuing their quarry.

Run over: Hounds running past the scent when the quarry turns one way or another.

Settle: When a pack of hounds begins to run their game in unison and harmony.

Skirter (cutter, slasher): A hound that runs wide of the pack or cuts across to catch up or get ahead dishonestly.

Strike: A hound that finds the scent of an animal and gives voice.

Thrown out: A hound that, for one reason or another, gets left behind by the onrushing pack.



Grady Allen

A "Treeing Walker" bound lives up to his name, left, by scrambling up a leaning oak. A pet coon remains nonchalant as it provides the lure for a treeing contest at a coon hunting meet, below.



Leroy Williamson

pulley extended across a small pond. Six dogs are released, and the first one to swim the pond and "tree" the raccoon on the opposite side is the winner.

Miller said in the field trial events, a coon scent is dragged through the woods for a mile or so, and six competing dogs are released to follow the trail. At the end, concealed judges give the first dogs

*"It's not a hobby
... it's a way of
life."*

"line points" for reaching the end of the course, and "tree points" for barking at the tree. A live coon in a cage also is used at the end of this race.

While these events are exciting for owners of the competing dogs, Stevens believes the true sport is in a real chase in the wild. Raccoons are, by virtue of their intelligence and physical strength, usually able to give hounds a challenging race. "In the first place, coons are hard for a dog to trail because they feed after dark in and around creeks or other water, then they will periodically climb into trees to rest," Stevens said. "This way they leave a trail that's confusing to a dog."

Once the race starts, some raccoons are clever at leaving false trails to trick the hounds' noses. "They often run up
(Continued on page 45)

THE LOUDEST FUNDRAISER FIGHTS CYSTIC FIBROSIS

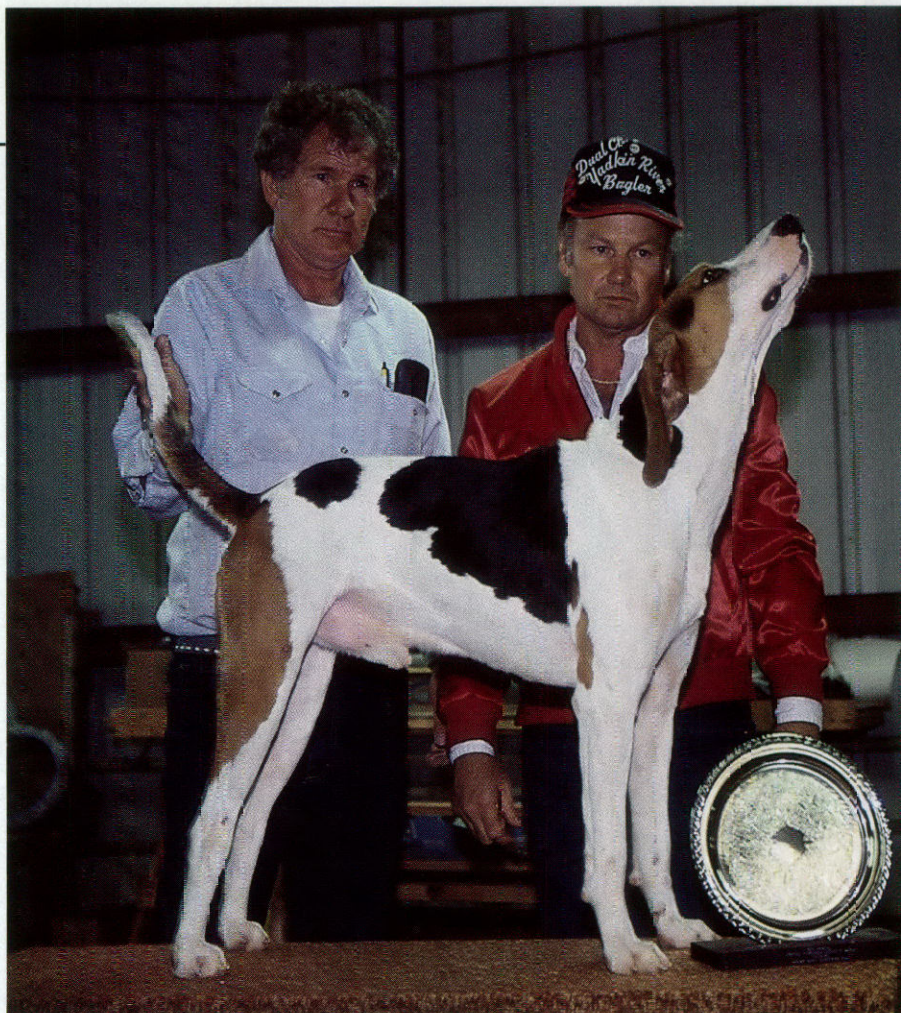
Dexter Whatley says he hit the low point of his life in 1979 when doctors told him his daughter Lora, then just two years old, was afflicted with cystic fibrosis.

