

# TEXAS

PARKS & WILDLIFE



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# TEXAS PARKS & WILDLIFE

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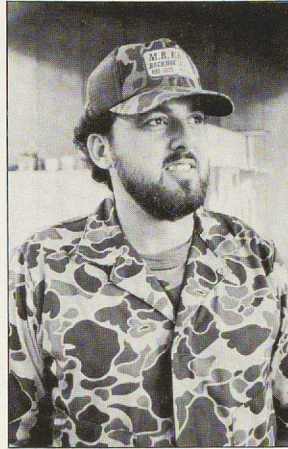
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**Front Cover:** Mountain lions once ranged over more of North and South America than any New World mammal, but human incursion and predator control have depleted their numbers. Texas is the only state east of the Rocky Mountains that still has a viable population of the big cats. (See story on page 2.) Photo by Pat Powell.

**Inside Front:** Spider webs are architectural wonders, built on a definite plan with remarkably strong silk. Most spiders lay eggs in masses and enclose the mass in a sac. (See photo story on page 16.) Photo by Paul Montgomery.

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# CAT OF THE



Pat Powell

by Mary-Love Bigony

**It is a regal cat**, often feared, frequently hated and sometimes admired. And despite bounty hunting, predator control and human incursion, the cryptic mountain lion survives.

There was a time when mountain

lions ranged across more of North and South America than any other New World mammal. They could be found from the Yukon to the tip of South America, from the Atlantic to the Pacific. Colonization in the eastern United States drove the mountain lion west, and today most of the lions in this country live in rugged areas of

the West and Southwest. Texas is the only state east of the Rocky Mountains that still has a viable population of the big cats, and they inhabit the cliffs and canyons of the Trans-Pecos and the thick brush of South Texas.

Known variously as cougar, puma, catamount (cat of the mountains), panther and painter, the mountain lion's scientific name is *Felis concolor*, "cat of a single color." It has been considered a god by Indians and a demon by stockmen, but many people who have lived their entire lives in mountain lion country have never seen the tawny, muscular cat.

Conflict between mountain lions and humans goes back to the time when this country was being settled. Pioneers used deer for meat and hides, and the lions were serious competitors for this resource. More recently in Texas, lion predation has caused justifiable outrage among sheep ranchers and provided the impetus behind widespread predator control against lions in the Trans-Pecos.

The mountain lion's hunting skill is indisputable. It has been called one of the most flawlessly developed hunting and killing machines ever created. Males average 110 to 120 pounds and females 60 to 70 pounds. They have powerful forearms and shoulders and large paws with long, retractile claws that have extraordinary ripping power. Their strength is so great, they are able to drag prey much larger than themselves over rough terrain and even over fences. Speed is not a factor in their hunting prowess, however. They stalk prey in a manner similar to a domestic cat, approaching close to the ground and into the wind. The cat advances only when the intended victim is looking away. Then when it is close enough, the lion makes a short, high-speed run and attacks.

# MOUNTAINS



Pat Powell

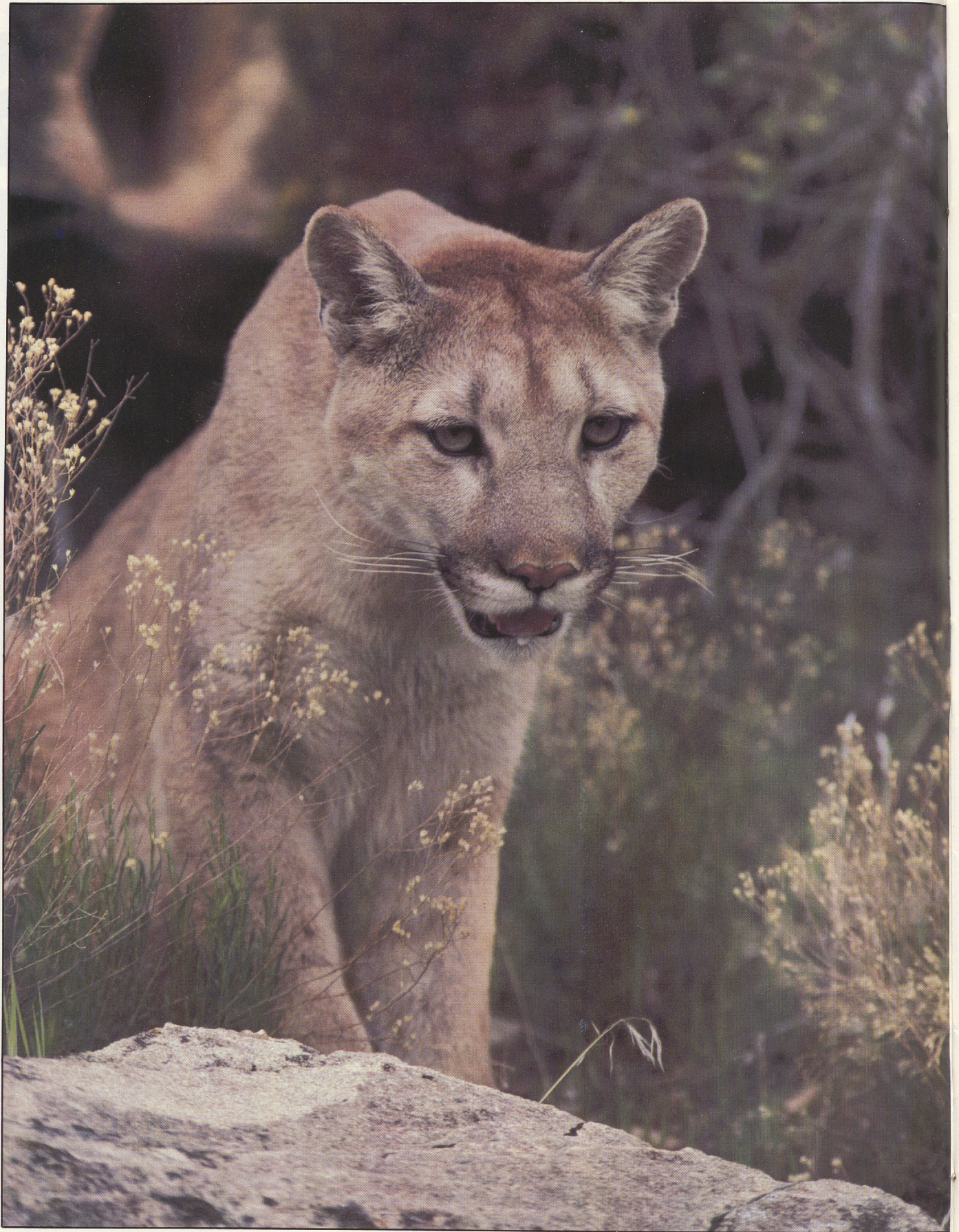
The mountain lion's strength, size and mysterious ways have long inspired fear among humans. But deadly as they are in stalking prey, lions seldom are aggressive toward man unless threatened, and could even be described as shy. Some people speculate that lions at times approach and follow man simply out of curiosity, with no intention of attacking. Although lions have attacked humans on occasion—when wounded, cornered, after heavy die-offs of deer or for some unknown reason—

the subsequent rehashing of the tale and the publicity an isolated occurrence receives fuels people's fears. An incident concerning a 13-year-old boy in Washington who was killed and partially eaten by a mountain lion in 1924 is recounted to this day. Following that incident, a hunt was organized for the murdering lion; 35 lions were killed.

In 1851, when mountain lions were far more numerous than they are today, naturalist John James Audubon wrote: "... at long intervals and

*Although its skill in hunting prey is deadly, at other times the mountain lion is a shy, sulking elusive creature. Adult lions live solitary lives, encountering each other only at mating times. After mating the two go their separate ways and the mother rears the kittens alone.*

under peculiar circumstances, when perhaps pinched by hunger, or in defense of its young the cougar sometimes attacks man. These instances, however, are very rare, and



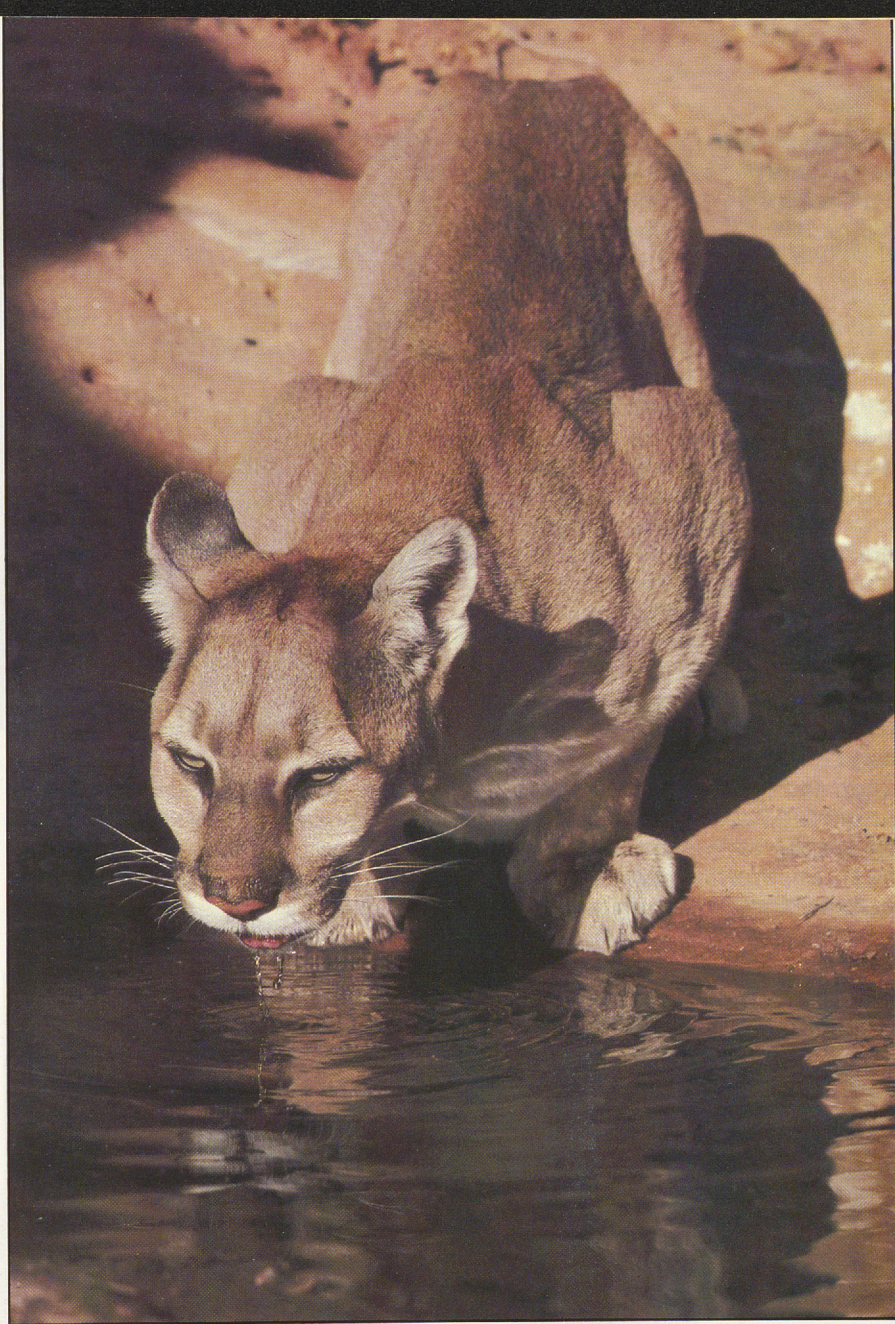
*Powerful forearms and shoulders and fine muscular coordination give the mountain lion a proficiency in stalking and killing that is unmatched among predatory animals. They can drag prey larger than themselves over rough terrain and even over fences.*

the relations of an affrightened traveler must be received with some caution, making due allowance for a natural disposition in man to indulge in the marvellous."

Because of the mountain lion's elusive and stealthy nature and the terrain it inhabits, information about the big cat is difficult to obtain. One man who has thoroughly studied lions and their behavior is wildlife biologist Roy McBride of Alpine. McBride's research has revealed that mountain lions live solitary, nomadic lives, often traveling great distances and seldom coming in contact with other lions.

McBride's radio telemetry studies have shown lions move about extensively and do not confine themselves to a home range, with the exception of a female and kittens. Availability of prey does not seem to influence their choice of an area. At times a lion will remain in an area for several months then move elsewhere, soon to be replaced by another lion. McBride notes that mountain lions often enter a remote, quiet area with a high deer population and little or no competition from other lions. But after a week or even less, the lion moves to a location with fewer deer where it will stay a month or more. McBride calls this a nervous characteristic of the big cat, and also a built-in safeguard to keep it from overhunting a particular area. Trans-Pecos lions and South Texas lions both tend to move around a great deal; however, habitat and prey are contiguous in South Texas whereas Trans-Pecos cats must travel for several days to get from one island of preferred habitat to another.

