

TEXAS PARKS & WILDLIFE

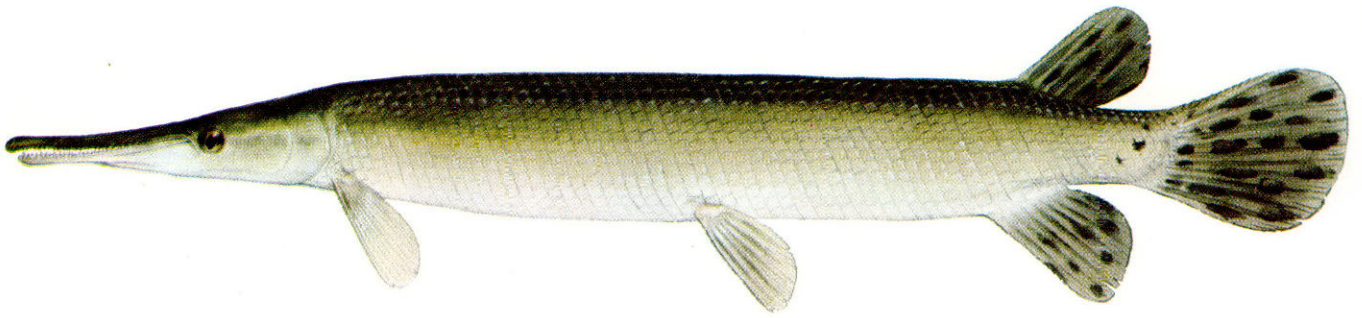
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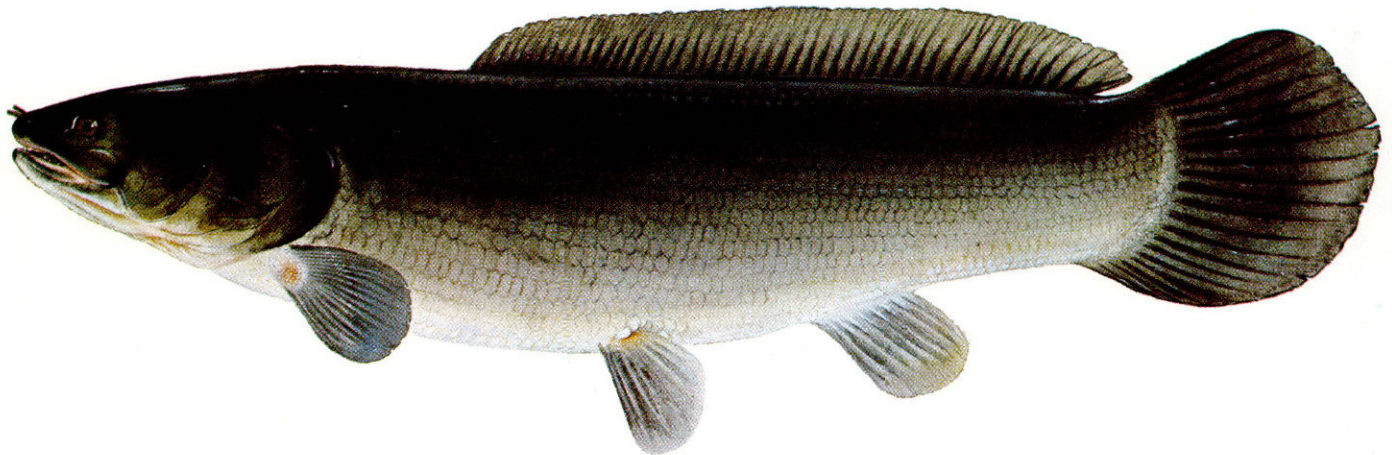
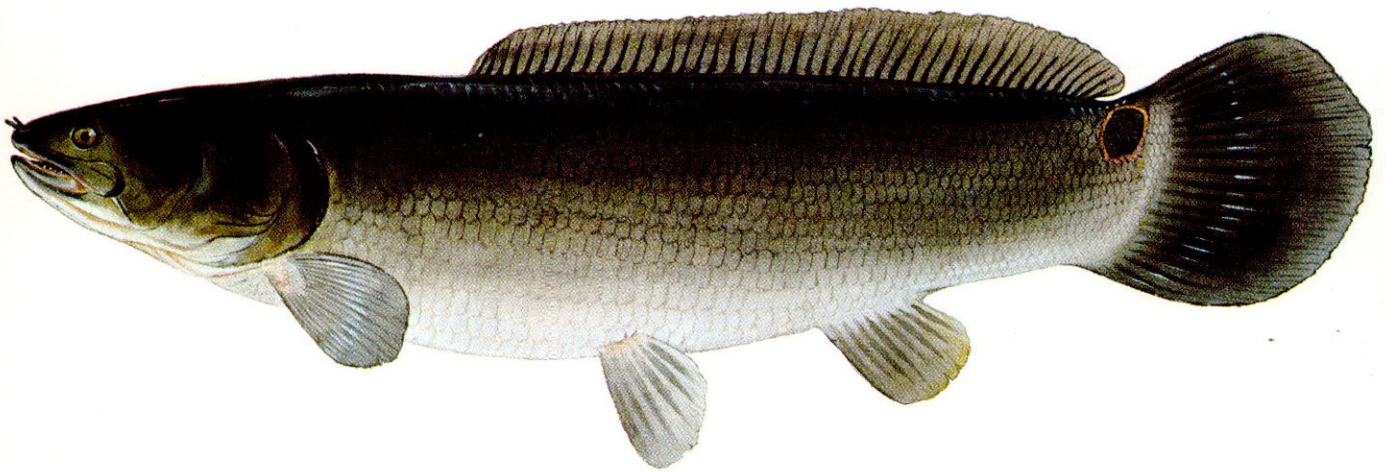
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The Fishes of Texas

Shortnose gar, *Lepisosteus platostomus*, (above) and the bowfin, *Amia calva*, are throwbacks from prehistoric times. Fossil remains of the ancestors of these air breathing fish date back thousands of years. Shortnose gar, named for an abbreviated snout, live in the muddy tributaries of the Mississippi River and in the waters of East Texas. The shortnose is smaller than its cousins, the longnose, alligator, and spotted gar. Bowfin, named for the bow-like dorsal fin, live in the slightly acid swamp waters of East Texas. Females weigh more than males, and the male can be distinguished by an orange or yellow bordered black spot on the tail.



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

WAYNE K. TILLER Editor
 JOHN HOUSER Associate Editor
 NANCY MCGOWAN Art Editor
 JOAN PEARSALL Copy Editor

ETHEL SPECK Advertising-Circulation
 LOUISE KREIDEL Business Assistant
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Cover—September is the time of year when archers planning to hunt deer shoot about 100 arrows per day. See related story on page 2. Photo by Wayne Tiller.

Back Cover—Scenery of Black Gap Wildlife Management Area shows other benefits of free hunting on State lands. Photo by Leroy Williamson.



The Silent Sport

by Wayne Tiller

MODERN deer hunting in much of Texas has evolved into spotting the game from the comforts of a luxurious blind, pointing a rifle, and executing a firm, steady trigger squeeze. Many sportsmen have become concerned as less interest is placed on the stalk, the study of the quarry, and the thrill of the hunt.

As a result, more hunters are turning to hunting deer with a bow and arrow in an attempt to regain the emphasis on the activities leading up to the kill—the anticipation, planning, companionship of fellow hunters, and satisfaction of outwitting the quarry. The actual kill is anticlimactic.

Similar to self-imposed handicaps in bowling, golf, and various forms of racing, the greater the odds in favor of the game, the higher the satisfaction to the true bow hunter. In this way, credit for success lies with the person's abilities rather than his purchase of the most sophisticated and most expensive equipment.

More hunters are turning to hunting deer with a bow and arrows in an attempt to regain the emphasis on activities leading up to the kill.

The use of the bow and arrow in deer hunting is often the sign of a person's preference for the *sport* of hunting, rather than the end result.

For the hunter striving to get more enjoyment and satisfaction out of his deer hunting, the first step is to acquire the proper equipment. Just as a rifle deer hunter would not be satisfied with a \$9.95 mail order special, so must the bowhunter use discretion in selecting his equipment to be sure it will perform adequately.

No amount of skill and accuracy can be purchased in an expensive bow. Therefore, a person's first bow should be of the more simple construction in a lower price bracket. In this way, if interest in the sport soon diminishes, there will not be a large financial loss. After attaining a fair degree of skill and accuracy, changes in equipment can be made according to cultivated personal tastes and the individual's physical capabilities.

The first bow should not have too heavy a draw





Walk-around targets in field archery make shooter recalculate each shot to simulate actual hunting conditions.

weight as this will only cause fatigue and inconsistent accuracy. Since many fundamentals are to be learned and proper habits cultivated, the added strain of a heavy bow will only complicate matters. Initial draw weights of 35 to 40 pounds are the very maximum since the effort needed to pull a bow will strain seldom used muscles. A modern wooden core bow with a fiberglass overlay will provide the best service with the least amount of fatigue, although with new equipment coming on the market each day, it is advisable to consult a reputable sporting goods store.

Several comparisons to rifles can be made to emphasize the value of selecting the proper equipment to perform the required task. Carbine barrels are short, thus limiting their distance and accuracy, just as shorter bows are designed for short range and limited accuracy shooting. Similarly, the expensive recurved bow compares to the fast .250-3000, .257, .243, and .270 in that all feature greater distance, better accuracy, and a flatter trajectory. However, some avid bowhunters still swear by the straight bow, making up the difference by choosing heavy pull weights and shooting only at close range.

Equally important as the bow is proper selection of arrows. Basically, the arrows must match the bow, just as shells must match the rifle. The spine construction must match the power of the bow in order that the initial shock of shooting does not snap the arrow at the time of release. All arrows oscillate when fired from a bow—those too weak for the bow tend to bend around the bow and continue on a wobbling, unpredictable course. Arrows with spines too heavy for the bow will never recover from the release shock and will go in some direction other than the aimed line of sight.

Another factor to consider when purchasing archery equipment is that all bows have the pre-

determined weight measured at a specified draw distance. A bow should come close to being designed for an individual's arm length, although the 28-inch draw is considered a standardized measure and is perhaps the most accurate.

Fletching, or the feathers on the back end of an arrow, does the same thing for an arrow that rifling does for a bullet. It provides a stabilizing rotating motion in flight, and this rotation is caused by the set or spiral design of the fletching. To keep things on a simplified plane, the beginning bowhunter is advised to stick with the three-feather fletch, although experimental fletches and alterations may be useful after accuracy and proficiency are acquired with the three.

A word of caution must be injected about buying arrows. Most novices will buy an expensive bow and save money on the arrows, but their reasoning couldn't be worse. A cheap bow will shoot expensive arrows with acceptable accuracy, but an expensive bow will not improve the flight of cheap arrows.