Whatley, a mechanic for International Paper Co., and his wife Linda were understandably devastated. "The news just about stopped everything except just day-to-day life," said Whatley. "It was almost more than we could take, since all the literature we could find on the disease said it's usually fatal at an early age."

Before that time, one of Whatley's joys in life was coon hunting and raising coonhounds. "Of course, hunting was one of the things that sort of fell by the wayside when these problems came up," Whatley said.

It was coon hunting that eventually became a positive force in the Whatley family struggle, but it took yet another tragedy to bring on the change. One of Whatley's hunting buddies, Gerald Wall, had suggested that Whatley enter a dog in the Arkansas Crippled Children's Benefit Coon Hunt in Hope, Arkansas. Shortly afterward, in 1984, Wall was killed in a traffic accident.

"I had about given up on entering anything at that point, but my family encouraged me to go ahead and enter," Whatley said. Whatley's dog placed in the top bracket in the hunt, and Whatley



Bench shows usually are combined with field events and actual hunts when coon hunters enter their hounds at sanctioned meets. The big winner at this meet in Atlanta last winter was the Cystic Fibrosis Foundation, which received more than \$12,000.

observed how successful organized hunts and bench shows could be at raising money for charity.

Returning home to Kildare, a small community south of Atlanta, Whatley started organizing what is now the annual Four States Cystic Fibrosis Coon Hunt, held in Atlanta each February.

Whatley called the United Kennel Club, told them his plans, and got sanctioning for a hunt. A local discount store donated a gun cabinet for that first event, and Whatley's employer, International Paper, donated \$500. That first hunt, organized almost on a spur-of-the-moment basis, collected \$3,300 for the Cystic Fibrosis Foundation. The total has grown each year. The 1991 hunt, which attracted 150 entries from as far away as Minnesota and Georgia, resulted in a \$12,722 gift for cystic fibrosis research, bringing the seven-year total that has been raised by the hunts

to almost \$40,000.

"The hunts have been successful because the hunters realize it's for a good cause, and the whole Atlanta community works at making the visitors feel welcome," said Whatley.

Lora, now 14, is doing well and living in hope that current genetics research will result a breakthrough in the battle against cystic fibrosis. A growing number of coon hunters are pitching in to help in that battle. Whatley said the 1992 hunt will be held on the last weekend in February, headquartered again in Atlanta. Further information can be obtained by calling Whatley at 903-796-3051. Donations to the Cystic Fibrosis Foundation may be sent in care of Whatley at Route 1, Box 69, Bivins, Texas 75555, or to Nancy Connell, executive director, Cystic Fibrosis Foundation, 2929 Carlisle #230, Dallas, Texas 75204.

(Continued from page 43)

a tree and then come right back down, and an inexperienced dog will false-tree right there," he said. "They also will cross and recross creeks, or run up and down steep bluffs or creek banks to lose the dogs."

Once treed, raccoons seldom leave the tree. Rather, they try to conceal themselves in vegetation. Some coon hunters swear the animals will hide their eyes to avoid being "night lighted" in a flashlight beam.

A race sometimes can be extended if the coon is treed in a small tree or one that a hunter can climb. Not wishing to

share the tree with a human, the coon usually jumps and runs away with the dogs in hot pursuit. Although the dogs occasionally catch the coon, the race usually continues until the animal is treed again.

Although raccoons seldom weigh more than 20 pounds, they are fierce fighters. Their sharp teeth and claws can do some damage to the unwary or inexperienced hound, Stevens said. "A big coon is just about like a miniature grizzly bear," said Stevens. "An old coon is not afraid of the devil himself, and he'll fight a circle saw."

As with many other kinds of hunting,

coon hunters occupy a dual role as predators and admirers of their favorite quarry. It's the chase, the sound of dogs on the run that matters to the coon hunter. The baying hound is an extension of his ego; a relationship that goes back to the time when the first wolflike animals were domesticated and trained to hunt.

Stevens, in his charismatic coon hunt program, uses a poem to show the emotions a hound can evoke in a person. It was written by Genevieve Word of Bandera around 1945:

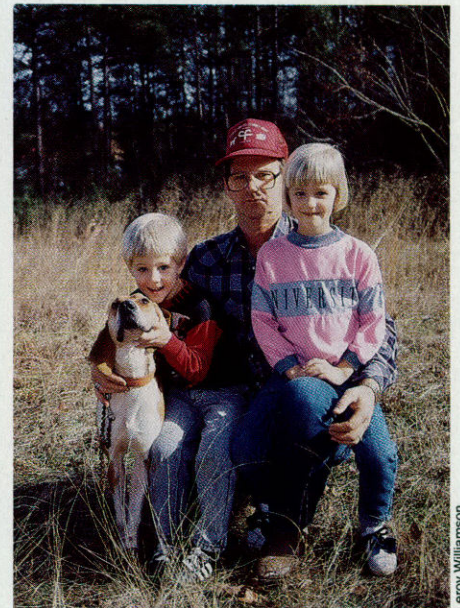
"The longing of his soul looks out his eyes,

And who am I that he should idolize;
Remembering me with many a fond
caress,

I don't know, but I'm going to make
a guess;

That he loves me and thinks I'm just
as fine,

As I do him, that ol' hound dog of
mine." ★



Coon hunting heritage runs deep in East Texas, as many hunters carry on the tradition started by their grandfathers and great-grandfathers. Perhaps surprisingly, coon hunting has endured in spite of an increasingly urbanized society.