Considering mountain lions' tendency of mutual avoidance and their low population densities, it is remarkable that these solitary creatures manage to locate each other often enough to propagate the species. But even when lions go for long periods without seeing each other,



Pat Powell

they usually are aware of one another's presence by their scrapes.

McBride's research has revealed the importance of mountain lions' scrapes. According to the biologist, the scrape serves three purposes: it is a visual marker, an olfactory marker (the scent of the urine determines the animal's sex) and it indicates the direction the lion is traveling. Scrapes apparently are not made at random or at the whim of the lion, but with a purpose. "A lion, or an experienced lion hunter," said McBride, "can enter lion habitat and soon begin to find scrapes that are placed in such specific areas that they can be anticipated and located with surety. A lion also may enter new country and find

out if other lions are present." He said that the places where lions make scrapes—under rimrocks, along the tops of mountains, in the bend of canyon bottoms and such—"are so specific that they are easily located by an experienced lion hunter and known easily, of course, by a lion."

A lion makes a scrape by pressing both hind feet to the ground and pushing backward in a six- to eight-inch stroke, then urinating on the pile of debris at the rear of the stroke. The front of the scrape points toward the direction the lion is traveling. So despite their preference for a solitary life, lions can locate each other at mating time.

*Mountain lion kittens are lively and rambunctious, which probably helps them hone their hunting skills. They play like house kittens, such as this one poking at a tortoise. At about eight months they lose their spots and begin to look like the adults. Cubs stay with the mother a year or even longer (opposite page).*

Lions stay together only a short time before they mate, then they go their separate ways and the female locates a secluded place to give birth and rear the kittens. McBride reports that bloody conflicts can occur if two males reach one female at the same time. Some fights even lead to cannibalism, but McBride believes this is triggered by a response of a sexual nature rather than hunger. Mountain lions do not appear to have a standard mating period, and females usually breed every other year.

Two to five kittens are born after a gestation period of about three months. They are woolly and spotted



Stephen J. Krasemann/DRK Photo

at birth, and weigh about one pound. The mother stays close by while she is nursing the kittens, leaving only to hunt. Sometimes she will return to feed on a kill for several consecutive

nights rather than hunt fresh prey, and begins to take meat back to the kittens as they near weaning age.

Mountain lion kittens grow teeth at about one month of age and are weaned in two to three months. They are lively and playful, which probably helps them hone the superior hunting skills they will need as adults. They remain with the mother for a year or longer.

Deer are the mainstay of the mountain lion's diet, and the lion's ability to stalk and kill surpasses the skills of most deer hunters. They also supplement their diet with other animals. Bruce Leopold is a doctoral candidate at the University of Arizona who has studied mule deer in Big Bend National Park. During his studies, Leopold gathered information about the feeding habits of mountain lions and has found they eat javelina, jackrabbits, ringtails, ground squirrels and rock squirrels in addition to mule deer and whitetails. "Mountain lions are opportunists," said Leopold. "If they are stalking a deer or javelina and see a rabbit or squirrel they'll kill it." Leopold has found that a lion kills a deer every seven to 14 days, and believes they are not an important factor in regulating deer numbers. "Their effect on deer seems to be to keep them distributed," he said.

Leopold and McBride agree that mountain lions are such strong and efficient hunters they have the ability to kill any deer they want and do not

Stephen J. Krasemann/DRK Photo





take weak or disabled animals as was once believed. Their skill gives them the authority to be selective. McBride cites as an example an incident which occurred on a ranch in Brewster County where four doe mule deer browsed a particular area. One of the does was crippled and unable to run. A female mountain lion moved into the area and within a 60-day period killed only the three healthy does, although the crippled one would have been easy prey.

The mountain lion's ability to use food wisely when it must has been significant in its remarkable survival. McBride says that the number of deer a lion kills is determined by the abundance of deer and the weather. During warm months when meat spoils quickly, a lion probably kills a deer three or four times a week. And if deer are abundant a lion kills more often than it does when prey is scarce. In areas where deer populations are low, a lion will feed on the same kill for several consecutive nights, whereas in an area of plentiful deer, it will abandon a partially eaten animal. Therefore, McBride believes that a lion probably has the same impact on a deer herd whether the deer are overly abundant or relatively scarce. "The regulating factor that

prevents lions from killing too many deer in one area is a restless nature that causes them to hunt over such a tremendous area and still maintain space between themselves and other lions," said McBride. Lions sometimes go on periodic fasts when traveling from one area to another, apparently more intent on reaching their destination than eating.

Sheepmen were the most vociferous proponents of mountain lion control when sheep ranching was widespread in the Trans-Pecos because a single lion can devastate a sheep herd. A lion's behavior among sheep is odd, as they apparently do not kill them out of hunger. McBride has found as many as 21 sheep killed in one night by a single lion, none of which was fed upon. "An animal such as a lion that has spent his entire life in search and stalk of an elusive prey reacts in a curious fashion when he finds himself in the midst of a domestic sheep herd," said McBride.

The decline of the Trans-Pecos sheep industry apparently has been one of the major reasons for the increase in mountain lion numbers in Texas. In the early '60s, lion control had reduced the number of Texas cats to probably fewer than 25.

McBride said that had it not been for lions coming into Texas from Mexico, the animals might have become extirpated from the state. But a serious drought in the 1950s virtually eliminated most of West Texas' sheep ranching, and the end of the sheep ranching industry also marked the end of most of the demands for lion control, as cattle ranchers consider lions neither a threat nor a problem. Lions have shown a marked increase in the absence of control.

During the 1950s, according to McBride, Texas lions were confined for the most part to Brewster County in West Texas, Webb County in South Texas and several counties adjacent to those two. But Texas, like most western states, has seen a significant increase in lion numbers. Today, McBride says mountain lions can be found in all the Trans-Pecos counties, as well as Crockett and Terrell Counties along the Pecos River and in the Guadalupe Mountains.

The mountain lion's only enemies are his own kind and man, and while man may once have managed to thin lion populations almost to the point of extinction, the cat has proven itself to be resilient and tenacious. Its size, strength and will demand respect, but not unbridled fear. \*\*

Stephen J. Krasemann/DRK Photo





# BASS FACTORY

Article by Jim Cox  
Photos by Bill Reaves

**A mid-February trip** to Mount Pleasant, Texas, (Pop. 15,000) can be a real big-city experience, replete with traffic jams, "no vacancy" signs on motels and long lines at gas stations. It might even be difficult to find a day's supply of the greasy but tangy "hot links" for which the Mount Pleasant/Pittsburg area has become noted.

It's not the barbecue, clean East Texas air or easygoing affability of the residents that draws thousands of outlanders to the pastoral Camp County environs. It's bass. BIG bass.

The city is astir during the early spring bass fishing period because of

Lake Monticello just to the southwest. On appearance, the 2,000-acre power plant cooling reservoir looks like dozens of others. But then Loch Ness probably resembles several other lochs, too.

The scenic upper end of Lake Monticello on a February weekend is magically transformed into a 500-acre outdoor bass boat showroom, with metalflake as far as the eye can see. Often every available stickup has at least one boat moored to it—sometimes several. Boat bumping, crossed lines and highly competitive jockeying for position are commonplace during this bizarre spring rite.

*Lake Monticello might look like any other lake, but Texas bass fishermen know better. This one is the champ among the state's public trophy bass lakes. From mid-January through March anglers throng to Monticello, braving bone-chilling weather in hopes of catching a trophy. And despite the heavy fishing activity, the lake appears to be maintaining strong bass populations.*

Like a vast field of oilwell pumps, the bassoholics rhythmically raise and lower the tips of expensive graphite rods, bumping 11-inch plastic worms along the lake bottom. They are waiting for the ever-so-slight tap which could send them back home to

bask in the glory of having caught a wall hanging-sized largemouth bass. Even on bone-chilling nights, the flotilla labors on, bathed in the faint light of the distant power plant and shrouded by fog rising from the lake's tepid waters.

Such is life on the lake which has emerged as the unquestioned champion among Texas public trophy bass lakes. Any Texas bass fisherman who has not been held captive in Tibet for the past five years knows about it. The diminutive lake produces good-sized bass all year, but the peak time is from mid-January through March when the larger fish begin to stir around in preparation for the spring spawning season.

Of course, the well-schooled student of Texas bassology would point out that in spite of its reputation, Monticello cannot claim the current state record largemouth—or the one before that, either. That honor belongs to one lake and one fisherman. John Alexander of Richardson caught back-to-back record bass during spring 1980 from Lake Echo near Athens, the latest one weighing 15 pounds, eight ounces. However, it should be noted that Lake Echo is private, with fishing allowed only by landowners and guests. Among the state's public lakes, none can approach Monticello's statistics.

Graphic evidence of the lake's factorylike production of trophies can be seen at the Kountry Korner Grocery, located on Farm Road 127 near the lake. Proprietor Jon Schultz literally has papered all available space on the store's walls with four-by-five color snapshots of big bass and their captors. Visitors are amazed that no fish under seven pounds ever has made the lineup. Schultz' store has become an unofficial weigh station for big bass, and his assiduous record-keeping on the trophy bass brought in has been beneficial to department biologists in monitoring the lake's progress in the face of some of the most intense fishing pressure ever seen on a Texas lake.

Amazingly, the lake appears to be maintaining strong bass populations in spite of the heavy fishing activity, but more on that later. During the

first three months of 1981, 219 largemouths were weighed at Schultz' store. The total weight was 1,828 pounds, for an average weight in excess of eight pounds. The largest known fish taken during 1981 weighed 11 pounds, 14 ounces. Weigh-in statistics not only illustrate the remarkable numbers of big bass coming from Monticello, they also show that most of the largest fish are taken during the January-March period. Biologist Allen Forshage of Tyler analyzed the bass statistics and found that in January 1981 anglers caught 90 bass of seven pounds or larger; only one fewer was caught during February. In March the total was 40, and by April the count dropped to 31. Only nine, seven-plus-pounders were caught in May. As of mid-October, 321 bass over seven pounds were weighed at the store, and doubtless a considerable number of anglers chose not to bring their fish in for weighing.

Department surveys at Monticello in recent years have revealed that in addition to lunker bass, the lake supports a well-rounded community of fishes which blends to keep the system in balance. Identifying the reasons for any lake's productivity is a tricky business involving biological factors which defy complete analysis. However, enough evidence has been gathered for biologists to learn why Monticello is a winner. Joe Toole, a department biologist from Marshall, has followed the lake's progress since 1972. He believes the lake's general location is the first key to consider. "Most of the prime bass-producing lakes, particularly for the larger fish, are in the eastern part of the state," Toole said. "The soil contains certain nutrients which make for fertile reservoirs." He said Monticello is situated in the heart of ideal lake country with nutrients being washed into the lake from an agricultural region. Also, the soil in the lake bed itself is conducive to production of aquatic vegetation which helps provide organisms for the lower part of the food chain.

"This fertility creates a forage base, consisting of small fish such as shad, minnows and sunfish. Threadfin shad are another important

forage species which do well at Monticello, since they apparently don't suffer significant die-offs in the winter because of the warm water," Toole said. This leads to another important piece of the picture. Monticello provides cooling water for the Texas Utilities Generating Company electric generating plant. The hot-water discharge keeps the lake water temperature warm, providing a 12-month growing season for bass and a hothouse environment for the fragile threadfins.

Yet another reason for the Monticello phenomenon was made possible by something Texas Utilities Generating Company officials chose not to do. Before impoundment, the power company cleared brush and trees off only certain areas in the reservoir's lower end, leaving hundreds of acres of the upper half of the lake bed populated with groves of hardwood trees and other objects referred to as "structure" in the trendy jargon of bass fishermen. Increasingly, lake-building authorities are realizing the recreational potentials of sport fishing, and how easily it is destroyed by excessive preimpoundment clearing in the lake bed. Largemouth bass in particular shun areas where a clean, flat topography offers no place to hide.