Perhaps more important in the purchase of arrows is selection of the most effective hunting head, or broadhead. Here again, various shapes and designs can be quite confusing. What most persons unfamiliar with the sport do not realize is that the properly designed and shot arrow should penetrate deep through muscle, vital organs, and even bones, cutting as many blood vessels as possible. Very often the shaft will pass completely through the deer. Broadheads with four blades are highly recommended by many hunters since they form an "X" hole that eliminates much of the friction and pinching on the arrow shaft by the deer flesh to permit deeper penetration and faster hemorrhaging.

In selecting a hunting point, matching it to the other equipment is a critical factor. A heavy arrow head that is shot in a strong bow will cause the

The anticipation, planning, companionship of fellow hunters, and satisfaction of outwitting the quarry is drawing more people to bowhunting.

arrow to wind-plane or yaw in flight. This places added emphasis on recommending that a beginning bowhunter consult with an experienced hunter or a reputable dealer before buying equipment.

After a dozen matching hunting arrows have been selected, the diligent hunter is still not ready. He should shoot these in groups of fours into a target at 20 to 40 feet. After each group is fired several times, one arrow may be consistently missing the mark. After shooting all arrows, the several that were varying from the true shot should be marked permanently and held in reserve. In this way, the most reliable arrows will be shot at game.

After practicing with hunting arrows, they should be honed down to a razor edge. Then, whenever an arrow is fired, special attention should be given to being sure it was not damaged. Just to be sure, honing after each shot is recommended.

Even with the awesome, razor-sharp broadheads and the possibility of an arrow shaft's shattering upon release, bowhunting is remarkably safe. One reason that bowhunting is safe is that the average bowhunter will shoot about 100 arrows per week for the greater part of the year. Most bowhunters will even increase shooting to about 3,000 arrows during the month prior to opening day. Through continued practice and familiarization with his equipment, the proficient bowhunter knows his business forwards and backwards, thus accounting for safety and contributing to accuracy.

Bowhunting may be compared to playing golf or bowling in that the sportsman is always trying to maintain his accuracy through constant practice. Often the end result is that the practice becomes more important than the hunting. Continuous and exhaustive practice perfects a person's coordination and develops an essential smooth release.

Many bowhunters seeking convenient practice facilities and opportunities, join field archery clubs. Unlike indoor archery ranges, field archery is shot on a closed-course range similar to a golf course. Animal silhouette targets are positioned at varying distances to simulate actual hunting situations. For the beginner, a field archery club will not only provide plenty of practice, but the association with other archers will provide the opportunity for sound advice on shooting and on the purchase of equipment.

In addition to becoming proficient with his equipment, the bowhunter must also be a student of his quarry. By walking around his lease the archer should be able to determine where the deer

will bed down, where they will walk on their way to feed, where will be the best ambush spot to take advantage of the brush and wind, and what other areas of the lease would afford good hunting prospects. Even shooting in a crosswind will seriously reduce the penetration power of an accurately released, expensive arrow.

On top of this knowledge, the bowhunter should know where his arrow must hit the deer from any of a variety of angles in order to down the animal quickly. If his arrow doesn't down the deer immediately, he must be able to trail the wounded animal in such a way that the deer will not spook and run into the next county.

Perhaps the hardest thing for modern hunters to learn about bowhunting is patience. The bowhunter must be able to stay perfectly still in his concealed position while the deer gradually ambles into range, walks behind arrow-deflecting brush, and stops to sniff the air. More often than not, bowhunters will "sweat out" a trophy buck for an hour or more, only to have him dash into the brush just as the bow is drawn.

But when the quarry finally is within range, say about 30 to 40 feet, and out where no brush will deflect an arrow, the real test of the archer is made. Seldom will a second shot be offered; it's the first one that counts.

Success among bowhunters in Texas is not any bragging point, and it is not at all unusual for a person to hunt hard for several years before getting his first kill. But then in this sport, it's not the kill that's important, it's the enjoyable months of practice, planning, companionship, and satisfaction of finally outwitting the quarry. Bowhunting truly is designed to put the challenge back into deer hunting. **

Editor's Note

While many counties in Texas have an open season on deer during the month of October, bowhunters should obtain a copy of the special archery regulations issued each year by the Parks and Wildlife Department. Hunting regulations specify that a person may not have any type of firearm or crossbow with him while hunting with bow and arrow, the bow must be capable of shooting a hunting arrow 130 yards, broadheads must be $\frac{7}{8}$ -inches but not over $1\frac{1}{2}$ -inches wide, the archer's name must be affixed permanently in non-water-soluble media to each arrow, and the use of poison, drugs, or explosive arrows is prohibited.



A Hunting Special

Be Our Guest



Last year, 5,226 hunters shot for free on State wildlife management areas, killing many deer, turkey, and ducks.

by John Houser



WHILE many hunters are searching desperately for some sort of hunting lease for which they will likely pay anywhere from a few dollars a day to \$200 or more a season, the smart hunter is thinking about some way to hunt free.

There are many ways to do this. A friendly relative, or a close neighbor are usually good bets if they don't have their land leased out. If these fail, there is always

another way; hunt on State-owned land.

Last year 5,226 hunters shot for free on State wildlife management areas, killing many deer, turkey, quail, javelinas, squirrels, and ducks. At the end of the season a surplus of 10,000 squirrel and duck permits remained unissued.

To hunt deer or quail on a wildlife management area, it is necessary to fill out an application for

a permit. The application forms can be obtained by writing to the Texas Parks and Wildlife Department, John H. Reagan Building, Austin, Texas 78701.

Hunting squirrels and ducks is much easier. All you have to do is show up at the check station at the particular management area on the day of the hunt. Permits will be issued on a first come, first served basis up to a predetermined maximum number, de-



Public hunts provide data on the amount of hunting pressure a species can withstand.

pending on the particular management area. Last year a surplus of 8,920 squirrel hunting permits was not used on the several units of the Angelina Wildlife Management Area in East Texas, and 1,133 duck hunting permits remained unused on the Murphree Wildlife Management Area near Port Arthur.

Management area hunts are conducted each year in conjunction with wildlife management studies. These public hunts are an integral part of the research program, providing invaluable data concerning the amount of hunting pressure game species can withstand without endangering



the next year's crop. Too, this information serves as a guideline for the Commission in determining open seasons and bag limits for each species.

So long as the research and management programs on the various wildlife management areas result in the production of surplus game, the Parks and Wildlife Department is faced with the necessity of removing the annual surplus. This removal is necessary to keep the sex ratio in balance, prevent range depletion, and reduce the waste of game animals.

Management areas were not purchased for public hunting, but

for wildlife research and demonstration purposes. However, hunting is the logical and proper way for removal of surplus game. Censuses are conducted each year in September to determine the condition of the game population and the desired number of hunting permits to be issued. The public then is invited to submit requests for application forms. When duly completed, the forms will qualify applicants to participate in a drawing for a permit.

The minimum age for hunters is 17 years. A maximum of four may apply as a hunting party, but none of these should apply for hunting on a second area. Num-

ber of the 1967-68 hunting license must be given along with the full name and address of the hunter. Do not forget to indicate the area in which you wish to hunt. If this is left blank, the management area nearest you will be entered. There must be an area indicated for your application to be eligible for the drawing.

If you fail to have your name drawn for the quail or deer hunting, remember there still is hunting for squirrels and ducks. Hunting on management areas helps wildlife biologists determine what is best for the animals and the hunters. And besides that, it doesn't cost a cent. **

Papermouth Panfish

by Joan Pearsall

POPULARITY can be a changeable thing but, when it comes to panfish, judging by the flocks of fishermen that spring into action when they are schooling, there are two consistent winners. For abundance, good sport, and good eating, the black and white crappies rate high in each category.

Other fish may get more publicity, but it's the native sunfish family, found only in North America, that lures the greatest number of freshwater fishermen. Included in this family are the two species of crappie, whose natural range is southern Canada through the Great Lakes area, and all the United States west to Nebraska. They have been introduced widely in other areas as well, to as far as the West Coast states.

In the northern part of the range, the black crappie is the more numerous. His preference is for clear, cool water of large, rock or gravel-bottom lakes and streams that are neutral to acid. In Texas, he is native only in the north and north-eastern regions, but has been introduced farther south. The white crappie has a greater tolerance for water that is slightly alkaline, and is fond of warm and muddy ponds, bayous, and quiet back waters. He is much more abundant in the warmer, siltier waters of Texas, and in the south generally.

As might be expected for fish so widely distributed and so familiar to sportsmen, crappie have been tagged with a multitude of imaginative local names. Some of the common ones are: calico bass, speckled perch, strawberry bass, white perch, sac-a-lait, bachelor, bride perch, ring crappie, chinquapin perch, lamplighter, silver crappie, and papermouth.

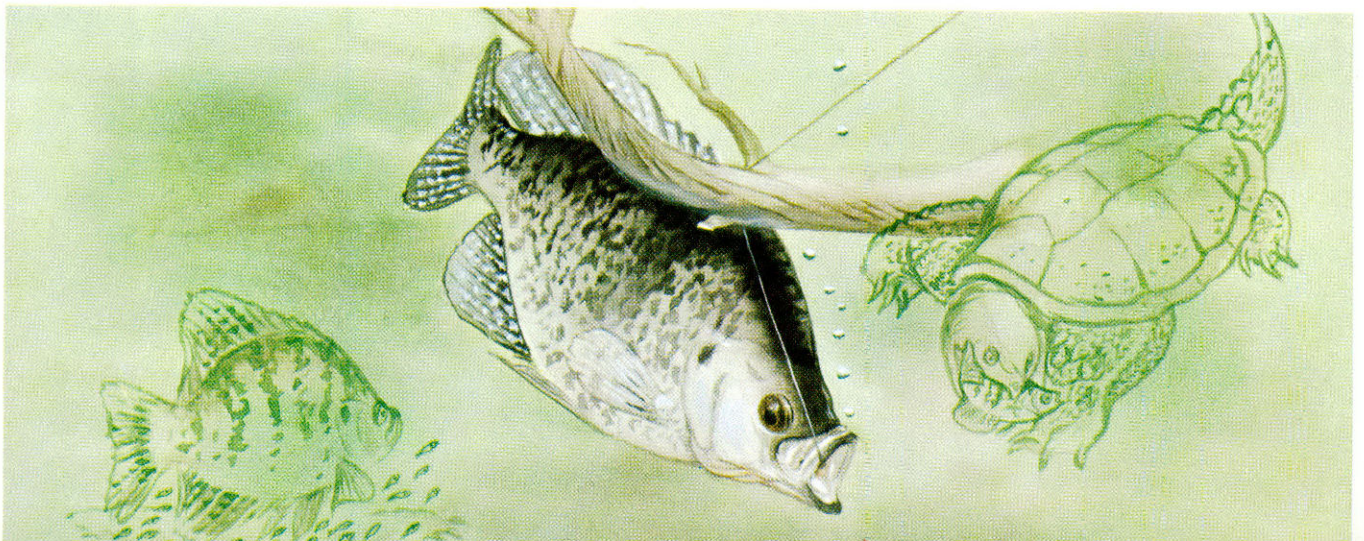
They also have the solid scientific labels: *Pomoxis*