From Quail to Dinosaurs

*Kids explore nature's wonders
at Robert A. Vines Science Center.*

Article by Barbara Dunn, Photos by Stephan Myers

What special feature do humans and only a few other animals have that has enabled us to survive? The group of fourth graders begins to shout answers. A brain? Lots of animals have brains. Arms and legs? Getting warmer. Hands? Now we're getting hot. How about thumbs? Right!

The students examine their thumbs with new interest while Jeff Schultz explains the importance of adaptation. After a lecture on the food chain and how energy moves through nature, the students move around the room to study marine displays. They touch specimens such as a dried portion of a whale's baleen that acts as a sieve when the huge mammal strains zooplankton. The setting is the Hall of Oceanography at the Robert A. Vines Environmental Science Center in Houston.

In the Hall of Wildlife Sciences, second graders crane their heads closer to Charles Peterson's tape recorder. "Bob White! Bob White!" comes the call from the speaker, and a flurry of hands rises of children eager to identify the

bird. Were it not for the rainy weather, a seventh grade class would be out in the arboretum, skimming the bottom of a pond and picking through leaf litter for invertebrates. Instead, they move into the Hall of Geology to watch a slide show and examine live bugs near the towering skeleton of a 33-foot allosaurus.

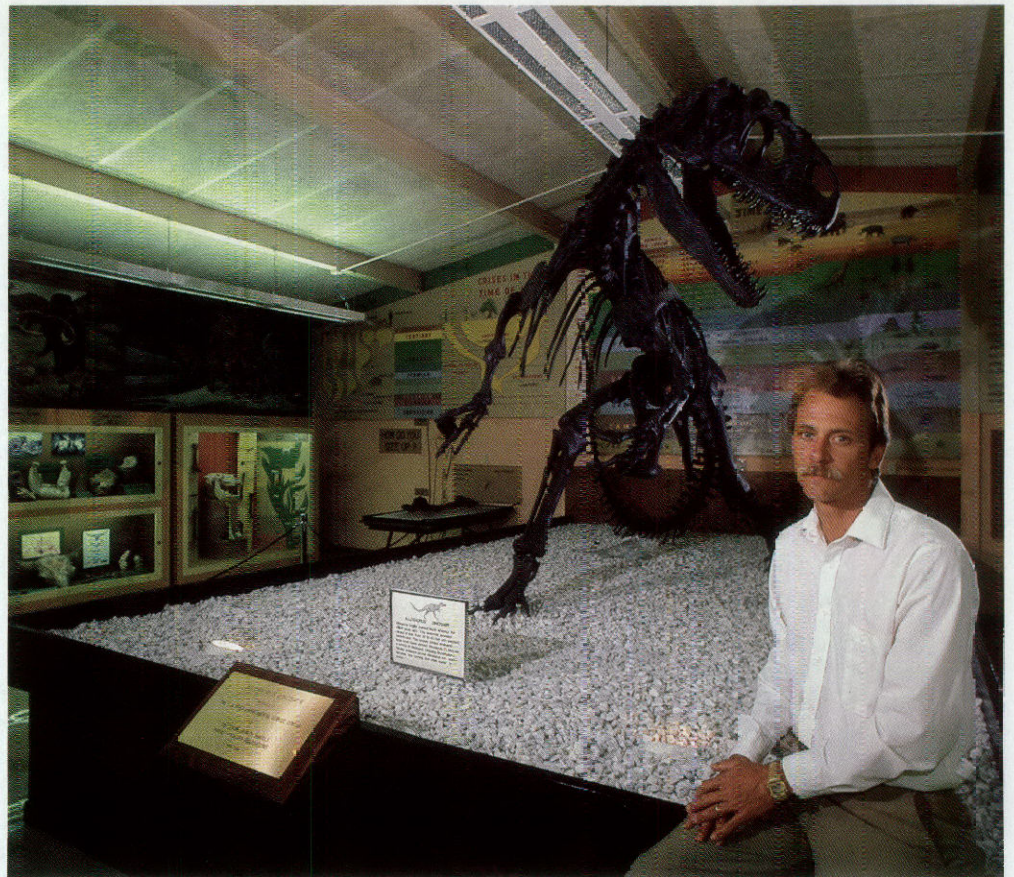
Nearly 13,000 students from Houston's Spring Branch Independent School District make formal study trips

to the Science Center each year. No textbooks are used here; there are no tests or assignments. "I introduce the kids to concepts," says Jeff Schultz, a teacher at the center. "The hardest thing in science is to understand something you can't see and touch." The classes are worked into the students' regular science curriculum, and all are taught with the same philosophy: children learn best by seeing and doing. "Our approach to environmental education does

A stocked pond (left) provides an aquatic study area. Julie Goodrich of the center's staff (right) nets fish, insects and larvae from the pond for the students to observe.