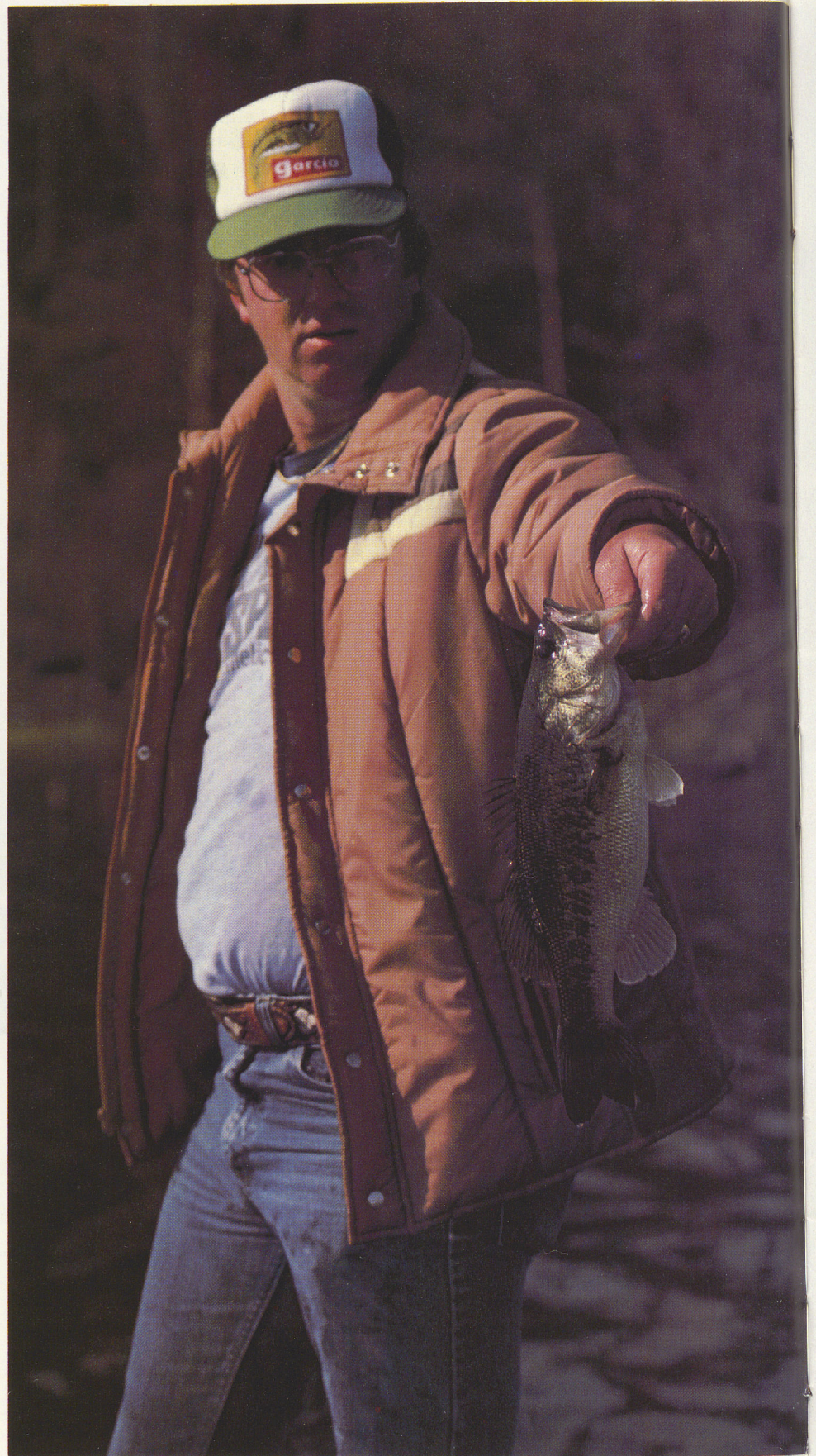
The department's fisheries biologists also could claim some credit for Monticello's bass production. The lake was among the first in the state to be stocked with the Florida strain of largemouth. The early stocking, done shortly after impoundment in 1972, gave the fast-growing Floridas a fertile new environment in which to grow, with little competition from other species. Virtually all the true trophy-sized bass which have been examined by biologists at the lake have been pure Floridas or first-generation crosses with native largemouths.

Lake Monticello's widespread reputation and resulting big bass mania have caused some concern among biologists, even though cove surveys give some indication that the lake is continuing to support a remarkably large number of bass. Two coves were treated with the chemical rotenone last summer and the catch was

analyzed. Although the coves produced an amazing 256.6 pounds of bass per acre, there were some indications that certain segments of the bass population are beginning to show the effects of heavy fishing pressure.

Hoping to maintain what at present is a high-quality bass fishery, biologists recommended institution of a "slot" limit on largemouth bass, and the Parks and Wildlife Commission concurred. The new length limits, which went into effect in September 1981, allow fishermen to retain only bass shorter than 14 inches or longer than 18 inches. Bob Bounds, the department's inland fisheries management coordinator, stresses that the slot limit is not necessarily a move to create a "trophy" bass fishery, although in practice that could be one of the results. "In a lake environment subjected to heavy fishing pressure, bass in the middle size, from 14 to 18 inches or so in length, are the size class which is most difficult to maintain in significant numbers," Bounds said. "These are the fish which are vital to keeping a lake's fish population balanced." There are two prime reasons for this theory, in Bounds' view. "It's essential to maintain relatively high populations of these fish because they are the primary predators, keeping populations of forage fish such as sunfish and even small bass in check." Bounds noted that in countless numbers of new lakes in Texas, heavy harvests of the larger bass have reduced their populations so drastically that the lakes became overrun with undersized (and underfed) small bass and sunfish. "Years ago, people believed that fishing pressure had little effect on a lake's productivity. Now, with the increased pressure exerted by an increasingly better-educated and equipped group of anglers, we know that the old theory is no longer true." Bounds added that while spawning success is not often a major problem in Texas reservoirs, bass in the 14- to 18-inch class are probably the most consistent spawners.

How does one go about catching a big bass at Monticello? One fisherman who should know is Bob Garcia,



a Colleyville fireman who, in the opinion of some statewide bass organization officials, probably has caught as many lunker bass from Monticello as anyone during the past five years. An admitted trophy bass addict, Garcia said switching emphasis from quantity to quality bass fishing was natural for him. "I had gotten to the point where filling my live well with bass was no longer important," Garcia said. "I believe catching the true quality fish is like going after a big trophy buck instead of going after meat."

Garcia fished Monticello exclusively during 1979-80 when he was proclaimed Angler of the Year by the Big Bass of the Month organization. The competition is based on entering one bass each month, and the combined average is computed to determine the winner. Garcia's fish ranged from 7¼ to 12 pounds, averaging 9½ pounds. "What I feel is important, though, is that I believe I've helped more people with advice that's paid off for them in catching big bass," said Garcia, whose fishing expenses are now subsidized by several fishing tackle firms.

Garcia believes Monticello is without question the best trophy bass lake in Texas and neighboring states, but he feels some anglers have approached it incorrectly in their quest for big bass. "A lot of fishermen I noticed were using the same philosophy at Monticello they use on cold-water lakes, especially during the winter. They were fishing in 15 to 25 feet of water because they felt the bass moved into deep channels in winter," he said. "You have to remember that Monticello's water stays warm all year, and you can catch bass in shallow water during the hardest February freezes."

As with most serious bass fishermen, the word "structure" is the touchstone of Garcia's fish-finding strategy. However, he seeks out structure which may be bypassed by less keen observers. "Most of my success has been fishing humps and ridges in the lake bottom," Garcia said. "I'm not talking about large variations at all. In fact, a rise or drop on the depth finder of only two feet could indicate the presence of

an underwater avenue used by bass." One of these high spots has been dubbed "Garcia's hump" because of the fish he has caught around it. "One week when I had to work I pointed the spot out on a map for a friend, and he caught a 13-pounder there the next day," Garcia laughed.

Once a promising area is located, Garcia recommends two primary types of lures for trophy bass—the 11½-inch plastic worm and deep-diving crankbait. "Both of these lure types work very well in January and February. In fact, Monticello can be a fantastic crankbait lake in the winter," Garcia noted. A crankbait was used by Jim Kimbell of Pittsburg in February 1980, to catch the 14-pound, 1½-ounce Monticello bass which held the state record for almost a year. "But all things considered, you would have to say the 11½-inch plastic worm in black, grape or red color is the most productive lure for big bass," said Garcia.

Perhaps the most compelling reason for Garcia's success at Monticello has been his practicing the quality he terms "grit." A typical itinerary for one of his February excursions would give an Eskimo pause. As a fireman, Garcia works 24 hours and is off duty 48 hours. "I normally get off in time to arrive at the lake around 10 a.m. on Monday, for instance. I launch the boat and don't return until about 3 a.m. Wednesday, just in time to make it back to work the next shift." This means more than 40 hours on the water, and he allows himself only a few rest periods, snoozing in the bottom of his bass boat.

Garcia has caught some of his most impressive fish during these marathon events, while enduring bitter cold weather and the gloom of night. "I caught a nine-pound, 15-ounce bass one night in February when it was 15 degrees and snowing," Garcia said. "Don't make the mistake of thinking the fish are affected by cold fronts at Monticello, because the bigger fish apparently move around during the worst cold snaps," he advises anglers. His favorite method of fishing, once a good area is located, is to cast me-

thodically in a circle around the boat, placing each cast about a foot farther along than the previous one.

If enduring Monticello on a February night is tough, midsummer days may be even worse. But Garcia said big fish can be caught even when 100-degree air temperatures combine with water temperatures in the same range to create a wilting, saunalike atmosphere. "You can fish an 11½-inch worm around the moss beds in the upper end of the lake and do surprisingly well, even when it's so hot you can hardly stand to be out there," he noted. He said he rigs the worm with a 1/32-ounce weight—just heavy enough to pull the buoyant worm slowly down through holes in the moss. Bass often will strike the worm before it hits bottom and fight with vigor one might think impossible for a fish living in such hot water, he said.

Garcia believes the Florida strain of largemouth has adapted well to hot-water lakes such as Monticello. "Floridas are a more aggressive fish than the native largemouth, and they seem to prefer shallow water more than natives," he said, adding that their aggressive nature may help explain the apparent superiority of the longer worms over less-formidable appearing lures.

Another fisherman who has been stricken by the Monticello mania is Ron Peterson, director of the Big Bass Express statewide bass tournament organization headquartered at Mount Pleasant. "Monticello is king . . . just a phenomenal fishing lake. It's demanding and sometimes frustrating to fish, but the thought of catching a trophy bass or even the next state record is enough to keep me and a lot of other fishermen going out there," said Peterson. He added that one spectral lakescape on a February night impressed him, in a way illustrating the lake's mesmerizing effect. "I remember looking out across the lake and seeing dozens of fishermen standing in the fog, with the glow of the power plant shining through the trees. The fog was so thick over the water you couldn't see their boats at all . . . It was a scene I don't ever expect to see on another lake." \*\*



# Sportsmen Speak Out On Steel Shot

Article and Photos by  
Ray Sasser

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**When** the Texas Parks and Wildlife Department expanded its nontoxic shot zone for waterfowl hunters prior to the 1981 hunting season, some of the state's sportsmen started worrying.

They were convinced that nontoxic steel pellets could not kill ducks and geese as effectively as lead pellets. They feared the harder steel pellets would damage their guns and that nontoxic loads were not available in quantities to suit the needs of Texas hunters.

One group of hunters even challenged, in court, the constitutionality of the state's steel shot zone. A district judge ruled in favor of the Texas Parks and Wildlife Department and the nontoxic shot was used throughout the expanded zone.

The idea of substituting steel pellets for lead when hunting waterfowl is nothing new. It's long been recognized that ducks and geese ingest spent shotgun pellets. A lead pellet is worn down by the bird's digestive system, and the result is lead poisoning.

Just how many ducks and geese die annually of lead poisoning is open to debate, but the number is certainly significant. Firing nontoxic steel pellets when hunting waterfowl would all but eliminate this lead poisoning problem.

Unfortunately, many Texas waterfowl hunters have not yet heard the news about steel ammunition. It's much improved over the first loads that generated so much negative publicity a decade ago.

Had you, as a concerned waterfowler, attended the trial over the steel shot controversy, you would have heard the updated facts on steel performance delivered with magnum force by Bob Brister, shooting editor for *Field and Stream Magazine* and Tom Roster, ballistics specialist for the U.S. Fish and Wildlife Service.

Both men are expert shotgunners. Roster has fired more than 75,000 rounds of steel shot under actual field conditions and in highly structured tests.

Testimony by Brister and Roster bears weight in a court of law, but it may be of more interest to you, a typical duck hunter, to learn what other typical duck hunters have to say about steel shot.

The J.D.Murphree Wildlife Management Area and Sea Rim State Park, both near Port Arthur, are good places to hear what average hunters think about steel loads. The state-owned Murphree Area has been a mecca for public hunters since 1958. Sea Rim State Park has allowed limited public hunting since its acquisition in 1973. Hunters on both marshes were required to use steel loads in 12-gauge shotguns only beginning in 1978. For the 1980 season, steel was required in all gauges.

When I approached David Lobpries, Murphree Area manager, about conducting interviews with a cross-section of hunters, I explained that I wanted to hear the negative remarks as well as positive observations.

"You won't hear too many bad things about steel shot here," Lobpries predicted, and he was right.

About the only aspects of steel shot that were objectionable to Jefferson County public area hunters on opening day of the 1981 duck season were the added cost of the steel loads, the nonavailability of reloading components for steel and the fact that steel is not required everywhere waterfowl are hunted in the entire country.

Bobby Bellows of Nederland was typical of the serious young hunters who've done their homework on nontoxic ammo. Bellows said he's read everything he can find about steel and even attended a steel shot seminar hosted by Lamar University in Beaumont.

"I'm definitely convinced that lead poisoning is a problem and the only real objection I have to steel shot is that I can't reload it," Bellows reported. "One thing I did this year was buy an improved cylinder barrel for my Remington 870 and it really seems to make a big difference. I made some good shots today on teal that were screamin' by."