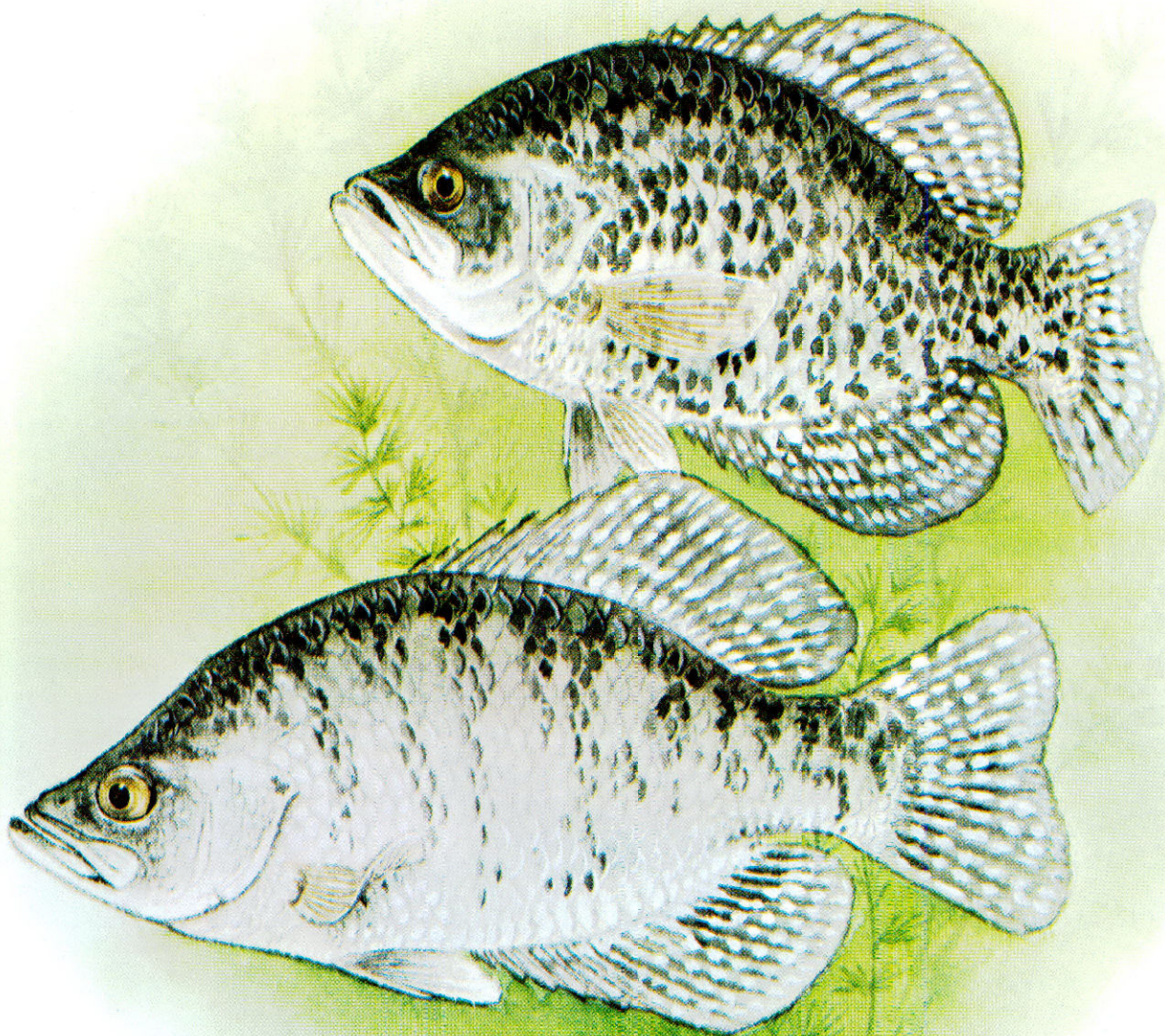
nigromaculatus (black crappie), and *Pomoxis annularis* (white crappie), but generally end up with just plain "crappie." In Kentucky recently, this spelling was changed officially to "croppie." It was felt that these fish deserve to have all doubts dispelled about the pronunciation of their name.

Both species are beautifully marked and have deep, laterally compressed bodies, large mouths compared to those of other panfish, fanlike fins, and broad, strong tails. They can weigh up to five pounds, but average one pound or less, and reach lengths of between 9 and 21 inches, with an average of 12 inches.

The black has a higher, more arched back than that of the white. This part is dark olive to black; the belly is white, and the sides are silvery green with irregular black mottling. His dorsal fin contains seven or eight spines. The more streamlined white is normally much lighter in color. He has silvery green sides shading into olive-green on the back. His mottling is a darker green in conspicuous, vertical bands on the sides. The white crappie is the only member of the sunfish family with five or six spines in the dorsal fin. He is lighter in build than the black, but tends to grow larger. However, he tends to become stunted more quickly when overpopulation occurs.

The above described typical coloring is strongly affected by water turbidity. Generally, the clearer the water the darker the color tendency. This is a protective camouflage reaction. Since this often leads to mistakes in identifying these two species, the most reliable point to look for is the number of spines in the dorsal fin.





Their mouths, which unfold like bellows to suck in food, are so thin that they tear easily from hooks. It's easy to see why some exasperated fisherman thought up the name "papermouth!" The lightest of tackle is most effective, for this reason.

Smaller fish, especially gizzard shad, constitute more than 50 percent of the crappies' diet in the south. They also feed on mollusks, shrimp, plankton, crayfish, and insects. They find minnows practically irresistible, and this is the most popular bait for them. Their need for protective cover is instinctive. In fact, it has been said crappie are like cottontails in their love for brush piles.

Feeding is done near the surface in the early morning, dusk, and late evening. They shun daylight and, when the sun is bright, retreat to shade or deep water. Good crappie fishing during the day often occurs when skies are gray and overcast, or when there is a light drizzle.

In early spring, crappie gather in large schools prior to spawning. At the time the water reaches approximately 70°, the males build saucer-shaped nests, crowded together in colonies in shallow water, among weeds, brush, or sand and gravel.

When a nest is ready, the male entices or drives a female over it, and spawning takes place. Varying

Long Shots Short Casts

Compiled by Joan Pearsall

RECOGNIZING THE ROGUES: The Missouri Conservation Department has a coyote predator control program that really works. It is a teaching program, based on the fact that predator damage nearly always is caused by one or a few coyotes. Coyotes generally do not attack domestic stock. When an individual develops a taste for beef or mutton, the farmer's logical move is to try to rid himself of that animal—not all coyotes. A predator control agent teaches farmers who have had damage to trap selectively, taking the specific animals that cause the damage. Some 200 stockmen who participated in the program were later surveyed. They indicated that, with these methods, they had reduced predation on livestock by 80 percent.

NOTHING TO SNIFF ABOUT: Several scientists indicate taste, not smell, is responsible for the ability of catfish to detect their food. Thousands of external taste buds distributed widely over the body, and especially concentrated on the barbels, provide the mechanism for taste detection. In experiments, bullheads with sense of smell unimpaired were guided by taste alone to chemical stimuli at least 25 catfish lengths away, the maximum limits of the experimental tanks.

HAZARDOUS HAZE: Meat usually is cooked outdoors by placing it on a grill over burning charcoal. The fat drips into the fire, is seared to smoke, and the smoke collects on the surface of the meat. Laboratory studies have shown that a typical one-pound steak, cooked in this way, collects the same amount of benzo-pyrene as contained in 600 cigarettes, and benzo-pyrene has definitely been isolated as a cancer-causing compound. In addition, another dozen or so suspected cancer-causing hydrocarbons are deposited on such meat. But don't give up charcoal cookery—just change the method. Do not start to cook the meat until the charcoal has burned through to a white, glowing bed of coals, at which time the smoke will be burned off. Then, don't allow fat to drip into the coals. Either cook the meat on metal foil, catch the drippings in a pan of water, or use one of the new vertical style broilers, which hold the charcoal in upright, grill-like containers, with the meat also held vertically.

GOTTA TOE THE LINE: If you own a duck that looks like a wild mallard, you must identify it by cutting off the rear toe of its right foot. The U.S. Bureau of Sport Fisheries and Wildlife has announced: "Unmarked mallards, wild or captive-raised, will henceforth be considered wild birds and will be governed by Federal and state regulations on hunting or possessing migratory waterfowl." The bureau says the toe can be painlessly removed with nail clippers, scissors, or other cutting edge.

in number with the size of the female, the adhesive eggs sink to the bottom of the nest. The female then is no longer needed, and the male drives her off and takes up his duties as guardian of the eggs. With his pectoral fins, he fans the eggs, thus supplying oxygen and washing off silt. Although usually amiable, he'll bite savagely if disturbed at this time.

Depending on the water temperature, the young will hatch sometimes within a few days or may take several weeks. They remain in the nest until the yolk sac is absorbed. As soon as the fry are ready to leave, they escape to nearby vegetation. The time it will take them to become adult and be able to spawn varies widely. In the north, it is three to four years, but in Texas, under normal conditions, this can happen within one year. Obviously, northern size and catch limits cannot apply here, and, to prevent overpopulation and stunting, limit laws have been removed in most areas of this State. Crappie are short-lived, usually not attaining ages of more than four to six years.

Fishing crappie is doing them a favor, for it keeps them in balance with the food supply. One criticism of crappie is that they are not great fighters. However, a fisherman with light enough tackle can be in for a pleasant surprise. The way they taste is another bonus. In the hot summer months, they are softer and not so well flavored, but at other times the flesh is firm and delicious. **

Editor's Note:

Due to the inherent reproductive capacity of crappie, this species will quickly over-populate and become stunted in small bodies of water. Such a condition normally results in poor fishing for all species of fish. This characteristic of crappie has caused the Parks and Wildlife Department to adopt a policy of not stocking crappie in ponds of less than ten surface acres. This policy is an attempt to provide the best fishing possible to small lake and pond owners.



Rare, 3,500-year-old plant, Aloe Vera, found in South Texas, has been noted for its healing properties throughout the ages.

Savila

by Hal Swiggett

San Antonio Express News

ONE of the hottest areas in Texas grows its own sunburn lotion. That's right, a plant grows in some pastures that will give relief from mid-summer sun. All you have to do is break off a leaf, split it with a knife blade, and rub the gelatinlike substance on your skin.

The way I heard it was that the plant was good for about anything from baldness to ingrown toenails. It has been used by doctors along the border as well as housewives and sunburn relief seekers, for as far back as my informant, Axel H. Gabrielson, could remember. The veteran of World War I has lived in the Zapata area since that time.