A 33-foot allosaurus towers over the Hall of Geology (right). Randy Beavers (pictured), the center's director, was in the second grade when he met Robert A. Vines, whose dream of a place students could learn about nature resulted in an environmental science center that bears his name.



not concentrate on teaching facts," says Randy Beavers, the center's director. "We spend more time on the abstract concepts of interrelationships through chains, and the ecosystem as a whole." Robert Vines, the renowned author of "Trees of East Texas" and "Trees of North Texas," and a charismatic lobbyist and teacher, began this approach more than 30 years ago.

The launch of Sputnik by the Soviets in the late 1950s sparked a push for better science education in the United States. While many in the science community looked toward space as the new frontier, Robert Vines took up his role as a traveling salesman. He didn't sell stars or technology; he sold the wonders of nature's plants and animals. Working from a tiny space at the library of Spring Branch Elementary School, Vines carried his message of conservation and environmental awareness to schools, garden clubs, churches and other organizations. He lectured, or rather told a story, about whatever plant or animal he happened to bring with him that day.

Randy Beavers remembers the first time he met Robert Vines. "I was in the second grade, and Mr. Vines had brought a skunk to show the class," says Beavers. "He had just picked it up along the road. It was the first skunk I'd ever seen and I was impressed."

Vines dreamed of bringing students to a central location, where the specimens could be displayed and the students could learn with a hands-on approach. In 1967, the school district purchased an old church building. The center has since grown to four large exhibit halls, a gallery of natural history, and a five-acre arboretum and bird sanctuary. Although it is entirely funded by the Spring Branch Independent School District and donations, its role as a museum attracts nearly 40,000 additional visitors from the general public

"I introduce the kids to concepts," says Jeff Schultz, a teacher at the center (right). "The hardest thing in science is to understand something you can't see and touch." Classes at the center are worked into the students' regular science curriculum.



Dioramas such as the bighorn sheep above and the beavers on the opposite page teach basic concepts about wildlife and their habitats.

and other school districts.

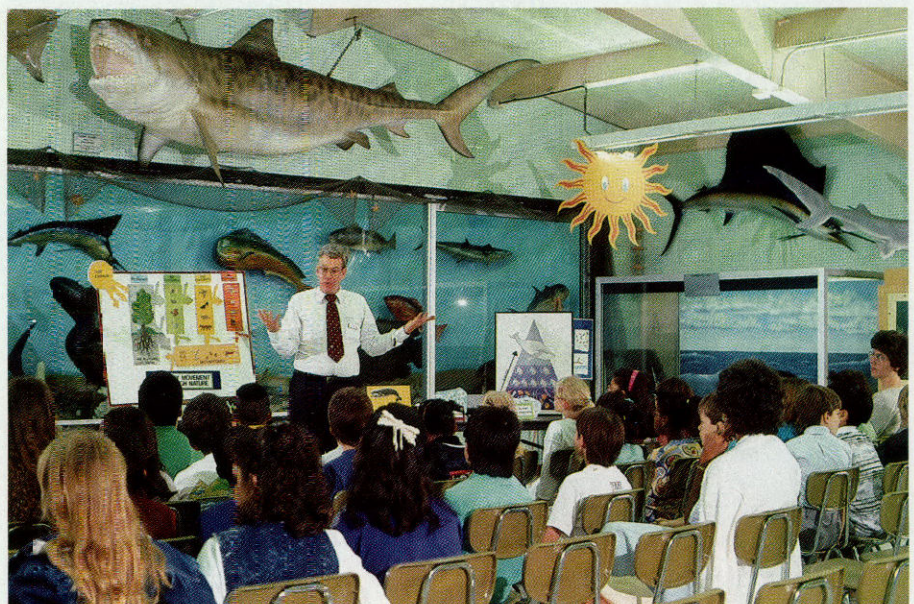
Enormous dioramas, which are scenic displays of figures against a painted background, fill the rooms. "A lot of thought goes into our displays," says Beavers. "Since we teach natural science, most of our displays don't become

outdated. The big difference between us and other educational museum facilities is that our exhibit halls are our classrooms. We use the exhibits to teach basic concepts."

Every diorama shows action and intricate detail. In the Wildlife Sciences Hall, visitors walk past bayou, pine forest, coastal prairie and hardwood forest habitats of the Houston and Central Texas areas. A coyote could stand stiff and unnatural, but instead seems on the verge of tearing through knee-high grass after a cottontail rabbit. Even the nine-banded armadillo seems as awkward when stuffed as in real life.