Like many waterfowlers, Bellows had favored tight-bored full chokes with lead loads for ducks and geese. One characteristic of steel ammunition is that it patterns much tighter than equivalent lead shotshells.

Tighter patterns in steel are created by the thick plastic shot cup that protects the gun barrel from the hard nontoxic pellets and also by the fact that steel pellets will not deform as will the softer lead. Steel pellets fly truer, a property that, combined with several other factors, gives first-time shooters some problems.

Such was the case with Edwin Merendino and his son, Todd, of Sour Lake, who both reported difficulty hitting first-day ducks with steel loads.

"This seems like an altogether different ball game," admitted Merendino, who hunted with steel only once in 1980. "I don't know if steel shoots tighter or looser but it's not the same as lead."

Todd Merendino stated that the steel loads he'd shot during the morning hunt seemed to lack knockdown power.

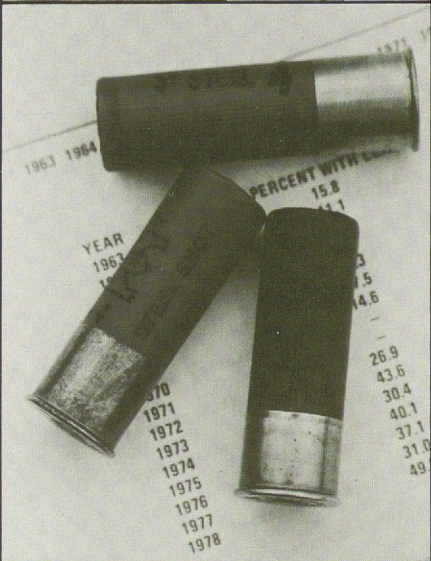
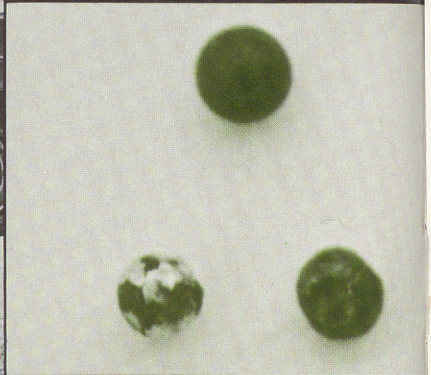
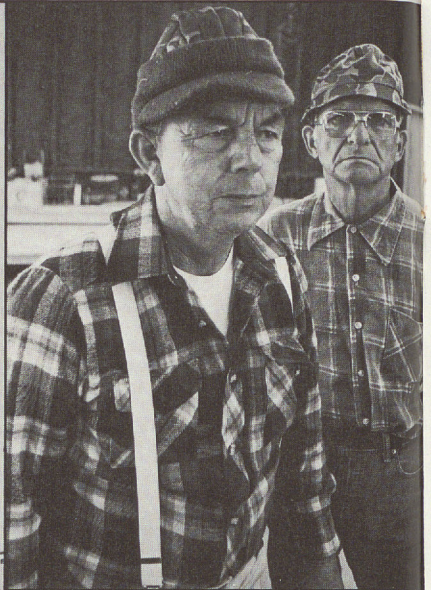
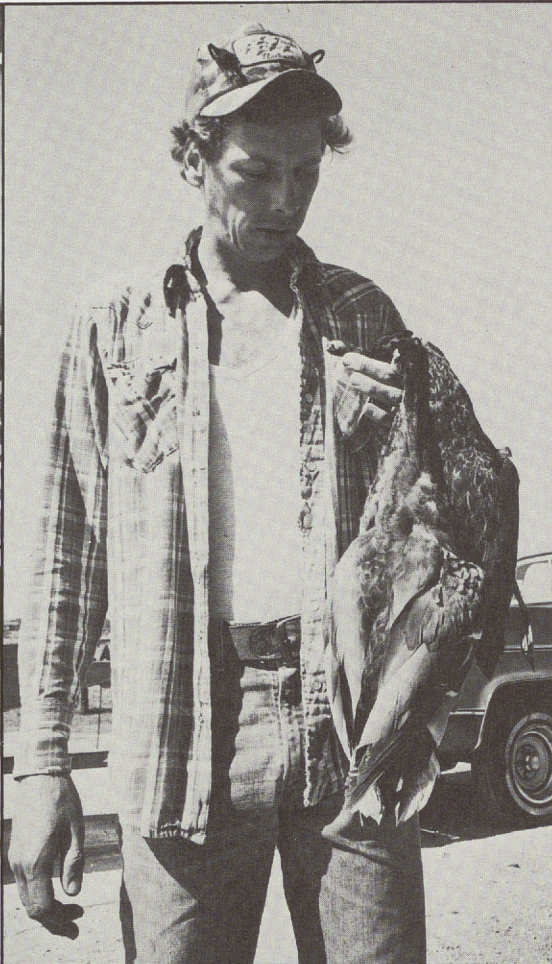
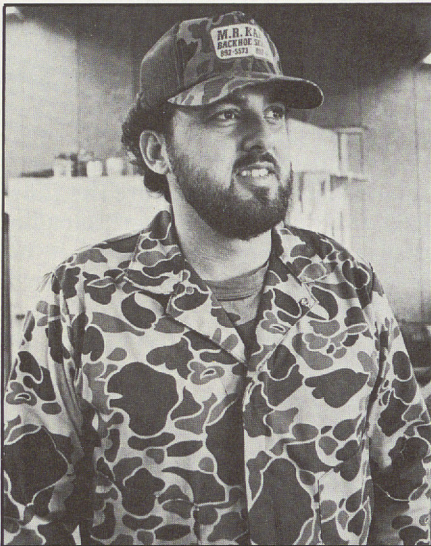
Most hunters, like Curtis Landry of Port Acres, can't tell the difference in performance between steel and lead.

"I've been shooting steel real regular for three years now," Landry reported. "I probably shot at least a case of steel last season. I like it just fine. It seems to penetrate better than lead and, as far as effective range is concerned, I can tell the difference."

Landry shoots a full-choke 20 gauge or a 12 gauge with a more open modified choke.

Hunters like Myphed "Judge" Anderson have noticed they don't have to lead birds quite so far with steel as they did when shooting lead loads.

"Steel gets there quicker," said Anderson, a longtime duck hunter. "One thing bad I have noticed is that steel





Bobby Bellows (top left) and Gig Becks (center) agree that lead poisoning is a serious problem. Norbert Romero (center left) observed that "steel seems to reach out and get those ducks pretty well." Myphed "Judge" Anderson and Floyd Trahan (top right) have noticed they don't have to lead birds quite as far with steel. The center right photo of pellets removed from duck gizzards shows that the steel pellet on top does not erode like the lead ones below it.

seems to get your gun dirty. I shoot a Remington 1100 and I have to clean it more often now than when I was shooting lead loads."

Anderson's hunting partner, Floyd Trahan, says he has to point his gun more carefully with steel than with comparable lead loads. That, of course, is due to the tighter patterns produced by steel shot.

Anderson's observation about shot speed is a valid one. Tom Roster's extensive testing with a variety of loads showed the average steel moved nearly 100 feet per second faster than the average lead shotshell.

Port Acres hunter Norbert Romero said he ran into some faulty steel shells during the 1980 season.

"I finally just switched brands," he said. "I had a problem with my gun jamming. When I switched brands, the gun worked fine. As far as I'm concerned, steel seems to reach out and get those ducks pretty well."

Romero also had supply problems late in the 1980 season, but never was forced to miss a Murphree Area hunt because he couldn't locate steel shot.

Most of the public area hunters interviewed recommended buying a supply of steel well before hunting season.

"I can see where there might be a supply problem for a hunter who buys shells two boxes at a time the day before the hunt," noted Bobby Bellows. "I buy a case or two well before the season and I've never had any problems."

Curtis Landry added that buying shotshells in quantity helps reduce the comparatively high cost of steel loads. He said he bought steel in 1980 as cheap as \$6.75 per box, in case lots.

Public area hunters who are familiar with the overall steel shot picture are aware that prices should become more competitive as more and more hunters are required to fire the nontoxic loads.

"I think steel shot requirements should be enforced on all waterfowl hunters everywhere in the country," Gig Becks, of Beaumont, said. "The way things stand now, the manufacturers are afraid to make it and the stores are afraid to stock it. They're afraid somebody else might file another lawsuit and hunters won't buy steel."

Becks would probably shoot steel anyway since he kills ducks as effectively with steel as with lead. He considers the steel shot program at least five years behind times.

"I've seen ducks that were dying from lead poisoning," he explained. "I picked up a pintail hen on a shell road

close to China last year and took her to biologists. Sure enough, it was lead poisoning. Too many people don't know the facts about lead poisoning and steel shot. I've got friends who hunt a lot and don't think there's any problem. They're wrong."

"Steel shot," summed up Curtis Landry, "will kill ducks, all right. If you can put it on 'em, they're D.O.A."

Meticulous monitoring of hunter success at the public hunting areas indicates Becks, Landry and other hunters who favor steel know what they're talking about.

For instance, from 1958 through 1977, Murphree Area hunters exclusively firing lead loads required 6.8 shots per duck bagged. The crippling loss with lead loads averaged 23 percent. Since Murphree Area hunters have been required to shoot steel, the shots per duck figure has dropped to 4.8 and the crippling loss has declined to 17 percent.

Moreover, tests involving gizzards from ducks and geese harvested on the Murphree Area indicate that the percentage of waterfowl with ingested lead has decreased. Nontoxic steel pellets are replacing lead in gizzards samples from public hunting areas.

Is this any indication that Jefferson County public area hunters are different from duck hunters elsewhere in the state? Charles Stutzenbaker, waterfowl project leader for Texas Parks and Wildlife, doesn't think so.

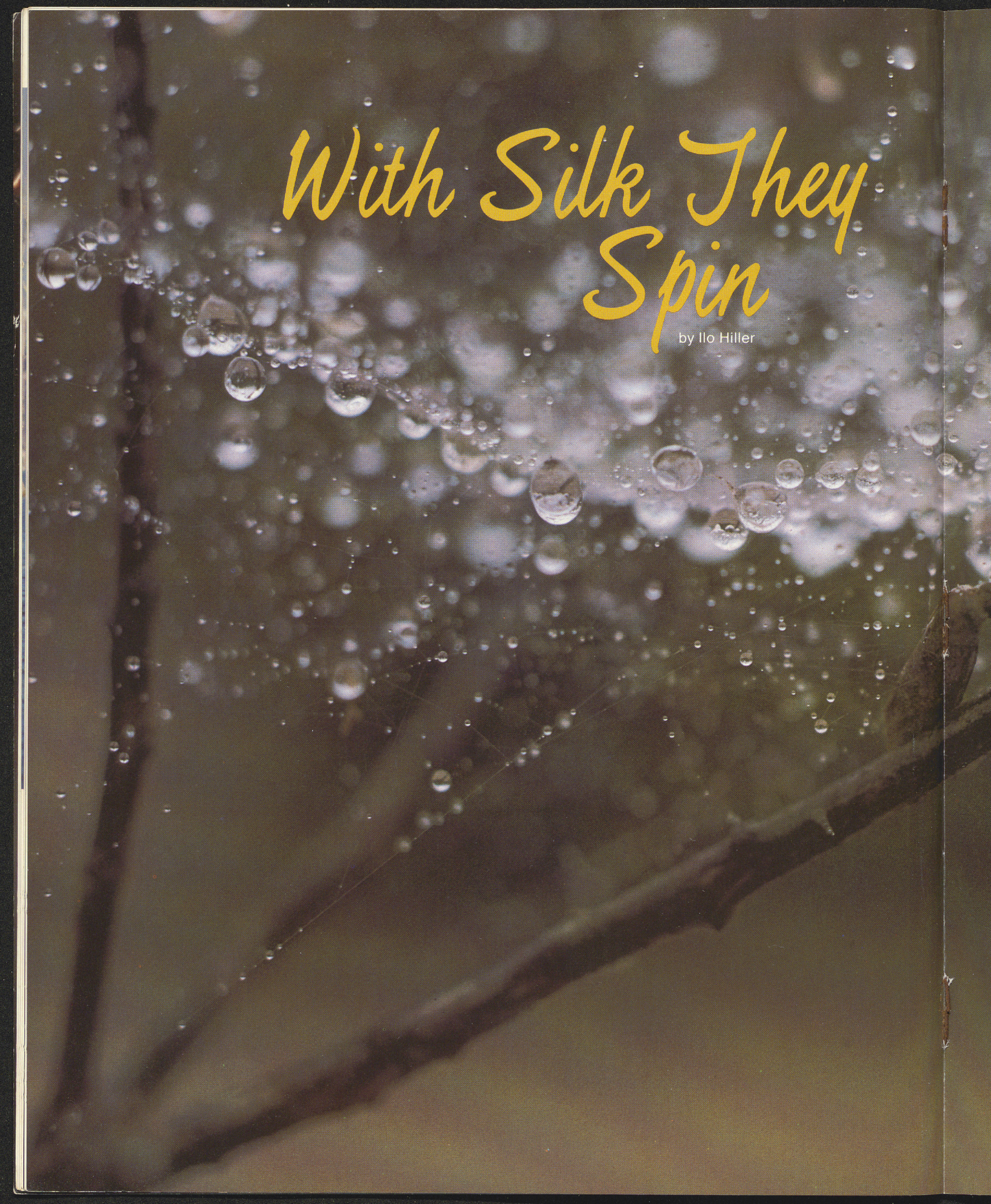
"Public area hunters didn't like the idea of shooting steel at first, either," Stutzenbaker said. "When steel regulations were first implemented on the Murphree Area, we know that a lot of hunters bootlegged lead shotshells. But, then, a funny thing happened. Hunters discovered they could kill ducks just as effectively with steel as with lead. The only difference between Jefferson County public hunters and hunters elsewhere in the state's steel shot zone is experience with the nontoxic loads. By and large, hunters opposed to steel are those who've never shot it."