On the border the plant is called savila and I stand to be corrected about the spelling because many persons could tell me of the plant but none were sure how to spell it. It is really the Aloe Vera, a rare old plant that has been traced back 3,500 years, and was used as a symbol of immortality and was painted on the walls of tombs.

Throughout the ages, healing properties of Aloe have been noted, and as early as 333 B.C. the Greeks identified it as a medicinal herb.

No one seems to be certain where Aloe Vera actually originated and its home has been re-

corded as Cape Verde, Canary Islands, Egypt, and Algeria. The Jesuit Fathers, however, get credit for bringing it to the New World as they had great respect for its medicinal powers.

The savila, or Aloe Vera plant, can be identified by its stiff triangular leaves. They are dark green in color and grow in the form of a rosette from the basal center. The leaves have sharp pointed "teeth" on the edges very similar to the bill of a sawfish. The plant gives the impression of growing directly out of the ground, as there is no apparent stalk.

Savila blooms in the spring with yellow blossoms on a long stock that grows out of the center of the plant. Occasionally the blossom has an orange or reddish tint, but it is always the basic yellow. Sometimes they will be two and a half feet or more above tips of plant leaves.

There are records of the Seminole Indians using Aloe Vera in their surgery. They apparently applied a split leaf to the incision, secured it there, and the wound healed.

Along our border, housewives and doctors alike began using the plant more than 50 years ago. Housewives used the gelatinlike substance for meat tenderizing and rubbed it on their faces to

Versatile Savila is said to be good for anything, from feet to facials, and potions to poultices.



Aloe Vera's longevity is due to its ability to live on its own gel for nourishment.

remove wrinkles. Doctors prescribed savila for arthritis, rheumatism, and stomach disorders, telling patients to drink it in water. It was a common medication for insect bites, scratches, burns, cuts, and skin irritations.

Apparently, many of the bygone uses proved effective to modern researchers, as the Aloe Vera plant is being grown commercially and used by at least two manufacturers. One sells it as the base for a skin cream and the other as a cure for stomach trouble, rheumatism, and arthritis.

Early day inhabitants along our Texas-Mexico border had beds of the plant growing by their homes. In three old houses in the Zapata, San Ygnacio area, vacant for nearly 50 years, the savila still grows. It had to be put here on purpose because of locations of beds at various sites. The Aloe's apparent longevity is explainable by the fact that it may survive for long periods of time by utilizing its own gel for nourishment.

During my information seeking treks to the Zapata area, and with the aid of Bernie Dresden and Gabrielson, I was able to track down many of the users of savila. Most of those using the plant have lived in the area for several generations, but a few were outsiders who had been let in on the "secret." In other words, it is a true "old time" remedy, and not just a figure of speech.

Gabrielson told of many instances of his own personal experience of the Aloe's being used for medication by border doctors during his tour of duty in the Zapata country. There and on into



A long-time medication for burns, scratches and cuts, Savila is now used in several patent medicines.

the Valley, it is accepted by residents who could not understand my interest in it. To them it is "old hat."

More talkative, because of her recent introduction to Aloe Vera, was Mrs. Elsie P. Brown of San Antonio. On a recent fishing trip to the Valley she was finned by a hardhead catfish. The wound in her leg was very painful. One of the fishing party knew of savila's powers and had also seen some in a certain yard. On returning to shore, she proceeded to go visiting, got a leaf from the plant, and applied it to the wound. According to Mrs. Brown, the gel drew out the infection and the wound healed without ever getting sore.

Another dedicated believer in Aloe Vera is Mrs. Minnie Hingst, also from San Antonio. She uses Aloe leaves daily for facials, and drinks the juice for her muscular arthritis. She buys the leaves from a nursery and does not use the prepared mixtures. On one occasion she had a severe burn from being too close to a fire and the application of Aloe Vera gel took care of the situation with ease. Mrs. Hingst also told me that she once stepped on a nail that pierced her shoe sole and went into her foot. She cleaned the wound with alcohol and then applied a split savila leaf. The next morning she placed the other half of the leaf on the wound and rebandaged it. There was never any soreness. Friends tried to get her to see a doctor for tetanus shots, but she had complete faith in the Aloe Vera and, according to her, it didn't let her down. She said the Aloe gel had

such drawing power that skin around the wound was white and wrinkled.

Mrs. Hingst is a baby sitter and many times gets home with an upset or nervous stomach. She eats a piece of Aloe Vera leaf before going to bed and it relieves the condition almost immediately. According to her, savila is the best digestive medicine to be had.

Savila plants are not too plentiful in the wild because of the demand for its use by landscapers. One cactus dealer in the Zapata area keeps it pretty well cleaned out whenever word comes in of a find. That is, he does if he can get permission from the landowner. For that reason it is still to be found in the border country from Laredo southward.

If by chance you get permission from one of the landowners to do a little hunting in the area, watch carefully. There are several plants that look very similar to Aloe Vera. To my knowledge they all have thinner and stiffer leaves and the "teeth" are sharper. Savila leaves are nearly an inch thick at the base. Also, most of the similar plants are a lighter shade of green.

Savila may not be all that it's praised as, but it may be worth the time and trouble to look into. Even if it just made one extra hair grow, or even took one wrinkle off, it would be worth something. The next time you are in South Texas down around Laredo or Zapata, look around for the Aloe Vera. It's one of Texas' many unusual and interesting plants. **

Falcon Lake

by Bob Felling

Editorial Assistant

WATER level fluctuates and the best fishing spots shift as erratically and spontaneously as the winds, but for freshwater fishing in Texas, Falcon Lake is unbeatable.

While a haven for the black bass fisherman, Falcon abounds with crappie, white bass, catfish, and sunfish, and leaving the lake with an empty stringer is as likely as driving through the Rio Grande Valley without noticing the mesquite brush.

Falcon Dam was completed in 1964 as a joint project of the United States and Mexico. The 44 miles long reservoir generally maintains a water surface area of 78,300 acres at the conservation elevation of 296.4 feet. However, fluctuations can raise the water level to a maximum elevation of 314.2 feet.

Embedded 150 miles above the mouth of the Rio Grande River, the dam lies 14 miles northwest of Roma and 30 miles southeast of Zapata.

Campsites, groceries, tackle, bait and other fishermen's supplies are available at Falcon State Recreation Park near the dam. The towns surrounding the lake afford lodging, restaurants, gasoline and other provisions.

Falcon Lake is an international body of water and in order to fish on the Mexican side of the lake, one must obtain a Mexican fishing license. They are available at the State park concessions stand, the 83 Motel in Falcon Heights, and the Lakefront Lodge in Zapata, as

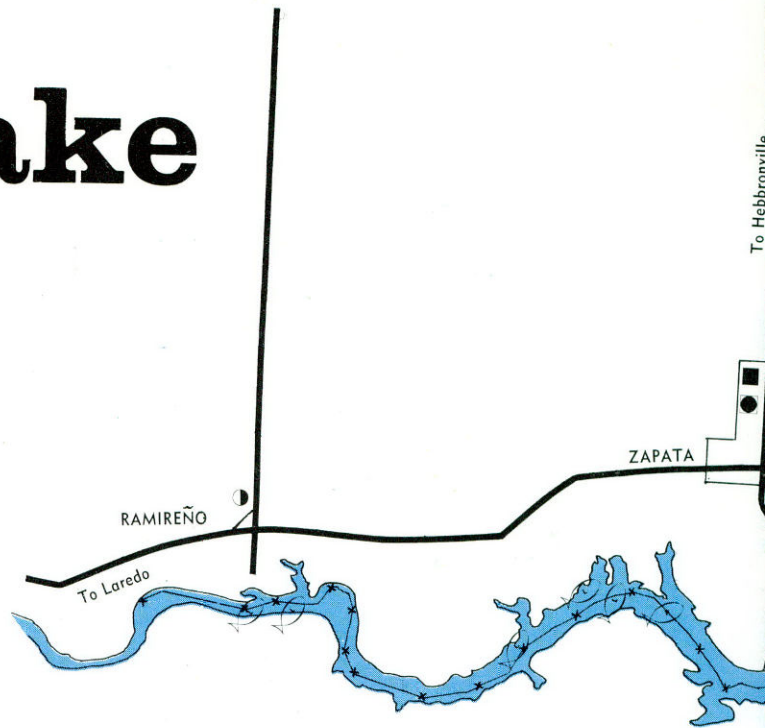
well as other businesses in the area.

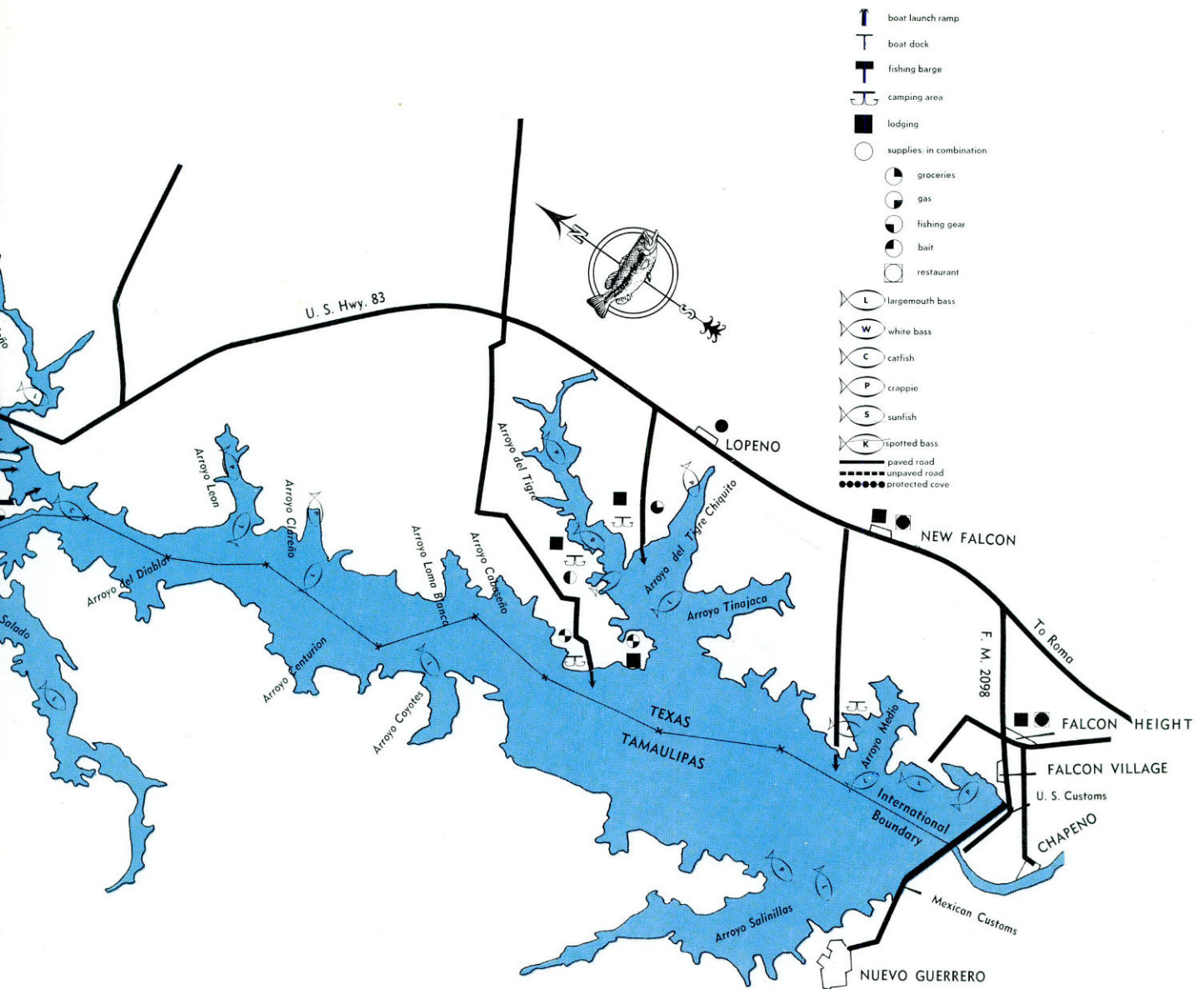
Catching Falcon fish isn't difficult because they will bite practically anything. Categorically, artificial surface lures, spinning lures, or plastic worms will bring in the bass. Live minnows and leadhead jigs will take a crappie limit in a short time, while catfish devour shrimp, worms, and, in the winter, stink bait. Sunfish and Rio Grande perch take a hook laced with just about anything.