Press a red button on a display in the Geology Hall and you can watch the path of molten lava in a volcano, or admire the beautiful blues and greens of fluorescent minerals. An enormous collection of fossils, rocks, minerals and wall murals illustrates a variety of geological concepts. Here you can learn about the rock cycle, the origin of birds and how geodes are formed.

The Hall of Oceanography houses spectacular dioramas of marine habitats found in the oceans, rivers and lakes of the world. From a ferocious 10-foot polar bear to sleek barracuda and colorful tropical fish, the diversity of underwater environments perfectly represents the marine food chain. Covering almost an entire wall, the Gulf of Mexico display fascinates many students who are



unaware that creatures such as the loggerhead turtle or the exquisite queen angelfish live close to their favorite beach.

Twelve-foot tall elephant tusks stand near the entrance to the Jack Roach Hall of Exotic Animals. Rare and endangered species from Africa, India, Alaska, Canada, Mexico and South America are displayed. The building and many of the animals were donated by the Jack Roach family. Jack Roach himself collected the massive Kodiak bear in 1947. The white coat of an Arctic fox blends into a North American Arctic display, and the predatory freedom of India's Bengal tiger, a leopard and a cheetah seems as though it had never been interrupted. A steady hum comes from a narrow glass case as thousands of live honey bees tend to their hive. A narrow steel pipe imbedded in the wall provides their only avenue to the outdoors.

Approximately 200 species of trees, shrubs and vines native to Southeast Texas fill the arboretum. A stocked pond provides an aquatic study area, and an outdoor classroom made from wood blends into the landscape. More than 125 bird species find sanctuary in the arboretum during the year.

Even Robert Vines, who died in 1978,



Fossils such as these ammonites are on display in the Geology Hall, along with a large collection of rocks.

may not have dreamed of the role the center now plays in the community. It provides a loan program of specimens, kits, films and slides to district teachers. In addition to the regular instructional programs, the center also offers Saturday Science Safaris, a summer science program for elementary students in kindergarten through fifth grade. The Gallery of Natural History houses special traveling exhibits, and the public may attend open houses or guided tours.

If children learn best by seeing and doing, so can adults. "We started our adult travel program in 1979," says Beavers. "We take whale watching trips off the coast of Baja, short, five-day trips to the mountains of West Texas and birdwatching trips to Arizona and the tropics. This summer, we're planning

to take an extended trip to the Galapagos Islands and the Amazon rainforest of Ecuador." The adult education program is open to the general public through the schools district's Continuing Education Program.

Students in the Spring Branch Independent School District visit the Science Center nearly every year as part of their science education. Many return during vacations, or many years later, to browse among the displays. "Our intent is not to be environmentally demanding," says Jeff Schultz. "We want people to become environmentally aware." ★

The freelance team of writer Barbara Dunn and photographer Stephan Myers, both of Houston, have collaborated on numerous articles for this magazine.



Jeff Schultz uses exhibits in the Hall of Oceanography to teach students about life under the sea.

ROBERT A. VINES ENVIRONMENTAL SCIENCE CENTER

Robert A. Vines Environmental Science Center is located at 8856 Westview Drive in Houston. Take I-10 to Bingle Road and turn north, then turn west at Westview Drive about 1/2 mile from I-10. The center is on the right side of the street.

Public hours are 8:30 to 5:00 weekdays, although some areas may be closed if classes are in progress. Further information on the center or its programs may be obtained by calling 713-465-9628.

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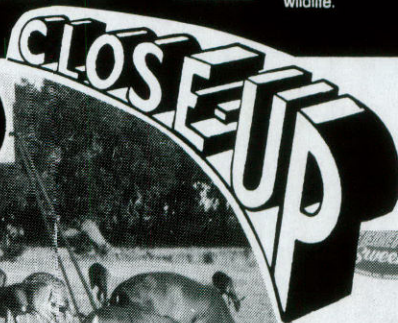
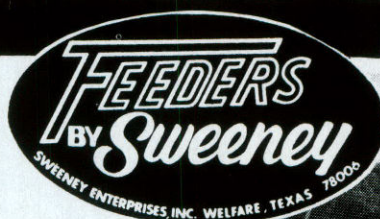


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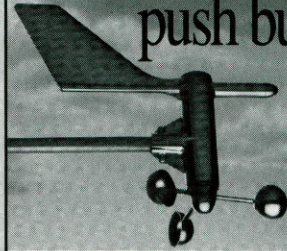


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OUTDOOR ROUNDUP

by Lyndal Waldrip

TPWD To Continue Stocking Turkeys

Eleven East Texas counties are scheduled to receive eastern wild turkeys during 1992 as the Texas Parks and Wildlife Department continues its eastern turkey restoration program.

The department's goal in 1992 is to stock 932 wild-trapped turkeys, "our most ambitious turkey stocking to date," said Don Wilson, TPWD's small game program leader. During 1991, the department stocked a record 816 eastern turkeys. Since 1987, the department has stocked 2,056 wild-trapped turkeys in 26 counties.