Average wing shots who think they're having problems adapting to steel loads, or those who'll be shooting it for the first time next season, might consider a little expert advice from ballistics expert Tom Roster:

- Avoid full chokes unless the majority of your shooting is done beyond 50 yards. Modified choke is best for overall waterfowling with steel. Improved cylinder is good if you allow birds to decoy.

- Number 4 shot is fine for ducks over decoys but Roster recommends Number 2's if you shoot mostly large ducks and try some long shots. For geese over decoys, don't use steel smaller than Number 1's. Pass shooting geese requires BB-size pellets.

"If you want to learn how to shoot steel, you've got to shoot steel," Roster advised. "Forget about bootlegging lead into steel shot zones. Put your crutch away. Shoot some steel at clay targets. Pay your dues. Anyone who says steel shot won't kill waterfowl has never shot steel or else he doesn't know how to shoot." \*\*



*With Silk They  
Spin*

by Ilo Hiller

Droplets of dew are caught as effectively by this spreading web as the insect for which it was spun; however, no new insects will be trapped until the sun dries the moisture from its silken strands. A few spiders spin their webs in the early morning hours, but most do this task at twilight so a freshly spun web greets the dawn. As we view the beauty of the silken masterpieces on the following pages we can understand more easily how they inspired a famous Greek legend about the spider. According to this legend, a girl named Arachne, who lived in Greece many centuries ago, was so skilled at weaving that people from far and near came to marvel at the products of her loom. Even woodland nymphs sang praises to her accomplished weaving. One day Arachne became so proud of her ability that she challenged Athene, the goddess of weaving and handicrafts, to compete with her. Athene accepted the challenge and produced a beautiful tapestry showing the warfare of the gods. Arachne wove one picturing the gods' love of adventure. The perfection of Arachne's tapestry was such that Athene became enraged and jealously destroyed it with a single blow from her spinning shuttle. Her anger then was directed toward Arachne. In the twinkle of an eye the goddess turned Arachne into a spider and condemned her to spin silk endlessly. True, it is only a story, but the legend seems to be connected with their scientific name. Spiders belong to the class Arachnida and the order Araneae, and their spinnerets produce silk from the time they are born until they die.



Paul M. Montgomery

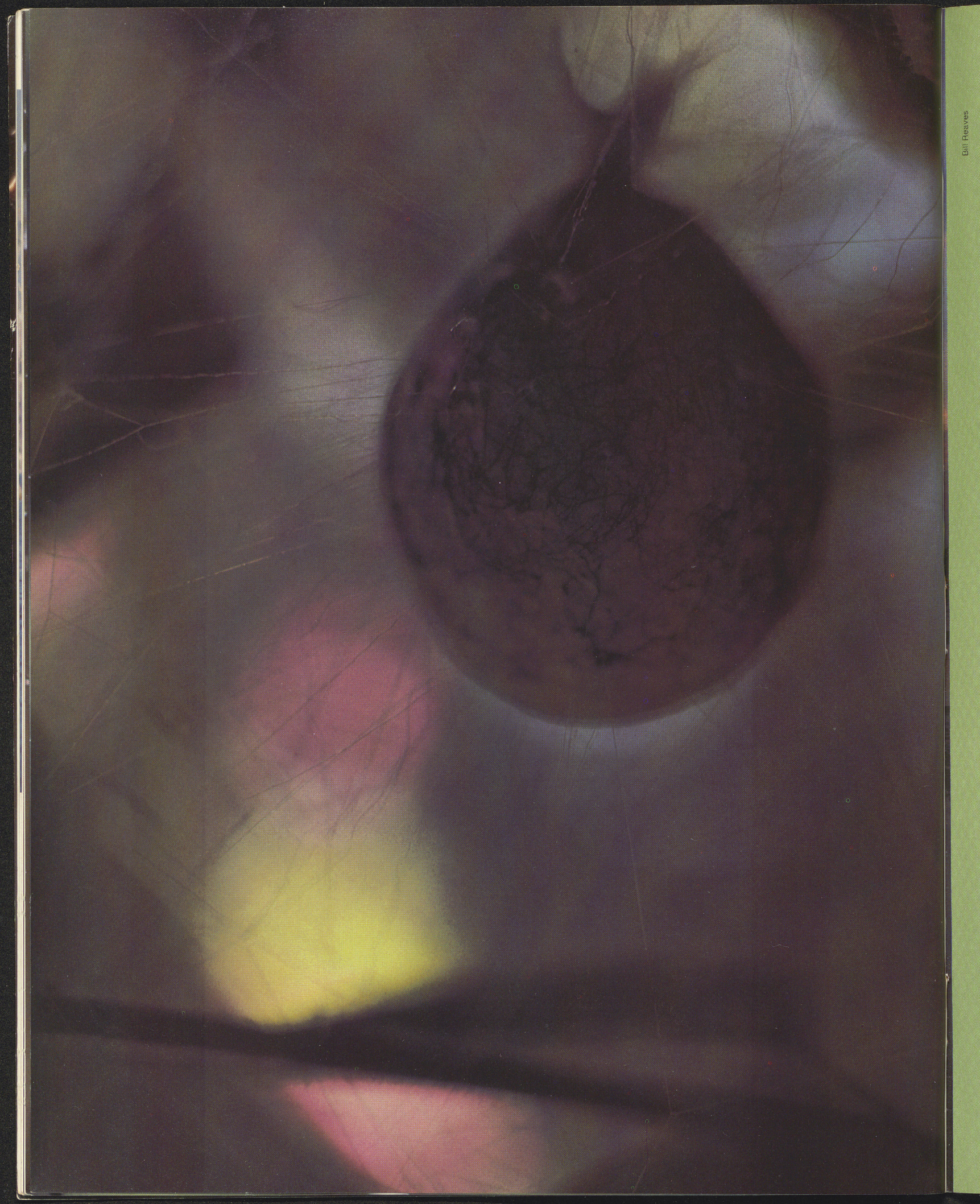
Bill Reaves



With tensile strength surpassed only by fused quartz fibers, a single strand of spider silk usually can be stretched half again its normal length before breaking. Strength varies with the speed it is drawn from the spider's spinneret—the greater the speed, the stronger the silk. It may be as fine as a millionth of an inch or 20 times as thick. A large, intricate web, such as those spun by the common garden spider and other orb weavers, looks as if it would take endless time to build, but usually takes no more than an hour.

Martin T. Fuller





Leroy Williamson



Spider eggs are laid in masses and enclosed in silk egg sacs. Depending on the species, these sacs are hung in various places or carried about by the female. Spiderlings hatch within, but do not emerge until after the first molt. If a young female spiderling is isolated at birth, she will still produce exactly the same web design as her mother's.

## MANAGEMENT AREA HUNTS SUCCESSFUL

Public deer hunts on two Texas Parks and Wildlife Department wildlife management areas in East Texas were pronounced successful by area officials.

In six days of hunting at the Pat Mayse area near Paris, hunters bagged 21 deer, for a 23 percent hunter success ratio. Biologists had predicted only about 15 percent success based on previous hunt records.

Hayden Haucke, assistant project leader for Pat Mayse, said the 12 bucks and nine does were fat and in extremely good condition because of excellent range, including a heavy acorn crop.

The largest deer taken was a

# Outdoor Roundup

COMPILED BY THE  
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DEPARTMENT'S NEWS SERVICE

3½-year-old, nine-point buck which weighed 90 pounds field dressed. The oldest antlerless deer taken was 4½ years old.

The 8,900-acre Pat Mayse Unit is operated under a license

from the U.S. Army Corps of Engineers and was acquired in 1972.

Hunts held on the Somerville area in Lee and Bureson Counties also pleased many hunters.

Project leader Charles Boyd said 199 hunters harvested 66 deer, for slightly over a 33 percent hunter success ratio.

This year's harvest produced 45 does and 21 bucks with the largest being a six-pointer that field dressed at 88 pounds. All of the animals taken were in good shape.

The hunts brought sportsmen from around the state to the 3,500-acre site adjacent to Lake Somerville which is owned by the Corps of Engineers and licensed to the department.

Hunting safety is stressed throughout the public hunts and all hunters, except waterfowlers and dove hunters, are required to wear a minimum of 400 square inches of daylight fluorescent orange material with 144 square inches appearing on both chest and back.

## MARCH IN . . . TEXAS PARKS & WILDLIFE

Fishing for chain pickerel on Caddo Lake in Northeast Texas is a pleasing experience for more than one reason. The moss-draped cypress trees make this one of the state's most beautiful lakes. And pickerel on light tackle strike and fight as viciously as any freshwater fish. March is the time to fish Caddo for this relative of the pike and our lead story will take you there next month. March also is a big month in the lives of the endangered Attwater's prairie chickens as they take to the "booming" grounds for mates. Only some 1,500 of the birds remain as their coastal prairie habitat dwindles. The Attwater Prairie Chicken National Wildlife Refuge in Colorado County was established to preserve the birds and their habitat. Young Naturalist is on the crawfish, or crawdad if you prefer. The sportfishing series continues with Corpus Christi Bay. And it's time to get the kinks out of your winter, house-bound legs on one of the numerous trails in state parks.

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## MOODY THEATRE DATES ANNOUNCED

Lone Star Historical Drama Association has set May 25 through August 29 as season dates for its 1982 production of "The Lone Star" and "Annie Get Your Gun" in the Mary Moody Northen Amphitheatre in Galveston Island State Park.

"The Lone Star," by Pulitzer-winning playwright Paul Green, will open May 25. Irving Berlin's "Annie Get Your Gun" will open June 2 and play on alternate nights, except Mondays, with "The Lone Star" through August 29. Showtime is 8:30 p.m.

A Texas-style dinner is available before the show each night; serving hours are 6 to 8 p.m.

Group rates are available for both dinner and the show. For information write Amphitheatre Box Office, P.O. Box 5253, Galveston, Texas 77551, or call (713) 737-3442. From Houston, call 486-8052.

## ENDRIN CONTROVERSY LAID TO REST

The endrin pesticide poisoning scare which flared up in September has quietly faded with the laboratory analysis of an additional 101 ducks collected in East Texas by Parks and Wildlife Department biologists.

The discovery of high levels of endrin in waterfowl and other wildlife in Montana in early autumn caused some fears among waterfowl officials in Central Flyway states, since eating heavily contaminated ducks could pose a health hazard to humans.

However, data from other states combined with laboratory analysis of 100 ducks from the Texas Panhandle taken during October convinced Texas biologists the waterfowl seasons should proceed as scheduled. No detectable levels of endrin were discovered in the Panhandle ducks, nor from the 101 East Texas ducks recently analyzed.

The birds were tested at the Texas Tech University of Medicine's Pesticide Laboratory in San Benito and the Texas Department of Health headquarters in Austin.

Bill Brownlee, migratory bird program director for the Parks and Wildlife Department, said the recent collections were from Colorado, Matagorda, Jefferson and Waller Counties.

Waterfowl seasons closed statewide January 17.



## IT'S TIME TO BUILD WOOD DUCK BOXES

Though the last shots of this year's duck season have only just been fired, it's time to start thinking about next year's nesting season.

Populations of the colorful wood ducks and other cavity-nesting ducks can be increased in some areas by constructing nesting boxes.

Nesting activity for wood ducks begins around the first of February, but the female will begin looking for sites before then. Department biologists recommend that nesting boxes be built in plenty of time for the ducks to become familiar with them. Boxes may not be occupied until the second spring.

By using scrap materials, one of these boxes can be installed for around \$10, which biologists believe is a small investment for the enjoyment of attracting such colorful and interesting ducks.

Wood ducks don't live throughout the state, but prefer hardwood bottomlands with an ample supply of water nearby. Normally, they nest in hollow trees, but they adapt to boxes of rough-cut cedar, cypress or rough-sawn hardwoods. Pine is not recommended because of its pitch or turpentine content. Weathered lumber is preferred.

Once built, the boxes may be installed on posts or metal pipe over or within a short distance from water. The builder has many alternatives in construction and installation, but the boxes should always have a predator guard. Also, boxes already installed should be cleaned and refurbished if needed.

Biologists George Veteto, Charles Davis and Ray Hart have prepared a leaflet on wood duck nesting boxes giving dimensions, construction details and helpful hints on placement of the completed boxes.