To say that a particular fish will bite a specific bait at any given time, however, would be foolish. Channel cats have been caught on surface plugs and bass have taken bait shrimp.

Regardless of the bait used, the fish population at Falcon is large and a little conscientious angling produces a stringer full at any time of year. Early morning and late evening are the best times for fishing during the summer. Bass feed along the shoreline in the moss and grass early in the day, but when the sun rises, they head for deeper, cooler water. Winter fishing is most popular at Falcon because of the prevailing moderate temperatures.

Trotlines set in the deep holes of Falcon produce catfish; crappie and sunfish can be found lingering around floating docks and along the shoreline. Again, to categorize the location of the





types of fish would be as fallacious as naming the baits to catch them. Fishing spots change with the level of the lake and the direction of the wind. In June and July, bass were being taken regularly on and along the sides of the points. Bass during that time were running into the four to six pound class and catfish scaled from one-half pound to four pounds.

Water safety training and a properly equipped boat can be as useful and as fruitful as a well-equipped tackle box. Being in an arid, low-lying region near the Gulf of Mexico, violent wind changes are common to Falcon. Unprotected by mountains or

trees, the lake receives the brunt of coastal and inland winds as the hot and cool airs mix. An unattentive or poorly prepared crew on a small boat can be swamped by four to five feet high waves which are not uncommon when the wind starts to blow.

Fast-moving northerners in the winter and fall can isolate a boat on the lake in a half-hour's time. Because of the size of the lake, a boater away from his camp should land his craft and walk to safety when a norther begins to blow rather than risk the probability of being swamped or getting blown across the huge body of water in the cold weather.

On the Texas side, limits of 15

black bass, 25 catfish and 25 crappie per day have been set. The limits, however, do not dampen the spirits of enthusiastic anglers. Some fishermen have transported deep freezes to the lake and filled them with fish through several day's fishing.

Texas limits do not apply for fish caught on the Mexican side. However, a receipt for the fish must be obtained through a port of entry to exempt the fisherman from Texas regulations.

Whether to fish, camp, water ski, or just recede from the bustle of daily routine, sportsmen can find enjoyment any time of the year on the international waters of Falcon Lake. **



A Link with the Past

by Barbara Jaska
Parks Interpretation Assistant

THINGS were quiet among the men of the Mexican Army, camped on a marshy bank of the San Jacinto River. It was siesta time on an April afternoon; most of the soldiers were relaxing after days of hard marching. Suddenly, a bugle sounded. The startled Mexicans heard the cries, "Remember the Alamo! Remember Goliad!" Before they could grab their weapons, the Texas Army spilled into the camp.

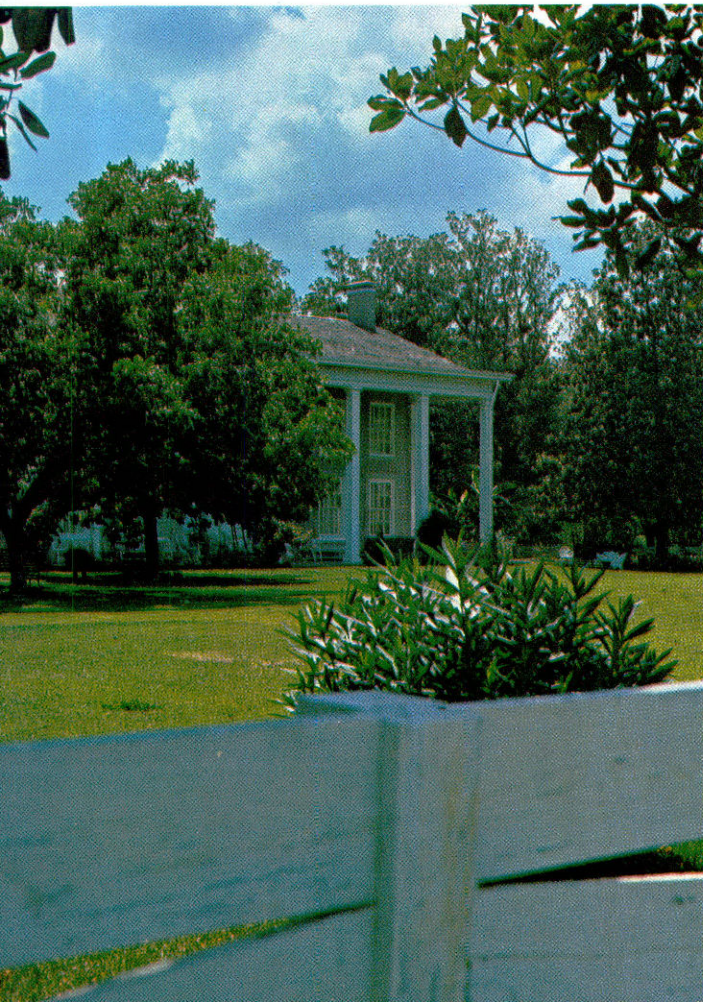
Eighteen minutes later, the fighting was over. The Texas Army had won a decisive victory. The battle marked the end of Mexico's tyrannical rule and the beginning of the Republic of Texas.

Today, San Jacinto Battleground is a State historic park; thousands visit the monument erected there.

Other events, persons, or places significant in shaping Texas as it is today are commemorated in Texas' historic parks and sites. San Jose Mission from the era of Spanish occupation; the Alamo from the Texas Revolution; Monument Hill from the period of the Republic of Texas; Fort Griffin from the period of Indian wars; and the Battleship *Texas* from the Twentieth Century stand today with other sites as symbols of a long and vibrant past.

State parks of a historic nature are classified in

*Historic missions, monuments and mansions
help us feel the spirit of their times.*



State historic parks and sites are tangible links with what has gone before.

either of two ways: State historic park or State historic site. Historic parks consist of the historic landmark and limited facilities for outdoor recreation. An example is Goliad State Historic Park, which encompasses more than 200 acres. It features a Spanish mission, a museum, and facilities for picnicking and fishing. Historic sites, on the other hand, consist of the historic landmark and only enough land to assure its preservation. Port Isabel Lighthouse State Historic Site, for example, is made up of a half-acre of land and a lighthouse built in the mid-1800's.

Today, Texas has 11 State historic parks and 10 State historic sites. Vacationers, members of historical societies, school groups, and others interested in history tour these landmarks every year. Together with the scenic and recreation parks, the historic parks and sites are attracting

visitors from all of Texas and from other states as well.

The value of historic areas, however, cannot be expressed solely in terms of revenue brought in by tourist trade. Their value goes deeper—into the very core of Texas culture. By viewing historic landmarks, visitors can learn what has occurred in the past; what makes Texas distinctly "Texas."

Oftentimes this value has a sentimental tone. San Jacinto Battleground, the field where Texans fought and died for independence, is in a sense hallowed; the soil is cherished by patriotic Texans. To put it to a materialistic use would be a grave irreverence.

Too, it is not enough sometimes to read about historic events in books or to look at pictures of life as it once was. Something tangible must remain; something we can see and smell and touch

that will help us feel the spirit of the times. At Varner-Hogg Plantation one can look out beyond the stately columns of the Nineteenth Century mansion and almost hear the creaking wheels of farm wagons, carrying freshly cut sugar cane to the plantation's sugar mill. Preserved historic structures thus provide a graphic story, a sensuous impact that helps us to better understand the larger pattern of history.

Moreover, historic landmarks, preserved or reconstructed on the basis of historical evidence, invite the historian of today to weigh the men and events of the past in the light of changing times. In this way, historic landmarks may give insights that historians of the past overlooked or did not have the knowledge to judge.