Counties scheduled to receive turkeys in the coming year include Harrison (135 on nine sites), Smith (75 on five), Marion (75 on five), Cass (105 on seven), Panola (75 on five), Shelby (195 on 13), San Augustine (105 on seven) and Sabine (90 on six). Upshur, Walker and Angelina Counties are expected to receive turkeys to finish up restoration efforts from last year.

Wilson said the turkeys are obtained from other states for \$500 each. The money is paid to state agencies to cover the cost of trapping the birds.

Counties are selected for stocking according to habitat suitability and proximity to established turkey populations, he said. Stocking areas are distributed at about eight-mile intervals within counties. This method of "block-stock-

ing" allows turkeys from adjacent stocking areas to expand and occupy the range between releases after three breeding seasons. Also, turkey populations in adjacent counties may overlap to form a contiguous population.

Eastern wild turkey restoration in East Texas has proven to be one of the significant accomplishments in the department's wildlife management program, Wilson said. "Our restoration effort already has received national acclaim and has been described as the most ambitious wildlife restoration effort attempted by a state agency. The recent success we've had in obtaining wild-trapped eastern turkeys for stocking has greatly accelerated our program since it began in 1987."

TPWD receives aid in the restoration program from the Texas chapter and various local chapters of the National Wild Turkey Federation, private individuals and the U.S. Forest Service. Significant contributions have been made by Temple Inland, Champion International, International Paper and Kirby Lumber Co., a wholly owned subsidiary of Louisiana Pacific, from revenue they received from the Type II public hunting program.

Wildlife biologists with the department's Private Lands Enhancement Program are available to provide on-site technical assistance to landowners interested in maintaining and improving wildlife habitat and populations.

Conservation Passport Sales Exceed Expectations

Native and winter Texans bought more than 7,000 Texas Conservation Passports in September, but Texas Parks and Wildlife Department officials say it is too early to tell whether the sales will make up for expected lost revenue from license fee increases that took effect on September 1.

A total of 7,385 TCPs was sold in September and another 3,000-plus sold through the first 20 days of October, said Johnny Buck, head of the marketing and tourism branch of the Public Lands Division. With data taken from sales of the annual and restricted annual park permits in fiscal year 1990, depart-

ment officials estimated about 2,200 permits would be sold.

"The success of this program is a combination of things," said Andrew Sansom, TPWD executive director. "Our staff is doing a great job of promoting the passport, but the bottom line is that this is a great bargain."

The \$25 TCP provides a waiver of park entry fees, camping and other discounts, and is a way for everyone to contribute directly to the preservation and enjoyment of Texas's natural resources. Revenues from the annual passport may be used to retire the principal and interest on Park Development Bonds; to operate state parks and wildlife management areas; and to acquire, lease or develop public lands.

Holders of the TCP will receive additional benefits such as entry to some park lands currently being developed, entry to some wildlife management areas, discounts on TPWD items such as *Texas Parks and Wildlife* magazine and news of special outdoor programs.

"Generally, the more conservation passports we sell, the more frequently people will visit parks. I'm satisfied with the sales so far. This may be a big spurt because it's something new. We'll have to wait and see," Buck said.

If data on the annual/restricted annual permits is any indication, sales should soften for winter before increasing rapidly from March through August. Buck said 70 to 75 percent of annual/restricted annual permits are sold during those months, a total of 24,985 in fiscal year 1990. The annual restricted and annual permits are good for one year from the date of purchase.

All but 188 of the TCPs were sold at state parks. The department headquarters in Austin sold 158 and 30 were sold from law enforcement offices across the state. The top five parks with TCP sales in September include Cedar Hill, 730; Brazos Bend, 377; Pedernales Falls, 336; Galveston Island, 250; and Inks Lake, 238.

In addition to selling the passport for consumptive and nonconsumptive users, and as gift ideas, the passport is valuable even to those who may not want to visit state parks or management areas. Purchasing the passport can be a way to help the department preserve the areas being enjoyed today for future generations.

"We're trying to sell people on the idea that it's not just for now," Buck said. "We have a system in place to preserve the natural resources for our



The department has launched the most extensive eastern turkey restoration project ever attempted by a state agency.

children and grandchildren."

TCPs are being sold at all state parks. For more information call your local state park or TPWD headquarters in Austin at 1-800-792-1112.

California Hunter Takes Desert Bighorn

S. Carl Miller became the second hunter in as many months to take a desert bighorn sheep from the Sierra Diablo Mountains when he bagged an 11-year-old ram November 5.

Miller, of Los Angeles, California, obtained the right to take one of two surplus rams for which permits were issued to landowners participating with the Texas Parks and Wildlife Department in the Desert Bighorn Sheep Restoration Cooperative, an agreement that allows the hunter access to TPWD land and two adjoining properties.

Miller's ram was taken on the Sierra Diablo Wildlife Management Area near Van Horn on the fifth day of his hunt. The ram's horns measured 15½ inches in circumference at the base and had lengths of 32⅞ inches and 32¼ inches. The green (not dried) score of 166⅞ is just shy of the 168 points needed to qualify for the Boone and Crockett record book.