These pamphlets are free and may be obtained by writing the department at 4200 Smith School Road, Austin, Texas 78744, or by calling toll-free 1-800-792-1112.

## TROUT STOCKING PROGRAM UNDERWAY

The annual winter rainbow trout stocking program conducted by the Texas Parks and Wildlife Department is underway at three locations in the state.

Trout obtained from the North Fork National Fish Hatchery in Arkansas have been stocked in the Guadalupe River below Canyon Reservoir Dam, Boykin Springs in Angelina County and below the Possum Kingdom Reservoir Dam in Palo Pinto County.

Officials are hopeful that a total of 136,000 trout can be stocked at the three locations during the winter stocking period which will continue through March or April.

The trout are stocked on a put-and-take basis, with most being caught by anglers before

summer. High water temperatures and low water flows during the summer months normally keep the fishery from continuing all year.

Stockings of the federal fish will continue every two weeks at all three locations. However, the Boykin Springs and Possum Kingdom stockings will continue only through March 24, while the Guadalupe will be stocked with commercially produced fish from mid-February through April.

Fisheries technician Vernon Staats of San Marcos said the fish already stocked average about eight inches in length. He said very few of the Guadalupe trout have been caught so far, since water release rates from Canyon Dam have been more than 700 cubic feet per second, which makes fishing difficult. Water releases are expected to be reduced soon.

The daily bag limit is five trout, possession limit 10.



## MAN CAUGHT SELLING OWLS

A San Antonio man has been charged with selling owls which are protected by state and federal law.

John Caudle, regional law enforcement director of the Texas Parks and Wildlife Department, said a classified advertisement placed in a local newspaper led to an investigation and eventual arrest of the man and confiscation of seven owls.

"When Game Wardens Rolly Correa and Hilda Sanchez checked the suspect's house, they found four young barn owls and an adult great horned owl," Caudle said. "Later they located two other persons who had bought owls from the man."

The seller of the owls was scheduled to appear before a federal court hearing in San Antonio. The two other defendants also were issued citations charging them with possession of a protected species.

The game wardens were assisted in the investigation by federal wildlife agent John Stroebelle of Laredo.

Caudle said all the confiscated owls were in good condition and eventually will be released back into the wild.

All birds of prey, including hawks, owls and eagles, are protected by both state and federal law.

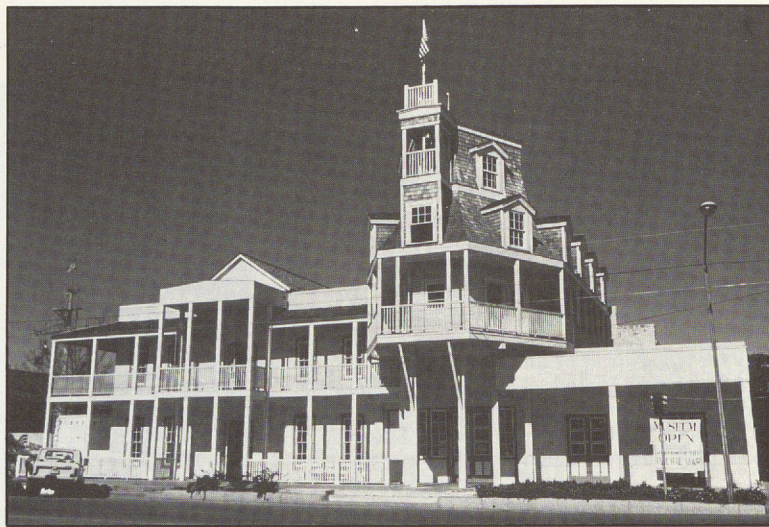
## DESIGNS SOLICITED FOR '82 DUCK STAMP

The Texas Parks and Wildlife Department is soliciting proposals for design and artwork services for the 1982 Waterfowl Stamp.

The design will be in full color of a waterfowl species common to Texas, with the exception of a mallard which was used on the 1981 stamp. Art must be original and not used in the production of any federal or state duck stamp program and not submitted in any other federal or state waterfowl stamp competition.

Deadline for bids is April 1, 1982. For complete information on the 1982 competition, contact the Parks and Wildlife Department, Director of Information and Education, 4200 Smith School Road, Austin, Texas 78744.

## Nimitz Museum



# Symbolizing War and Peace

Article by Joan Pearsall Photos by Glen Mills

**The eye-catching structure** graces the main street of the small, distinctively German town of Fredericksburg, but its significance reaches far beyond this spot in the heart of the Texas Hill Country. It is the state's newest historical park and it honors a native son who became one of history's most outstanding admirals—Chester W. Nimitz.

The building itself, dating back to the mid-19th century, is strongly rooted in the stalwart local community and has seen much of its development. Now, the Admiral Nimitz State Historical Park will enable much insight into those pioneer years. Greater emphasis, however, is placed on World War II with particular attention to events in the Pacific, where Fleet Admiral Nimitz was Commander in Chief.

The nearby History Walk of the Pacific War, with its battlefield relics, graphically reminds us of those grim days and pays tribute to the courage of the nation's defenders. The park also reflects the yearning for international brotherhood, as symbolized in the beautiful Japanese Garden of Peace and in Admiral Nimitz' humane philosophy.

This unique historical complex is the outcome of efforts by Fredericksburg citizens in the late 1960s, who felt that his grandfather's old Steamboat Hotel should be restored as a memorial to the admiral. It became a project of international scope, donations coming from individuals and organizations here and abroad. In 1970, it was established as the Admiral Nimitz Center by the Texas Legislature, under operation of the Nimitz Museum Commission. This provided state funds for operation and maintenance, but capital improvements and restoration are being made possible mainly through the fund-raising of the Admiral Nimitz Foundation. Use of his name was approved by Admiral Nimitz with the understanding that the center was to be dedicated to all who served with him in the Pacific War.

Effective September 1, 1981, the legislature placed the facility under jurisdiction of the Texas Parks and Wildlife Department. This will entail few changes in operation. Park manager Doug Hubbard, who served in the Pacific for 2½ years during World War II, has been with the museum project from the start. He

said inclusion in the park system will add momentum to the completion of restoration and interpretive exhibits, and help increase visitation. The Nimitz Foundation will continue its assistance, however, and private donations and gifts of mementos still are welcomed. Completion of the museum will probably take some 18 months.

Playing as a small boy in the Nimitz Steamboat Hotel, and the strong influence of his beloved grandfather, were among Chester Nimitz' earliest memories. Since his own father died before he was born, his grandfather became the most important man in his life. The child would listen eagerly to tales of the old man's youth in the German merchant marine. From him he learned an early lesson that was to prove its value in later years.

"The sea, like life itself, is a stern taskmaster," his grandfather told him. "The best way to get along with either is to learn all you can, then do your best and don't worry—especially about things over which you have no control."

Captain Charles H. Nimitz of Bremen, Germany, had emigrated

to Texas and in 1848, nine years after the founding of Fredericksburg, married the daughter of one of its original settlers. In 1852 they built and opened the Nimitz Hotel, having at first four rooms and a large hallway, later enlarged to 30 rooms. In the 1880s, the famed Steamboat addition, complete with crow's nest, made it a landmark, expanded it to 45 rooms, and helped the old sailor to feel less landlocked.

In the early years before El Paso became sizeable, the Nimitz was the last real hotel between Fredericksburg and San Diego, California. Attractions which caused its fame to spread included Mrs. Nimitz' excellent cooking, even during Civil War hardships, the establishment's meticulous cleanliness, an ingenious bath house—a rare luxury on the frontier—and the conviviality of the host. Captain Nimitz also accommodated the German colonists' favorite hobbies—singing, debating, gaming and enjoyment of beer. In addition to a casino, dance hall and theatre, the hotel boasted a thriving brewery. The place hummed with activity and the comings and goings of a colorful assortment of guests, including many celebrities. For travelers setting out for the West, this was the last contact with civilization they might have in months.

Politics were a hot topic during the Civil War, since the German communities were strongly for the North. But Captain Nimitz, a staunch Democrat, organized the Gillespie Rifles to protect settlers from Indians when troops were withdrawn from the nearby forts and also was appointed Confederate conscription officer for the sector.

Chester Nimitz knew the hotel after it had acquired its shiplike superstructure and was known as the Steamboat. Born in 1885, he lived in Fredericksburg until he was seven and moved to Kerrville. At the age of 16, he was accepted as a cadet in the U.S. Naval Academy. As a midshipman in 1905, Nimitz met the Japanese Admiral Heihachiro Togo at festivities in Tokyo celebrating the admiral's victory over the Russians. In 1934 he attended Togo's state funeral. Togo had spent seven years in England studying naval

science and was strongly influenced by the great British Admiral Lord Nelson. In turn, Togo became a hero to the young Nimitz, who followed in the same spirit of naval tradition and leadership.

As a new ensign, he served briefly as skipper of a gunboat and a destroyer, then was assigned to the submarine service: he became an expert on these craft and diesel engines, which stood him in good stead during the two world wars when submarines were crucial to the nation's defense.

Early in his career, Nimitz began to develop his theories of leadership that were vital in his successful command of the Pacific during World War II. He saw that it was important to pick good men, then help them do their best; that loyalty, discipline and devotion to duty on the part of subordinates must be matched by patience, tolerance and understanding on the part of superiors—"Loyalty up and loyalty down," in naval parlance. He discovered that some of his best help and advice came from junior officers and enlisted men, so made a practice to listen to anyone regardless of rank. He also knew the value of the leaven of humor in handling people.

Diplomacy was another of his

skills. He broke the ice in getting along with allies and fellow military commanders by insisting to his men that good performance and friendliness were as important as protocol. Improvement in these relationships in several instances was a definite boost to the war effort.

There was steel under Nimitz' calm, gentle manner, however. Although he never raised his voice when expressing displeasure, his blue eyes would glitter instead of displaying their usual twinkle, and the point would get across. This was seen also at times of great crisis, in his firm determination to go ahead and win. The author Edwin P. Hoyt wrote of him: "Blue-eyed, gentle Nimitz, hard as nails underneath, the professional naval officer, knew best of all how to get optimum performance from his major weapon, men. He was a master of delegation of authority. He wanted action—immediate, appropriate and resultful action—and he nearly always got it . . . Nimitz was the man to win a war."

*Exhibits in the museum (opposite page) depict Admiral Nimitz' military career and the magnitude of his responsibilities during World War II. The building originally was a hotel, built by the admiral's grandfather in 1852.*



During World War I he served as Chief of Staff to the Commander of the Atlantic Submarine Fleet. In the 1920s he established for the first time the Naval ROTC and taught naval science at the University of California in Berkeley, always studying to keep abreast of modern developments. Promoted to Rear Admiral in 1938, he was given command of a cruiser then a battleship division, then was appointed Chief of the Bureau of Navigation in Washington, D.C. Ten days after the fateful attack on Pearl Harbor, December 7, 1941, President Franklin D. Roosevelt dispatched Nimitz to the Pacific. Promoted over 28 admirals senior to him, Nimitz took command of the Pacific Fleet.

Among the devastation that greeted him, he set about to restore fleet morale and confidence after America's worst naval defeat. His first move was to keep the staff intact, with no transfers, blame or court-martial. Given a second chance, these officers repaid him to the full in hard work and dedication. He reasoned that one way to strengthen confidence of the American public in the U.S. Navy was to create an air of calmness, determination and planning. As part of this plan, he set up a pistol range and horseshoe court near his office, to which he often invited war correspondents, so they would report the confident, relaxed atmosphere. Many times, when he was keyed up about the outcome of battles but could not show it, he would go pitch horseshoes.

Three basic questions he tacked up above his desk for subordinates: "1. Is the proposed operation likely to succeed? 2. What might be the consequences of failure? 3. Is it in the realm of practicability of material and supplies?" These questions, he

said, could also be applied to many problems of our daily lives.

In appraising the losses suffered at Pearl Harbor, Admiral Nimitz noted several fortunate aspects. The greatest was that the aircraft carriers escaped and few cruisers or destroyers had been hit. Losing the battleships freed personnel for use in carrier and amphibious tactics which in the long run proved decisive. In concentrating on the battleships, the Japanese neglected to destroy the submarine base and the repair facilities, which made recovery easier. They also overlooked 4½ million barrels of oil stored in tanks near the harbor. Without this oil it would have been months before the American fleet could have sailed on war missions. Above all, the attack on Pearl Harbor united the American people as never before or since, determined to win the war forced upon them.

Admiral Nimitz' implacable strength was tested to the full many a time during the long war in the Pacific. William H. Ewing, former war correspondent and friend of the Admiral, wrote that it is a rare characteristic to range from the benign and gentle to heights of resolution, to accept terrible costs in order to win a necessary objective. He noted that Carl Sandberg's reference to Abraham Lincoln as a man, "of both steel and velvet . . . as hard as a rock and soft as drifting fog," could apply to Chester William Nimitz as well.