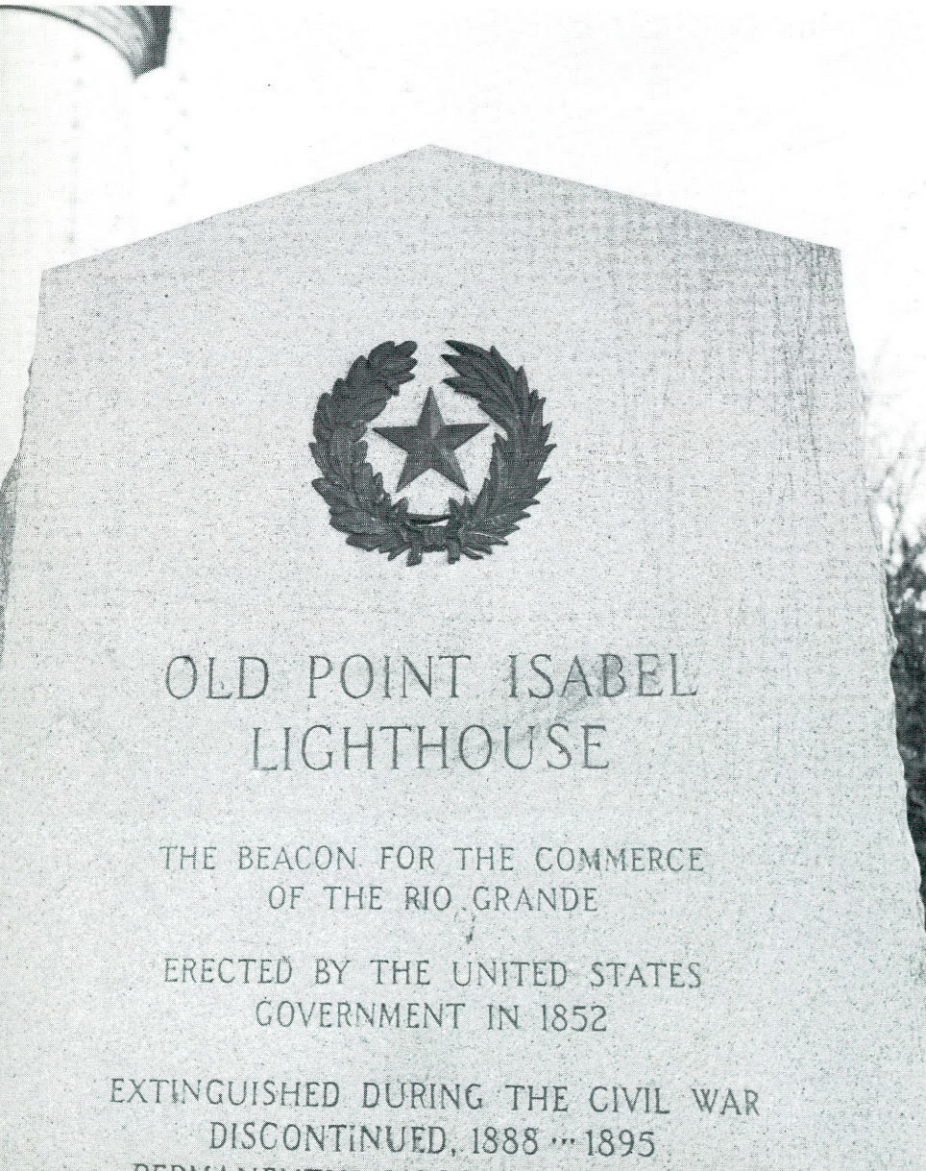
But the 21 State historic parks and sites are not, by any means, the only landmarks having State-

wide historical significance. Numerous historic structures and sites—missions, forts, battlefields, roads—as well as archeological remains of pre-historic man, still exist in scattered portions of the State.

In some cases, the landmark has remained intact to a large extent or, at least, possesses a great deal of original material. As such, it would lend itself well to extensive archeological and historical research. Once the research is completed, the landmark could be developed as a State historic park or site, with guided tours, museum exhibits, publications explaining the site's historical significance, and similar interpretation aids.

Some historic sites are being preserved by local governments or by historical groups, but many other landmarks stand exposed to the damaging effects of weather, vandals, or new

The old beacon is extinguished, but the glow of pride in its history still burns.



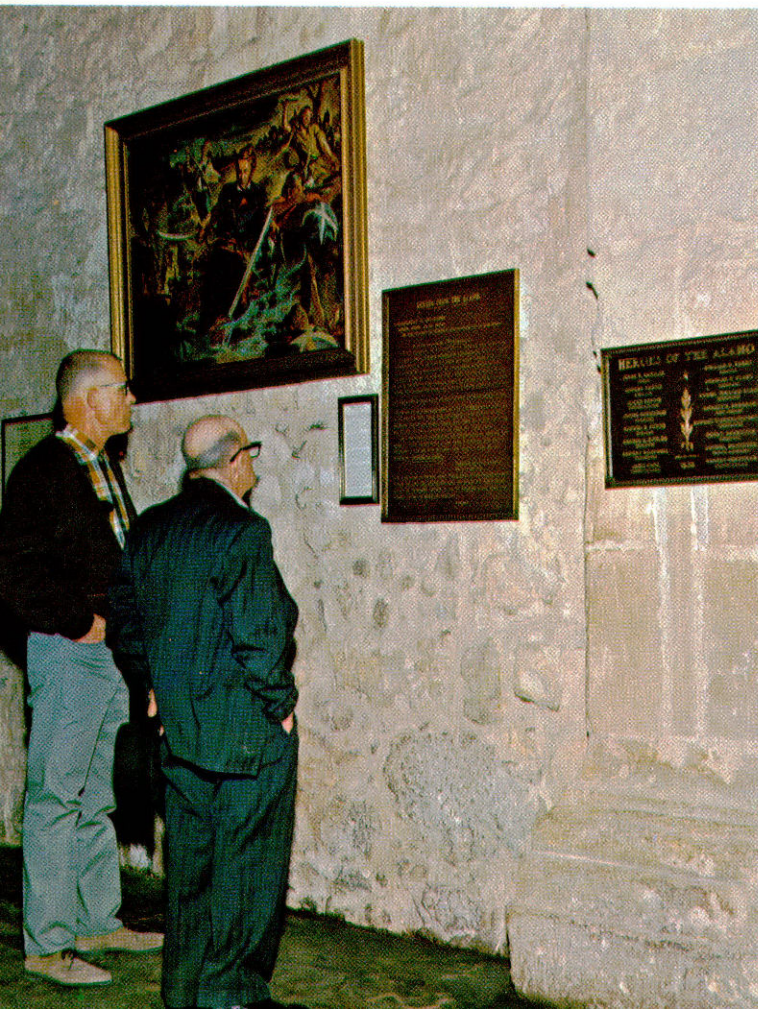
Preserved historic structures give the modern visitor better insight into the past.

construction. If nothing is done now, the sites may be lost forever to historical research and to public use in seeing remnants of the past.

The Texas Parks and Wildlife Department, which administers the State parks, has compiled a list of 41 historic sites, unique in type and age, which require immediate preservation. The preservation and limited development of these 41 sites is included in the \$75-million land acquisition program that will come before Texas voters on November 11. If the people of Texas approve the program, then additional steps may be taken to protect some of the scores of other sites worthy of preservation, sites that may likewise contribute to a fuller knowledge of Texas history.

Texas today is the end product of a series of wars and treaties, merging cultures, technological advances, ideas, and ideals. If Texans are to act meaningfully in the future, they must have a sound knowledge of the past. State historic parks and sites help us keep in mind what has gone before; they are, in fact, a tangible link with the past. **

History comes alive for these visitors to the Alamo, below. The interior of the San Jacinto monument, right, and magnificent San Jose mission, lower right, are other shrines that should not be missed.



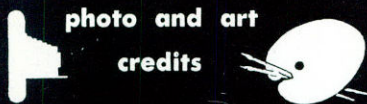


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Page 18—Williamson; 4 x 5 View Camera, 150mm; Ektachrome X; 4 sec. @ f/11; moon double exposed; San Jacinto Monument.

Page 19 (left)—Richard Moree; Hasselbald, 80mm; Ektachrome X; 1/60 @ f/11; Varner Hogg Plantation.

Page 19 (right)—Williamson; Mamiya C-33, 80mm; Ektachrome X; 1/125 @ f/11; San Jose Mission.

Page 20 (left)—Port Isabel Light-house; (center) Fort Griffin; black and white print.

Page 21—Williamson; Fort Parker; black and white print.

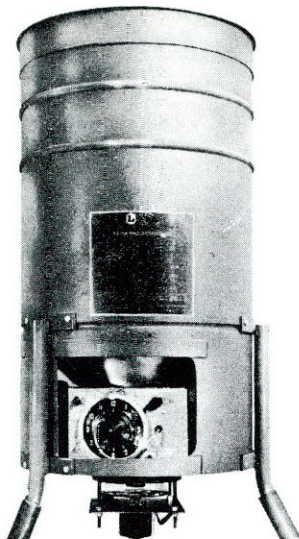
Page 22—Williamson; Mamiya C-33, 80mm; Ektachrome X; 1/30 @ f/11; (top) inside San Jacinto Monument; (lower left) inside Alamo.

Page 22 (lower right)—Ron Perryman; Ektachrome X; inside San Jose Mission.

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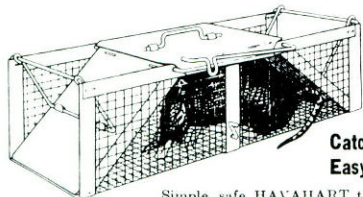
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Fish with a Flash

With the coming of September there is a shift of outdoor action from fishing to hunting, although many confirmed fishermen only recognize fall by packing a gun along on each fishing trip and taking advantage of every opportunity to fire a few shots. Then

there are a great number that actually make the conversion, but take along some fishing literature to read during the long evenings.

Every year seems to bring more useful reading for the avid angler. From complete encyclopedias on fishing to the leaflets and brochures published by many companies explaining the proper use of their product, the flood of words and pictures is astounding.

Some of the best advice and most valuable information is obtainable as side dressings in many of the larger tackle manufacturers' catalogs. This runs the gamut from hints on using and caring for that brand of equipment, to listings of record fish, best baits or lures to use under different conditions, and how to cast, land a fish, bait a hook, and generally have more fun fishing.

DARDEVLES are many things including a spoon type fishing lure. So, to the angler that can't see how a fish would bite that lure "because it doesn't look like anything to eat," the makers of the lure have explained its proper use and documented its effectiveness.

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A free copy of this book may be obtained by writing Ed Eppinger, 6340 Schaefer Highway, Dearborn, Michigan, mentioning this column. A copy will be on its way without charge, pronto.

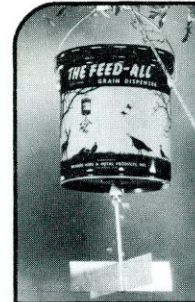
BAKING SODA is not a customary find in a tackle box, but don't think it isn't a valuable item to have on practically any trip into the outdoors. The outdoor-minded friends at Church & Dwight Company remind anglers that baking soda is a dry, scratchless scourer that will shine a dull or rusty lure in no time. Also, lures won't rust if they are hooked onto a cork and dropped into a jar of dry soda.

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them and rubbing with dry soda.

Other physical comforts offered by a can of baking soda include soothing relief from sunburn, chiggers, and mosquitoes. When the sun bakes you medium-rare, dunk a piece of cloth in water, sprinkle it with soda, and slap it on the tender spot. This will relieve the sting and many times prevent blistering.

Also, with soda along, you have an antidote for that queasy feeling that comes when a big one gets away. **



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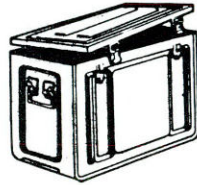


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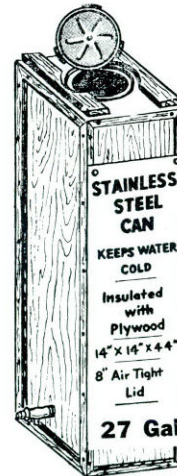
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PREHISTORIC PREDATORS

by Joe E. Toole
Inland Fisheries Biologist

PRIMITIVE armor-plated fishes filled the waters when dinosaurs were plodding across Texas. Today, two families of these primitive fishes, the gars, Lepisosteidae, and the bowfins, Amiidae, still are represented by individuals very similar to their ancestors of 125 million years ago.