Miller and TPWD biologist Mike Hobson, who approved the ram as a harvestable animal, saw 54 sheep, including 30 rams. Four of the rams were considered very good mature age (Class IV) rams. "There are some good rams in the herd," said Bob West, TPWD regional director from San Angelo. "There's a considerable number of Class III rams, six-year-old rams. If something doesn't happen to them, we're going to have some big ones in the next three or four years."

Miller is the third hunter to legally take a desert bighorn sheep in Texas since the early 1900s. Francis X. Bouchard of McAllen, who was issued the other permit, took a seven-year-old ram measuring 153⅜ on October 17. In December 1990, David Abbey of Dallas became the first hunter since the early 1900s to legally take a ram when he harvested a 12-year-old ram.

Because of declining numbers in the native population, hunting for desert bighorn sheep was prohibited by law in 1903 in Texas. Even under full protection, the native population continued to tumble. With the establishment of the department's Sierra Diablo WMA and other brood facilities, as well as a lot of



Restoration of desert bighorns in Texas appears to be making progress.

time and effort by TPWD, the Texas Bighorn Society and private landowners, extensive restocking efforts have been made in the Trans-Pecos region of Texas. Helicopter surveys during the fall of 1990 indicated a healthy population of sheep that could allow for the controlled harvest of a limited number of surplus mature rams.

Eastern Turkeys Get Habitat Enhancement

More than \$19,000 has been made available by the National Wild Turkey Federation and its Texas chapter for habitat enhancement work on the 3,000-acre Clement's Scout Camp in south Henderson County.

The habitat work will benefit eastern wild turkeys that were stocked by the Texas Parks and Wildlife Department in the area three years ago.

Arrowleaf, Louisiana 5-1 and crimson clover and ryegrass will be planted in 12 food plots this fall, said Kay Fleming, TPWD wildlife biologist in Athens. Next spring, chufa, bahia grass, alyce clover and iron and clay cowpeas will be planted to provide supplemental feed in late summer and early fall. Fleming and personnel with the Soil Conservation Service located sites totaling more than 100 acres that would be suitable for food plots on the scout camp.

The scout camp already practices controlled burning of upland woods every five to six years to promote new growth of vegetation and prevent excess rank growth of vegetation, he said. "This proven habitat manipulation practice plus the increased number of food plots should really give the eastern wild turkey restoration program a shot in the arm on this area."

Habitat work was initiated by Ed Cox Jr., facilities chairman with the camp, and Alan Haynes, sporting goods store owner in Tyler. Fleming prepared sev-

eral proposals on varieties of winter and summer supplemental feed, planting rates and schedules and costs of preparing and planting these food plots.

As part of its eastern turkey restoration program, which began in 1987, the department has stocked 2,056 wild-trapped turkeys in 26 East Texas counties.

Wildlife biologists with the department's Private Lands Enhancement Program are available to provide on-site technical assistance to landowners interested in maintaining and improving wildlife habitat and populations. For more information contact the TPWD at 512-389-4395.

Revenue Increasing, But License Sales Lag

Public response to the increased hunting and fishing license and stamp fees, which went into effect September 1, has been predominantly positive so far, although exact figures won't be known for some time.

"I'm cautiously optimistic. I think most Texans are aware that funds from license and stamp sales can be used only for conservation-related programs and research," said Paul Israel, license section supervisor at the Texas Parks and Wildlife Department. "While the numbers of licenses sold are down, the vast majority of Texans have realized the need for increased fees and have been willing to pay them."

While license numbers probably will be down at the end of the fiscal year, revenue from sales reports is up 55.46 percent for August and September 1991 compared to the same two months of 1990. Israel said the increase probably won't remain that high, but it is a positive sign that most people are continuing to buy licenses and stamps.

One reason for the increased revenue is the new \$5 turkey stamp. The department already has distributed more than 130,000 turkey stamps to license outlets. "If we sell 100,000 turkey stamps, that will result in about \$450,000 in revenue that we didn't have last year," Israel said. "Also, this will be \$450,000 that will not be paid by all hunters, only those who actually hunt turkeys, and the revenue from the stamp sales will directly benefit turkey conservation programs and research."

"Consignments (the distribution of licenses to license agents) the past six years have been an accurate indicator of actual sales," he said. "This year, they're

OUTDOOR ROUNDUP

Continued

running pretty close to our projections."

With the fee increases officials are expecting a 10 percent drop in licenses sold but a revenue increase of 30 percent. Indications so far, though, are that license sales may be down less than 10 percent. "When all is said and done, I think we might be down only 8 or 9 percent because of the excellent dove season," Israel said. "A lot of people hunt doves for only a limited time. It was a good season, so some people who might not have hunted in a normal year did so this year."

Resident hunting license sales

OUTDOOR DATEBOOK

JANUARY

Jan. 4: Texas Conservation Passport (TCP) waterfowl tour and photo session on Redhead Pond, Mad Island Wildlife Management Area, 512-729-2315.