Another author, Samuel Eliot Morison, wrote of Nimitz that he was one of those rare men who grow as their responsibilities increase. "At the height of his duties as CinCPac (Commander in Chief of the Pacific), he commanded more men, ships and planes than all previous commanders in all previous

wars. But he retained the simplicity of his Texas upbringing . . . ever calm and gentle in demeanor and courteous in speech. . . . No more fortunate appointment to this most vital command could have been made. He restored confidence to the defeated fleet. He had the patience to wait through the lean period of the war, the capacity to organize both a fleet and a vast theater, the tact to deal with sister services and allied commands, the leadership to weld his own subordinates into a great fighting team, the courage to take necessary risks and the wisdom to select, from a welter of intelligence and opinion, the strategy that defeated Japan."

At last came September 2, 1945, and the signing of the surrender treaty aboard the Battleship *Missouri* in Tokyo Bay. Just previously, Nimitz made a special visit to the *Mikasa*, land docked flagship of his old hero, Admiral Togo, and was shocked to find it pilfered, vandalized and deteriorated. He published an appeal to the Japanese people to help restore it, made a generous personal donation, and persuaded the U.S. Government to give the Japanese a surplus military vessel to be scrapped and the proceeds added to the restoration fund. He similarly aided in rebuilding the Togo Shrine in Harajuku, Tokyo. Another gesture was returning to their former owners their surrendered samurai swords which had been presented to him.

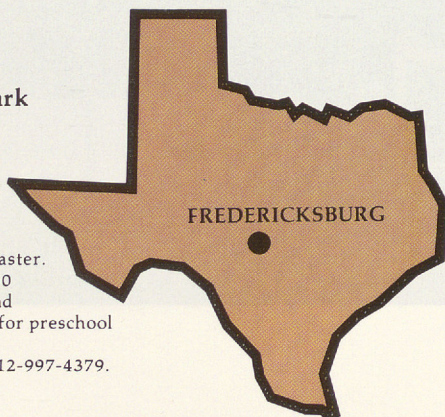
*"Uncommon valor was a common virtue," Nimitz said of the ordeal of the Marines at Iwo Jima (below). The people of Japan raised money to build the Garden of Peace (opposite page) when the Nimitz Center was established, as an expression of their gratitude to the admiral and their respect for him.*

### Admiral Nimitz State Historical Park

**Location:** 340 East Main Street, Fredericksburg.

**Hours and Fees:** Open seven days a week 9 a.m. to 5 p.m. except Christmas and Easter. Fees are \$1 for adults, 50 cents for students 18 and younger and no charge for preschool children.

**For information:** Call 512-997-4379.





These efforts and his general benevolence toward occupied Japan contributed greatly to the betterment of Japanese-American goodwill, said Secretary of the Navy Paul H. Nitze, at the admiral's funeral in 1966. Nimitz' last words addressed to the Japanese people were: "The damage received by both sides was great, but with the passage of years, the wounds of war have healed, and today our two countries join their hands in cooperation. This fact is of great pleasure to me, and it is my fervent hope that we may continue thus forever."

As an expression of their gratitude and respect, the people of Japan raised money to build the Garden of Peace when the Admiral Nimitz Center was established in Fredericksburg. A group of Japanese experts, led by Taketora Saita, most famous garden designer in Japan, came over to plan and build it meticulously, together with a replica of the study and tea house of Admiral Togo. There is meaning in each plant and object and its placement. The designer was particularly delighted with the quality and beauty of local stones and rocks, covered with sun moss (lichen). He described

his satisfaction in selecting and placing them, as if he were picking up diamonds.

Two classical designs are carried out: the beauty of nature is symbolized with trees, shrubs and a waterfall; and "the eternal tranquility of the sea" is presented with small pebbles as the water and native granite as islands. A pool and little brook represent the stream of life, the raindrop which finds its way to the sea. Benches are placed along the shady walk, so visitors may rest and "visit with the stones." By its beauty, the Japanese and Americans who worked together to build the garden hoped to transform the spiritual attachment between Admiral Chester Nimitz and Heihachiro Togo, their friendship and respect for one another, into a friendly relationship between the people of Japan and the United States.

Another feature of the garden is the Memorial Wall, with plaques affixed to the rock memorializing those killed in the Pacific during World War II. Anyone wishing to make such a memorial may do so for a minimum donation of \$250.

The Garden of Peace, which nestles at the back of the old hotel, is usually seen after a tour of the building. Interior restoration is still in process. Plans are for exhibits here to tell the story of early Fredericksburg, the colonists' struggle for survival, how the community eventually thrived, and the history of the hotel, including the story of the Nimitz family. Other exhibits will depict the Pacific War and Admiral Nimitz' life after the war.

The lower floor is in operation and temporarily houses the Museum of the Pacific War. A display of wartime artifacts includes weapons, uniforms and other memorabilia, as well as exhibits pertaining to Admiral Nimitz' personal career and the magnitude of his responsibilities during World War II. A naval art gallery also is to be seen on this floor, and a gift shop is planned.

After closing the gate of the Garden of Peace, the next step for the visitor is to go one block to the History Walk of the Pacific War. Eventually, this short distance along

Town Creek will become the Nimitz Trail, with restored natural beauty as it was in old Fredericksburg, and with picnic and play areas. On the park property is the Ruff House, a restored pioneer rock home that is used as a conference center and for community events.

The History Walk is an amazing and unusual display. The path, lined with anchor chain, features a collection of large military hardware—damaged planes, tanks, field and naval artillery, an amphibious tractor and other items that actually took part in the Pacific conflict, as well as a Nagasaki-type atom bomb case like the one that helped culminate the war. The trail is a self-guiding one, with pushbutton audio and video effects. The voice of a man wounded in a tank on display and tapes of messages during one of the naval battles, give a vivid picture of the horror as well as the outstanding courage that was commonplace. As Nimitz said of the ordeal of the Marines at Iwo Jima: "Uncommon valor was a common virtue." This type of exhibit is a jolt to complacency and highly educational, making the visitor feel a personal involvement in history.

The theme, explained Hubbard, is: "We inspire our youth by honoring our heroes." If people can be stimulated to recognize sacrifices that have been made to preserve their freedom, that will be the museum's utmost accomplishment.

The idea has inspired worldwide enthusiasm, as has the wish to honor the great achievements of Admiral Nimitz. The U.S. Navy has sent or lent numerous items; individuals and governments have poured in bequests and assistance; and Australia sent 40 tons of artifacts, much of it dragged from the jungle.

Texas has several unique historical parks and now it has gained another, that is truly one of a kind. The delightful town of Fredericksburg is an enticement in itself; in addition, a few hours spent at the new park there will yield a harvest of discoveries about several chapters of the past and a deep respect for one of the most outstanding men of our century. \*\*

## SPORTFISHING TEXAS BAYS

by Page Campbell-Hostettler  
and Karen Thompson, Coastal Fisheries

# ARANSAS BAY IS ONE OF THE BEST-KNOWN FISHING AND VACATIONING AREAS ON THE TEXAS COAST.

It is especially popular with winter Texans. The area's popularity stems from its semitropical climate, the excellent fishing and the accommodations in the numerous small towns surrounding the bay.

The Aransas National Wildlife Refuge, bordering the bay system on the east and north, is the winter home for 75 or more endangered whooping cranes, brown pelicans and peregrine falcons, and attracts birders from all over the world. Annually, more than 130,000 tourists visit the Rockport-Fulton area alone; 50,000 or more are exclusively winter residents. The towns of Lamar, Rockport, Fulton, Bayside and Aransas Pass provide more than 40 motels, numerous trailer parks and two state parks.

The Aransas Bay system includes one major bay (Aransas Bay) and eight minor bays (Mesquite, St. Charles, Carlos, Dunham, Copano, Mission, Port and Redfish Bays) covering 56,185 surface acres. The Aransas system extends from Aransas Pass northeastward to Mesquite Bay and from the eastern boundary of San Jose Island westward across Copano Bay to the small community of Bayside. Four public and 11 private boat ramps (a minimum launch fee is required) provide the boat angler access to six major oyster reefs in the northern section of Aransas Bay. In addition to boat access, numerous locations along the northwest shoreline provide excellent wade and bank fishing. These wading areas begin at Texas Hwy. 361 (the road from Aransas Pass to Port Aransas) and continue intermittently to the end of Live Oak peninsula. Two of the better wade-bank areas are Little Bay in Rockport and Tin Can Point on the southeast end of the Copano Causeway Bridge.

Copano Bay is the largest of the minor bays in the system, with an area of 62 square miles and depths ranging from three to nine feet. Extensive beds of algae and grasses offer excellent fishing, as game fish tend to stay in these areas and feed on the abundant bait fish. There are five major reefs in Copano Bay and numerous

Bill Reaves



smaller ones providing additional habitat for fish and other organisms. Access to the bay is provided by two public and eight private boat ramps. Copano Bay, with its numerous access points on both the east and west sides, attracts the avid wade and bank fishermen. Night fishing is popular on the South and North Copano Causeway piers north of Rockport. A small fee is charged to fish, and live and/or dead bait usually is available.

The rest of the minor bays of the Aransas system also provide excellent fishing. Redfish Bay, for example, is a valuable nursery ground for juvenile fish, shrimp and crabs. Five public and four private boat ramps provide access. Deep waters of turning basins, channels and the Intracoastal Waterway are good fishing areas in the winter. Bait is available from the numerous marinas and bait stands that surround the bay.

St. Charles Bay is a narrow, shallow bay with many small oyster reefs. It is also a prime nursery ground, especially for red drum, due to an abundance of sea grasses. One private and two public boat ramps provide access to this bay. The western shore of St. Charles is accessible to wade or bank fishermen, while on the eastern shore boats are needed for access to the shallow areas.

Mesquite Bay is attractive to boat fishermen because it contains Cedar Bayou cut. This pass is a direct migration route for marine life from the Gulf of Mexico into the bays and vice versa. Cedar Bayou is fished most heavily with the onset of cool fall weather when the fish move out of the cold shallow bay water into the warmer Gulf.

Charter boats and guides are available to sportsmen without boats. Inquire at almost any of the marinas in the area for more information. Gulf fishing trips can be scheduled any day of the year, weather permitting, through one of the charter services operating out of Port Aransas.

During September 1974-August 1978, the Coastal Fisheries sport creel program found that weekend boat fishermen spent an average of six hours fishing on each acre of water in Aransas Bay. The numbers of hours expended while fishing—fishing pressure—showed a seasonal variation. Summertime in the Aransas area is the peak period. The warm, shallow bay waters provide excellent habitat for many sought-after fish. Fall is the next most popular fishing season, partly due to the movement of fish from shallow water to warmer, deeper water as cool weather approaches.

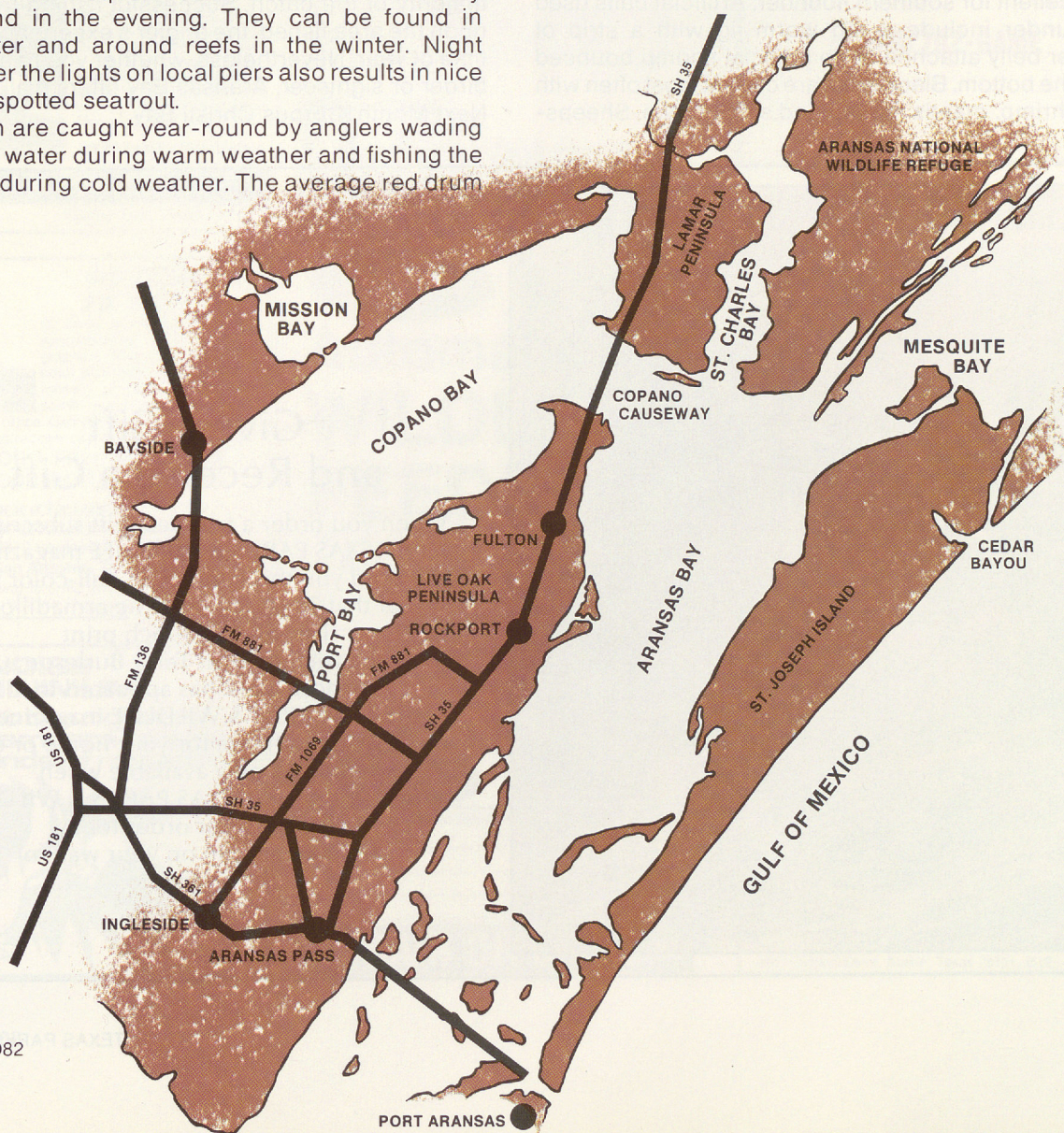
Spotted seatrout are the sportfisherman's favorite, and they can be caught during all seasons. The average spotted seatrout caught in the Aransas Bay area weighs about one pound, but during summer, large sows trout weighing up to eight pounds become the prime target for area anglers. During the hottest summer months, spotted seatrout frequent shallow water in the early morning and in the evening. They can be found in deeper water and around reefs in the winter. Night fishing under the lights on local piers also results in nice catches of spotted seatrout.