Primitive characteristics of these fishes are exemplified by their armor-like scales and their unique ability to breathe air. This enables them to survive in polluted or drouth stricken areas under conditions that would be fatal to other

species. No doubt, these adaptations have made survival possible for these "living fossils" throughout the changing environments of geologic time.

Four species of the gar family are present in Texas today: the alligator gar, *Lepisosteus spatula*; the shortnose gar, *L. platosotomus*; the spotted gar, *L. oculatus*; and the longnose gar, *L. osseus*.

Truly reminiscent of prehistoric creatures is the alligator gar, reaching a length of ten feet and a weight of more than 300 pounds. Large specimens cannot be mistaken for other gar species due to their size. Smaller fish are identified by the double rows of teeth in the upper jaw.

Least common of Texas gar, the shortnose gar is similar in appearance to the spotted gar but the head is without spots.

Spotted gar are characterized by dark, round spots on the head and body. Its fins also are heavily blotched. This fish obtains a maximum length of three feet and the body generally is broader than that of the longnose or shortnose gar.

Longnose gar, easily identified by a long, thin bill, are the most abundant and widespread species of the ancient gar family. It is commonly called the fish gar or needlenose gar. The longnose gar can attain a weight of 50 pounds, although specimens of this size are rare in Texas.

Family Amiidae is represented by one living species, the bowfin, *Amia calva*. This fish is commonly called grindle, mud fish, cypress trout, and, in Louisiana, chou-pic. The most distinguishable characteristic of this fish is the long dorsal fin which extends like a bow down most of the back. The female grows larger than the male, reaching a length of three feet and weighing as much as 10 to 14 pounds. The male bowfin can be distinguished by a black spot bordered in bright orange or yellow on the tail.

Gars and bowfin generally are regarded as a nuisance by sport fishermen. Gars are commer-

cially important in some areas as food fish but not to the extent of other commercial fish species. Many trotline fishermen have had visions of fighting catfish on their line only to find a bait-stealing gar on the hook. The powerful bowfin has provided the action for many tales about "the big bass that got away." Bowfin strike viciously at anything resembling food, and may be taken on a variety of lures or natural baits.

One popular method for catching gar is using wire loops baited with minnows. The wire loop encircles the hooked minnow, and when the gar strikes the loop is jerked around its bill. Lures made from frayed nylon rope also are effective for catching gar. The nylon filaments become entangled in the gar's teeth and the fight is on! Gar fishing is a summer sport since the fish are not active in the fall and winter months.

A five-year research study on the food habits of the gar and bowfin in East Texas has been conducted. This study was initiated to determine the value of these primitive fishes as natural predators of overpopulated rough fish species.

During this study, individual fish stomachs were dissected and examined for food items. A total of 1,511 gar and bowfin stomachs have been examined to date. Of this number, 1,005 (66.51 percent) stomachs contained food which was grouped into these categories: insects, molluscs, crustaceans, amphibians and reptiles, game fish, forage fish, and unidentified fish remains.

Game fish category include all identifiable game fish species such as the largemouth bass, black crappie, channel catfish, and various sunfish species.

Forage fish category included all rough fish species (those species not sought by sport fishermen), including gizzard shad, various species of suckers, bullhead catfish, and minnows.

The most numerous food items found were forage fish species. This category made up 44.77 percent of all food items recorded. One stomach from a young alligator gar contained 31 small

gizzard shad. Game fish species comprised only 6.25 percent of the total.

These data indicate that gar and bowfin are not selective feeders but take what is most readily available to them in their environment. This theory is strengthened by the presence of numerous crayfish in the stomachs of fish taken in newly impounded waters where the crustaceans are plentiful.

Within the dominant forage fish category the most common species recorded were the gizzard shad, lake chubsucker, and bullhead catfish, in the order of their abundance. All of these species are prolific producers and potentially detrimental to game fish populations.

The two most primitive fishes, the gars and bowfins, are important predator species. Although at times their meal may be a bass or sunfish, it is much more likely to be a shad or sucker. Their voracious and non-selective feeding habits, therefore, definitely aid in controlling many species of rough fish in our lakes and streams. **



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OUTDOOR BOOKS

A Sportsman's Trio

THE SPORTSMAN'S ALMANAC by Charley Farquhar, published by Harper & Row, 493 pages, illustrated, \$8.95.

Some books are written for the reader to curl up with by the fire on a cold night. Others, such as *The Sportsman's Almanac*, are written for informational purposes only. This, of course, does not take away from their effectiveness or usefulness; many times these books are better than the former type.

Such is the case for this work. *The Sportsman's Almanac* provides information on all 50 states, giving major geographical features, regulations for resident and nonresident hunters, fishermen, and trappers. It also lists the principal game and fish of each state.

For others interested in the outdoors, the *Almanac* provides information on lakes, wilderness, and canoe areas, and the national forests. Sections on land and marine mammals, birds, fresh and salt water fish, and federal regulations, are also informative.

Field portraits of 150 mammals, birds, and fish are included in a 32-page section by Matthew Kalmenoff.

This is not a book to curl up with, but it is one which is essential for the traveling outdoorsman. —Jim Sutton

WATER USE AND WATER USE TERMINOLOGY by J. O. Beatch and C. R. Humphrys, Thomas Printing and Publishing Company, Ltd. (1966), illustrated, 375 pages, \$12.95.

Problems of pollution have finally attracted the attentions of the public and the Federal and State governments. Because of this, a compilation of terms

and their meanings has become a necessity.

That need has been partially fulfilled in the area of water pollution control with this work. Any book which is a pioneer in its field will more than likely be expounded upon or perhaps pre-empted by later writers and scholars. The authors, realizing this, have laid a foundation and started work on the walls.

This book should, and will be, a reference for the layman as well as the technician, those responsible for pollution solutions as well as the interested citizen. The authors' reason for writing the book was that they felt a uniform terminology is a prerequisite for communication. And communication on this subject will indeed gain importance as time goes by.

Topics covered include just about everything that is known from aesthetics to zoning. There are 29 new terms defined and explained.

The flyleaf of the book contains this thought: "Observe at least once, in your short life span, the fragile web of pristine values intrinsic to a virgin lake or stream. Should this experience be available to posterity?"

Although the authors do not attempt an answer to this important question, it is obvious that if it were negative, this compilation would not have been undertaken. —Jim Sutton

WILD DEER by C. B. Colby, published by Duell, Sloan & Pearce, New York, 126 pages, illustrated, \$3.95.

Written with a concise but informative style, this short book offers a bright description of 19 wild deer species from around the world.

After beginning with a history of deer in America, the author gives a "note on tracks." He details the hooves of the four major American species: moose, wapiti, caribou, and whitetail. He explains the similarities and the differences among the four types and offers pen and ink drawings for illustration.

In the chapter on the wapiti, the American elk, Colby recalls the following incident:

"One of the most interesting and surprising examples of animal intelligence I have ever witnessed was displayed by a cow elk one winter in New

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Hampshire. . . . She had heard us coming but could not see us, and we froze in our tracks to see what she would do.

"She snorted loudly and stamped her feet hard, then crashed into the crusty snow again and again, but more and more softly each time, so that the noise sounded exactly as if a startled elk had rushed away in panic into the timber. We did not move as she peered into the brush to see if we had gone. While we watched in amused astonishment, she repeated this little ruse three times, duplicating each time the exact sound of a fleeing elk. Then feeling that she had completely fooled whatever the danger was, she went back nibbling the evergreen"

Later in the book when speaking of the European red deer, he reveals, "Deer that inhabit lime-deficient areas make a practice of eating cast antlers

and old bones for the calcium they contain."

In addition to feeding habits of the deer, Colby discusses their coloration, size, hoof prints, distinctions between male and female, and other field recognition marks.

Common and Latin names of each species are given along with a description of how the names originated. He states the history of each deer and where they can be found in nature and in captivity.

Mating habits and seasons, parental overseeing the young, sociability, predators, feeding ranges, sounds the deer make, and man's usage of the deer are other subjects touched on by the author.

Intertwining pertinent facts about each of the deer species with personal experiences and anecdotes, outdoorsman Colby makes a thoroughly enter-

taining book for the young naturalist as well as the veteran sportsman. Precious few other books present such specialized information on exotic deer, many of which have been introduced to Texas.
—Bob Felling

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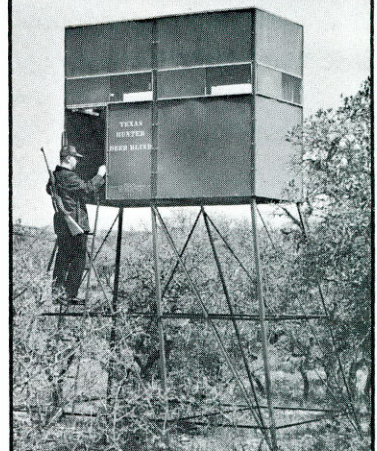
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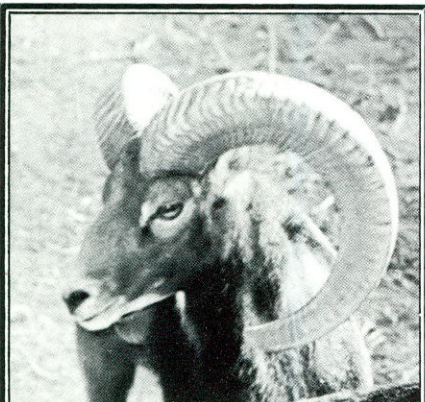
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GUNS & SHOOTING — L. A. Wilke

Slingshot Shooting

Many men today who have reached the age of fatherhood can brag about their slingshot days. We hunted with them, trained our shooting eyes, and developed accuracy. Yes, and in a few instances we broke out window lights or shot at the neighbors' cats.

In my boyhood the design was somewhat different from modern store bought models. We used the tongue out of old hightop shoes, with either a leather thong or two heavy pieces of fishing cord. We'd pick up bantam egg size rocks from the creek bank, place them in the sling, swing it around our heads two or three times for momentum, and let go one string. Quite a few boys gained considerable accuracy. I've seen them knock over jackrabbits at 50 to 100 yards.

The rubber-powered style was not uncommon during my younger years, but we whittled a handle out of a "Y" shaped willow branch, or sometimes cut them out of hardwood. Then we clamped a rubber band around each finger of the handle, attached a leather pouch, and it was ready to shoot.

Rubber bands weren't easy to get back in those days. Sometimes they cost us a nickel a pair. And they wouldn't last too long, because we soon found ourselves overloading them. My favorite ammo was calks off the ends of horseshoes. The village smithy wasn't too far away from my home. I would go there each afternoon when school let out and pick up the little iron tips he had cut

off horseshoes he had fitted during the day. I had exclusive access to these because each Saturday I would pump the bellows for his forge.

Slingshot days don't usually last long for the youth. They grow out of them in a couple of years. But now adults have taken up the hobby, and slingshots are making a comeback. This time they are made commercially, and are much more effective.