Jan. 3-12: Mourning dove winter season, Central Zone.

Jan. 3-19: Mourning dove winter season, South Zone.

Jan. 4-Feb. 9: Zone C sandhill crane season.

Jan. 11: TCP wetland wildlife management and photography tour, Mad Island WMA, 512-729-2315.

Jan. 18: TCP waterfowl tour, Engeling WMA, 903-928-2251.

Jan. 18: TCP nature tour, Elephant Mountain WMA, 915-364-2228.

Jan. 18-Feb. 2: Special antlerless-only white-tailed deer season, South Texas.

Jan. 25: TCP waterfowl viewing and marsh ecology tour, J. D. Murphree WMA, 409-736-2551.

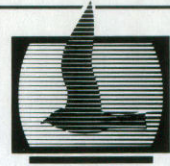
FEBRUARY

Feb. 1: First Annual Bird House Day, Fairfield Lake State Park, 903-389-4514.

Feb. 8: TCP water bird and waterfowl viewing tour, Lower Neches WMA, 409-736-2551.

Feb. 11: Application deadline for Type I wildlife management area spring turkey gobbler hunts.

TEXAS
PARKS & WILDLIFE



TELEVISION SCHEDULE

Watch for our companion television series, "Texas Parks & Wildlife," on your local PBS affiliate. The following is a partial listing for January. All times p.m. unless otherwise noted.

CITY/STATION	DAY	TIME
College Station KAMU, Ch. 15	Check Local Listings	
Corpus Christi KEDT, Ch. 16	Saturday	5:30
El Paso KCOS, Ch. 13	Check Local Listings	
Harlingen KMBH, Ch. 60	Saturday	5:30
Houston KUHT, Ch. 8	Tuesday-Thursday	5:30
Killeen KNCT, Ch. 46	Thursday	1:30
Odessa KOCV, Ch. 36	Check Local Listings	
San Antonio KLRN, Ch. 9	Check Local Listings	
Waco KCTF, Ch. 34	Thursday	11:00

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

In stereo where available

dropped after the previous fee increase in 1985-86, then increased for two years before dropping each year since 1988-89. Sales were down 2.9 percent in 1990 to 1,076,073 resident hunting licenses. If it drops more than 7.5 percent for 1991, it will be the first time Texas has had fewer than one million licensed hunters since 1971.

Israel said resident fishing license sales have been stable the past several years. "It's dropped some, less than one percent in 1990, and I know it dropped some in 1991. We should see our second straight decrease but not by much."

There were 1,759,651 licensed resident fishermen in the state in 1990, down from 1,773,106 the previous year. "Fishing license sales have been a lot more stable than hunting," he said. "Compared to deer hunting, fishing is less expensive to do and there is easier

access."

Israel also speculated that many previous combination license holders will buy either a hunting or fishing license this year instead of the combination. In 1990 the savings was \$3 over the hunting and fishing licenses; in 1991 it was only \$1.

Also on the upswing are nonresident license sales. Nonresident hunting licenses have increased every year since 1985-86. There were 18,987 sold in the fee increase year of 1985-86 and that has risen to 34,326 in 1990. Nonresident fishing license sales leveled off in 1990 after climbing five consecutive years. Beginning with 87,248 in 1983-84, sales have risen each year to 114,392 in 1989-90. There were 113,004 in 1990. "I think people from out of state realize what a great outdoor bargain we've got in Texas," he said.

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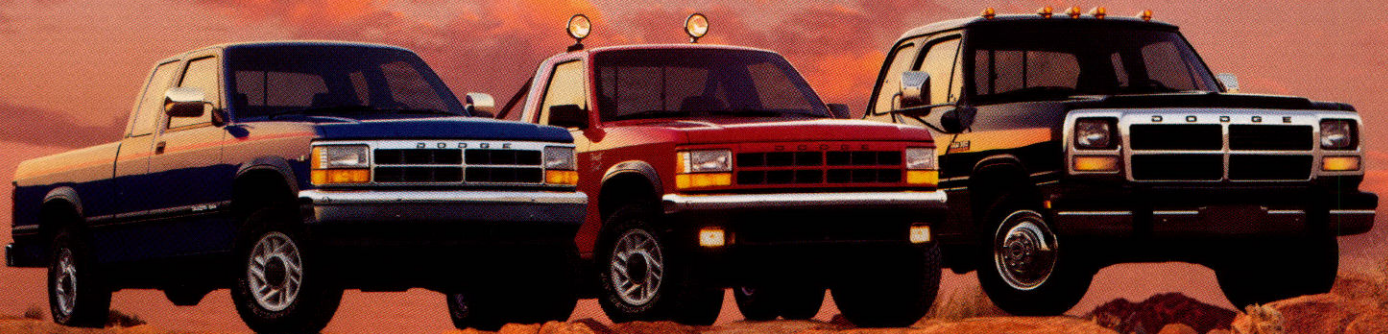


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