Red drum are caught year-round by anglers wading the shallow water during warm weather and fishing the deep holes during cold weather. The average red drum

caught in Aransas Bay weighs about two pounds, but six- to eight-pound red drum frequently are caught. At the onset of fall, red drum can be caught along passes and channels that lead to the Gulf of Mexico. Bay fishermen, on the average, catch larger red drum during this period.

Another favorite fish of area anglers is the southern flounder. In Aransas Bay, the average flounder weighs about one pound, but three- to four-pounders are common. The annual fall flounder run, when the fish move out of the bays to spawn in the Gulf, is a well-publicized event. At this time the best areas to fish for flounder are the passes and ship channels leading to the Gulf of Mexico. Southern flounder can be caught on rod and reel but flounder gigs are the preferred method. By using lights at night to locate the fish on the sandy, shallow-water bottom, flounder as large as eight pounds can be gilled.

In Aransas Bay, black drum begin schooling at the onset of colder weather. Black drum ranging from one to 35 pounds are caught frequently in the late winter and early spring. Bottom fishing along channels and off piers



is an excellent way to catch this cousin of the red drum.

The sheepshead is one of the less popular fishes but it provides excitement for the angler as well as good eating. Fishing for sheepshead is successful during early spring, and they can be found around reefs, pilings and channel markers where they feed on barnacles and other small creatures. Sheepshead also are found in the grass flats of the bay.

Some of the other fishes that make up sportsmen's catches are Atlantic croaker, whiting, sand seatrout and gafftopsail catfish. Fishing for whiting and Atlantic croaker is best during fall in the channels and passes. Spring and summer are excellent periods for catching gafftopsail catfish and sand seatrout; fishing with dead shrimp on the bottom almost anywhere in the bay results in successful catches of these two species.

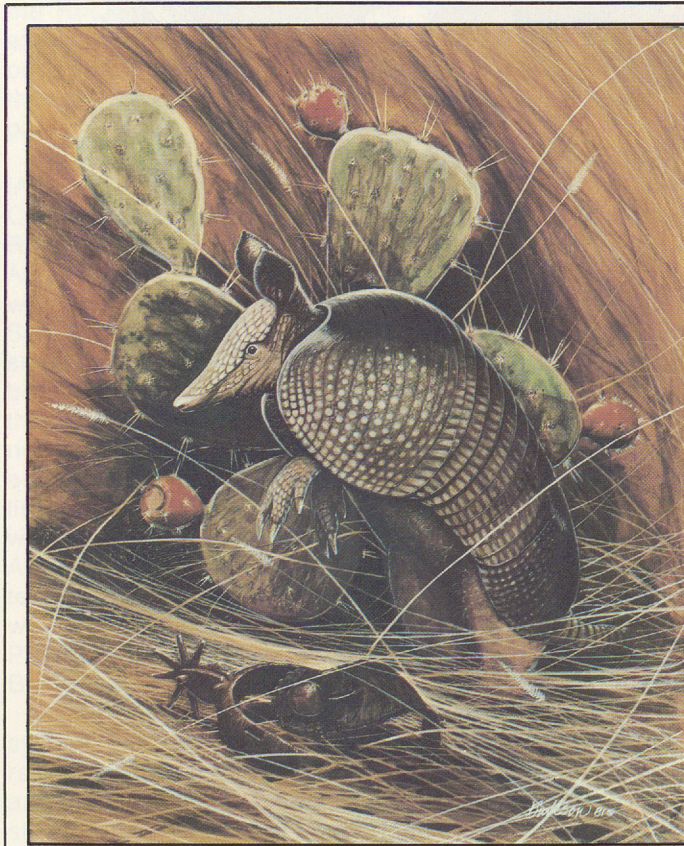
Baits vary according to individual preference and the type of fish pursued. Live shrimp is by far the most popular and successful bait for red drum and spotted seatrout. Fresh dead shrimp and live finger mullet are also good red drum baits. Live fish, such as pigfish, attract large spotted seatrout. Popular artificial baits for red drum include gold spoons and lead-headed jigs, while fish-shaped lures and "speck rigs" attract spotted seatrout. Live sheepshead minnows and finger mullet are excellent for southern flounder. Artificial baits used for flounder include a red worm jig with a strip of flounder belly attached or an artificial shrimp bounced along the bottom. Black drum are caught most often with dead shrimp, mantis shrimp and small crabs. Sheeps-

head anglers prefer dead shrimp, fiddler crabs and small live fish.

Three of the more popular rigs used for fishing with live or dead bait are the flounder rig, the bottom rig and the trout rig. Flounder rigs consist of a leader line, a weight and a hook with bait to bump the bottom. Bottom rigs have a leader line, one or two baited hooks and a weight at the end. Trout rigs are made up of a leader line, a hook with live fish, live shrimp or dead shrimp and a small styrofoam cork placed several inches above the bait. This allows the bait to swim or float while the angler jerks or pops the cork to make a popping sound in the water. This popping noise attracts spotted seatrout and other fish.

According to department surveys, Aransas and Redfish Bays are good fishing areas for all species. St. Charles Bay and Cedar Bayou are particularly good areas for southern flounder and red drum fishing. Good catches of sheepshead and black drum are reported from Copano and St. Charles Bays. The spotted seatrout does not appear to prefer any one particular bay and can be caught nearly anywhere.

Fishing is by far the most popular water sport in the Aransas Bay system. Red drum, spotted seatrout, southern flounder, black drum and sheepshead constitute the majority of the catch. Successful fishing trips depend upon the area fished, the angler's experience, baits and time of year. Nevertheless, whether you're a fisherman, birder or sightseer, Aransas Bay offers it all. \*\*  
Next Month: Corpus Christi Bay



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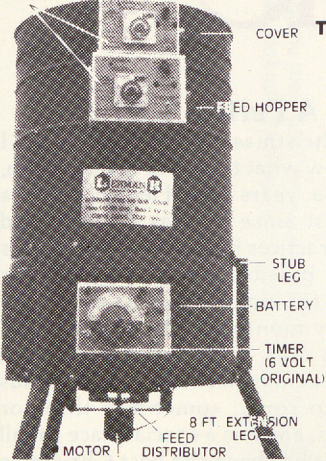
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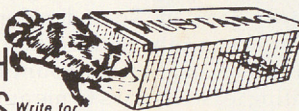
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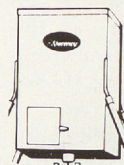
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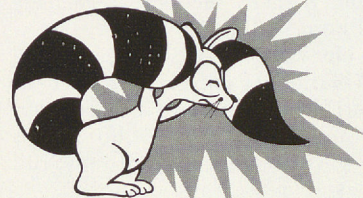
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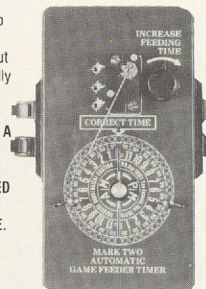
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# Letters to the Editor

## Daylight Affects Growth

After reading the antler development article by Ilo Hiller, I have a couple of questions.

Some time ago I read an article that stated that antlers were grown and shed according to the length of the days and nights. To prove this it told of a biologist who kept deer in captivity in a structure where light could be controlled artificially. By regulating the length of the days he was able to confuse the bucks as to the season. This resulted in their growing and shedding two sets of antlers in a 12-month period. Is this possible?

I have a freak deer rack on my living room wall which has a normal seven-point branch on the left and a 14-point branch on the right. The right branch is very heavy and points slightly forward. It measures four inches by one inch at the base. Did this buck fail to shed one branch one year and grow another alongside of it?

Bud Harjes  
Lubbock

■ Many things in nature are controlled by the photo-period or length of daylight (fish spawning, egg laying, leaf shedding, etc.) and man has learned to use this to his advantage, especially in the poultry business. Since deer hormones which control such things as antler growth and breeding are affected by the photo-period, experiments such as the one you mentioned are possible and have been conducted successfully. As to your freak rack, it would not be possible to make any definite statements. However, since only one branch grows from a pedicel, it is unlikely that your deer grew two. Oftentimes unbalanced or freak antlers occur when an injury, disease or some other thing affects the chemical balance of the deer during the antler-growing period.

## Doe Permits

Your November issue included an article about the importance of harvesting antlerless deer, but sometimes it is impossible for a small landowner such as myself even to obtain a doe permit. I own 40 acres in Erath County, but this year a minimum of 110 acres is required to obtain one permit.

Last year there was a special four-day season in Erath County when no doe

permits were required. This was an excellent program that let small landowners harvest a doe, but when I called the Parks and Wildlife Department to inquire about a special doe season this year I was told the program was discontinued because the large ranchers did not want one. It is a common practice for ranchers to sell their doe permits to the hunters who lease their land. This is illegal, so they do so under the guise of giving the permits to those hunters who will pay an additional amount for a doe hunting lease. It looks to me as though a relatively small number of large ranchers control all the doe permits to the detriment of the small landowners.

Tim Elliott  
Hurst

## Longtime Subscriber

"The Eyes of Texas" had a television program last fall on your magazine and said it had been published since 1942. My husband and I have been with you since 1948. We enjoyed it then, and we still do. I hope we all will be around for a long time yet to come. Keep up the good magazine and all that goes with it.

Fred and Frances Wostal  
Mathis

## Lake Limestone

My husband and I are disappointed that we haven't seen anything in the magazine about the new Lake Limestone near Groesbeck. We're hoping to see something soon.

Mrs. Thomas Helenberg  
La Porte

■ Lake Limestone is not part of the state park system, but is under the jurisdiction of the Brazos River Authority. There are three improved public boat ramps on the lake, and the one nearest the dam is paved and has lighted parking. There are no facilities for camping or picnicking, but the Brazos River Authority has designated several public use areas where camping is allowed. Camping facilities are available at two private campgrounds on the lake.

## A Perfect Gift

One Christmas several years ago, I didn't know what to get for my Grandpa, who is 86 years old. He has been a taxidermist since he was 14 years old and still practices his old-fashioned ways whenever possible. I subscribed to your magazine for him, and he looks forward to it every month for the pictures and stories on deer, other wildlife and fish, as he is an avid fisherman, also. He reads it cover to cover, sometimes three or four times, and has a special place for all of them. It has been the best Christmas present of all to him. Thanks for a wonderful magazine.

Mrs. James Clifton  
Stafford

## Impressive Article

I was delighted with the photographs and article by Paul Montgomery and Ilo Hiller in the October issue. The quality of the photographs is impressive, as is the layout. I am a wildlife and landscape lover and a frequent hiker in state parks. But I am not a sportsman. It is refreshing to see your magazine print an article like this one. I know there are many people who appreciate articles such as this, illustrated with quality photographs. I look forward to new visual delights in the coming year.

Judy Abrahamson  
Austin

## BACK COVERS

**Inside:** Lead poisoning kills significant numbers of ducks and geese each year, and mallards have one of the highest lead ingestion levels of all waterfowl. Although the use of steel ammunition would eliminate lead poisoning, many hunters have resisted the change. But a survey of sportsmen on two public hunting areas showed that most of them who had actually used steel shot had little trouble with it. (See story on page 12.) Photo by Bill Reaves.

**Outside:** Winter takes a swipe at Big Bend National Park, turning the usually arid landscape into a frosty tableau and a thorny ocotillo into a showy centerpiece. Photo by Bill Reaves.