The Weber Tackle Company has announced a new model called the Slingbow. It has a crotched grip that is molded of high-impact plastic in a grain-like mottled brown color. It is designed to fit the hand to offer greater accuracy in shooting. It is powered by live-action pure gum rubber surgical tubing. It is sold in either light, medium, or heavy pull. The tubing is mounted on each prong of the handle with the other end looped through a genuine leather ammo pouch. And to make things easier, Weber also is marketing glass, marble-size ammo.

This ammunition makes target shooting very inexpensive with the slingshot, whether one of the modern versions or of the old homemade variety.

To get full economy when target shooting with the Slingbow, there should be a "bullet" catcher. This is very easy to make. Just get a large cardboard carton, something like the box that packages of corn flakes are shipped in. These are usually about 20 by 30 inches. Place your target in the middle of one side of the box,

set it first at 10 paces until you get accuracy at that distance, and then start moving it out.

The pellets will go through one side of the box, hit against the opposite side, and fall to the bottom. They can be picked up and used again.

Ready-made targets are available. Of course, you can make your own by making rings on a letter size sheet of paper with a compass.

For youngsters, this type of target practice should be supervised at the beginning and constantly watched. Even adults should use about the same care in shooting slingshots as in handling a gun. They can be fun to shoot, but also dangerous. **

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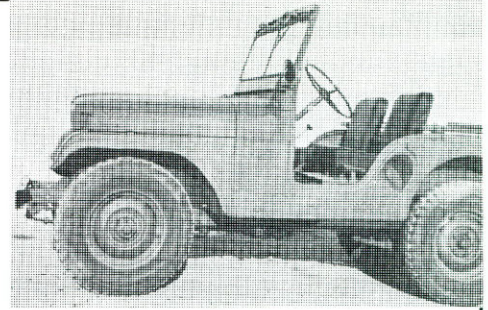
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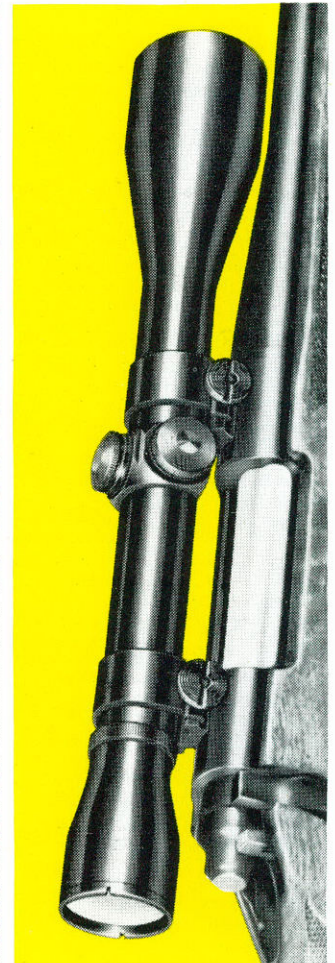
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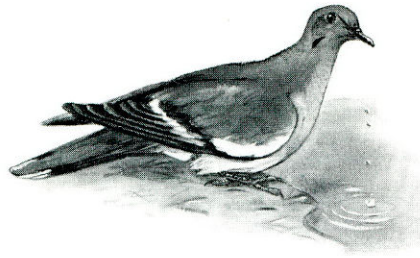


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Letters



to the Editor

Honey Fungus

I was somewhat surprised to read in your January issue that "honey is fatal to hummingbirds." This, I should think, would be most unlikely, and I should like to have a look at the evidence.

Obviously, any pure carbohydrate, if given as the exclusive food, would lead to starvation, but I doubt that as an attractant or supplement it would be harmful.

The literature is sufficiently diffuse so that even an ornithologist cannot expect to read everything pertinent, but I certainly would like to have the source of the alleged toxicity of honey cited.

Charles E. Hall, Ph.D.
Professor of Physiology
Galveston

Supporting our statement about honey and hummingbirds are the following references: *National Geographic*, Jan., 1963, "Man Who Talks to Hummingbirds"; *Audubon Magazine*, July-Aug., 1963, "Attracting Birds to Your Garden"; *Audubon Magazine*, Sept.-Oct., 1965, "Honey and the Fatal Fungus"; and *Audubon Magazine*, Jan.-Feb., 1966, "Fatal Honey." It seems that, unlike sugar water, a honey mixture ferments readily, and the resulting fungus is very harmful to humming-

birds. This fungus makes the tongue of the hummingbird swell, which disables it from normal feeding habits and thus starves the bird to death before recovery can be attained. If fresh honey is used and if the container is thoroughly cleaned out and replenished before fermentation has a chance to occur, the danger to hummingbirds of fungus starvation is practically negligible. But where a honey mixture is put out and left for a period of time, until it is used up, birds feeding on this mixture after a while are very likely to suffer from this fungus ailment. —Editor

Rare Ferret

I enjoyed Joan Pearsall's article on "The Eleventh Hour" very much, and her remarks concerning the black-masked, black-footed ferret, *Mustela nigripes* in particular, which prompted me to write this note.

A few days before reading this article, I saw one of these animals at the Cameron County Water District #6 reservoir, and thought in view of their scarcity it might not be amiss to report it.

C. W. Ellington
Brownsville

Boxes for Bluebirds

I read with interest your article about bluebirds in an earlier issue of *Texas Parks and Wildlife*.

I built four bluebird boxes in 1962, and put them up on fence posts on my farm of 115 acres, in Grayson County. Although I put the boxes up late in March, I had three nests. In 1963, I increased the boxes to nine, and eight nests were made.

In 1964, I increased the boxes to 13, and nine nests were built. Twelve nests were built in 1965. I increased the boxes to 14 in 1966, and 14 nests were built.

I have found by experience that the bluebirds will not build in a box unless out in the open on a post. I tried putting boxes on trees, but only had squirrels. It seems to make no difference which direction the boxes face.

The mother bird is very tame when on her nest. Most of my boxes are four and five feet from the ground. I build the boxes out of scrap lumber or crates.

I did not realize that so many bluebirds were in this part of the country. Every farm could have bluebirds with just a little effort.

Winton E. Noah
Denton

Pleased Visitor

I was delighted to read, and see the illustrations of the famous Battleship *Texas* in your May issue. On an unforgettable visit to the "Lone Star" State in February of last year, whilst going from Beaumont to visit the whooping cranes in Aransas, I was flown in a Cessna "skywagon," right over San Jacinto, and looked down on that memorial to your final victory over Mexico.

I was particularly interested to see the tall column, with its lone star at the top, towering over the great ship.

Since then, I have read many books on Texas, its history and its wildlife, and very much hope one day to be able to pay another visit.

J. M. Craster
(Sir John Craster)
Northumberland, England

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Junior Sportsmen

by Joan Pearsall

17. Useful for outdoor meals.
20. Boy's name.
21. High, rugged mountains.
22. Important tool when you are camping.
24. Someone I see in the mirror.
25. Very popular in the fall.
30. Far away from civilization.
31. A steed, or a trophy.
32. Something to guide a horse with.
33. A happy look.
34. New Testament.
35. Seen very much in Texas.
37. Someone who tries to catch fish.
40. Exists.
42. Beverage made with malt and hops.
43. The first woman.
44. Deep, narrow valley.
45. Sometimes do this when you fish.

Words from the Wild

Here is something to sharpen your brains, in readiness for school. Those vacation memories will come in handy here.

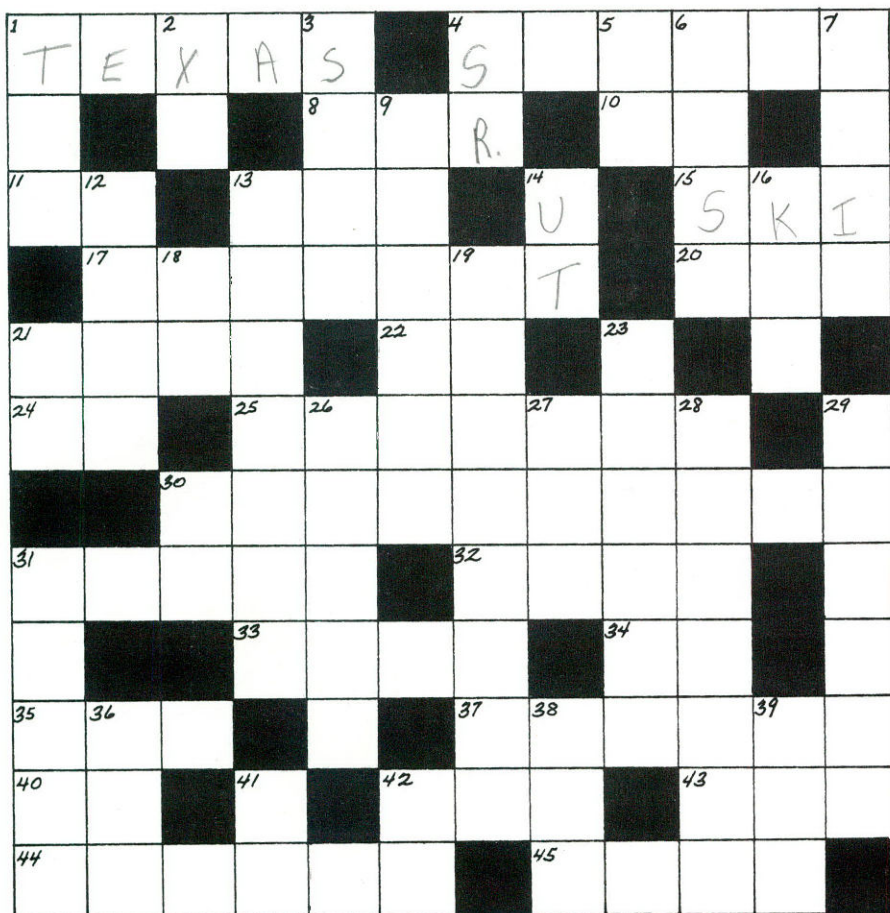
8. You need this, the fresher the better.
10. Point of the compass—opposite direction from Texas.
11. Abbreviation for nickel.
13. Part of a fish.
15. To do this, you need a boat to pull you.

ACROSS

1. Lone Star State.
4. Active hobbies.

DOWN

1. Easy to get in Texas.
2. Extra Large.
3. Can help a boat move.
4. Senor, or Senior, abbreviated.
5. The light is this, when you turn the switch.
6. You need enough of this to be healthy.
7. To move in the water like a fish.
9. Opposite to coastal.
12. An island.
13. One of the most popular outdoor sports.
14. University of Texas.
16. Small animal, or a collection of tools.
18. Can't avoid some of this when camping.
19. Outside.
21. Before noon.
23. Turn in a game.
26. Extra special.
27. Anger.
28. Calmed down.
29. Back from the sea.
30. Western Union.
31. Entertaining sound.
36. Great to live in, and for all types of vacations.
38. America is in the—World.
39. The evening before.
41. Alongside.
42. Just one (indefinite article).



Solution on page 24.

