

TEXAS

PARKS & WILDLIFE

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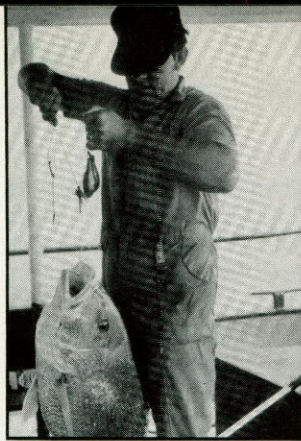
**TEXAS PARKS & WILDLIFE
magazine**

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

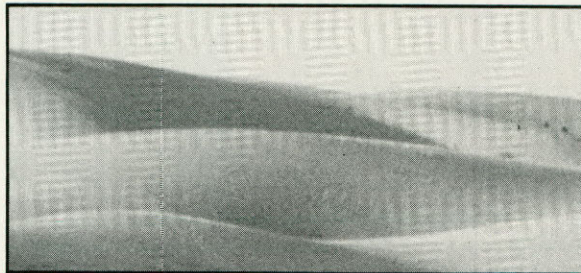
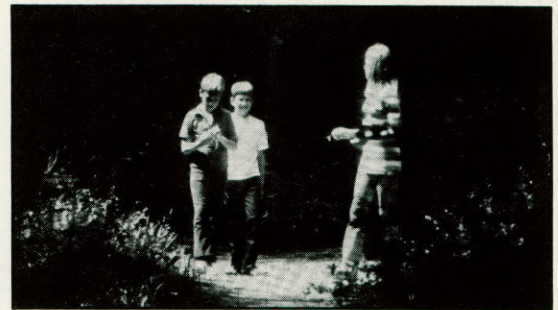
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Front cover: Although this wild turkey was strutting last spring, he may find himself some hunter's Thanksgiving dinner. Photo by Bill Reaves.

Inside front: Sand-surfing is one of the most popular attractions of the dunes of Monahans Sandhills State Scenic Park. Photo by Bill Reaves.

Lake trotlining for **CHANNEL CATS**

by Ed Dutch

If you're the kind of person who loves to eat fish just about as much as you love to catch them, well maybe this is for you. Lake trotlining for channel catfish is by no means easy but it can produce meat for the table year round. And to some, there's nothing better than crisp, deep-fried catfish fillets and hush puppies.

Trotlining may not be quite as thrilling as catching a five-pound bass on a spinning rod, but there is something to it. It's hard to explain the feeling that is derived from hauling a "big ole cat" over the side of the boat just before dawn when the bugs are thick around the lantern and a cold mist is hanging just above the calm water. Your feet are wet and your arms and hands feel stiff, but you do have a tired feeling of accomplishment and maybe a little adventuresome.

Since there is work involved in trotlining for channel catfish, it's advisable to stock up on some information about its characteristics and habits.



Probably the third most sought after freshwater fish in Texas behind bass and crappie, the channel catfish is sometimes known as willow cat, spotted cat or fiddler cat. They can easily be identified from all other Texas catfish except the blue catfish by their forked tail and small narrow head. Coloration varies but they are usually silver-gray above and shade to silver-white on the belly with numerous small, black spots that become obscure or absent with age.

When the spots disappear, the channel cat is difficult to tell from the blue cat. They are distinguishable by counting the rays in the anal fin (the one on the bottom in front of the tail). The channel cat has 24 to 29 rays while the blue cat always has 30 or more soft rays in the anal fin.

Channel catfish are found in almost every portion of Texas because they can readily adapt themselves to most waters. In larger lakes and streams where ecological conditions are right, they are very prolific and usually spawn in May or June when the water temperature reaches 75 degrees.

The young feed on a wide range of living and non-living things and grow rapidly to reach sexual maturity in two to three years. Adults eat live and dead fish, crayfish, insects and a variety of vegetable matter.

Every once in a while, a channel cat will be caught that weighs 15 to 20 pounds or maybe even larger, but the average fish is five pounds or under. The state record channel catfish weighed 36 pounds, eight ounces. That's makings for a real fish fry.

Channel catfish are primarily nocturnal in their habits and more are caught during the dusk, night and dawn hours although some conditions may cause them to bite throughout the day. Virtually any bait is good because of their omnivorous eating habits but they might be finicky at times and prefer one bait to another. Most trotliners have caught channel cats on everything from bar soap to stink bait. Some of the other more popular baits are shrimp, shad, blood bait, chicken and pork liver, minnows, cut bait, grasshoppers, crayfish, cheese, frogs and worms.

The smaller catfish devour more food in relation to their size and therefore feed more often. They can be caught at almost any time and in varying depths of water. If you're really after the food fish, these smaller channel cats are the most desirable because their flesh is firmer and tastier than that of the larger fish. With a daily bag limit of 25 in most Texas counties, you can

easily enjoy a few good meals after one successful outing.

Locating a good "hole" to set your trotline is an important consideration in channel catfishing on a lake. It seems that lake fishing for catfish often is quite complicated if you're really working for the big ones, but locating an area of the smaller channel cats is easier and more productive.

In good lakes with a high population of channel catfish, one place is usually about as good as another. The mouths of streams or creeks emptying into the lake are pretty good places to start. The mouth area has abundant food especially after rains when the water is rising. Underwater springs which are marked by areas of cooler water help concentrate the fish during the hot summer months. Brushy bottoms always offer the possibility of catching a few nice channel cats.

Some trotliners either use a weighted drag or electronic depth finder of some sort to locate underwater channels and deeper holes which might be the home of a large number of catfish. A simpler suggestion is to drift fish across open areas on the lake and place your line where fish bite or are caught.

It is almost impossible to guess the depth at which the catfish are feeding in the lake. The bigger fish usually feed in the deeper water while the smaller ones work in the shallow areas, but this is not always true. Varying the depth of your line will locate the fish.

Trotlining for channel cats is sometimes better in deeper water just to get away from the bait stealing bream and bullheads. Then again, in the deeper water, you might not catch any fish at all or have your fish die on the line because it is placed in an oxygen-poor thermocline. It's all a matter of moving your line all around or up and down to find where the fish are at any particular time. In other words, work at it.

By law, trotlines are required to meet certain specifications, but other than those, the ways to set a trotline will vary with almost every old-timer. County regulations are available in the yearly fishing guide published by the Texas Parks and Wildlife Department, but a couple of things apply throughout the state. Stagings and hooks on trotlines must be at least three feet apart and all freshwater trotlines must be identified by a legible tag, constructed of a material as durable as the trotline, bearing the name and address of the fisherman and date it was set out. Usually, a plastic bottle float with the proper identification printed on it with a waterproof felt-tip pen works fine.

The tag must be updated every 90 days if the line is to remain in the water. Make sure and check the county regulations before putting a line in the water so that you don't end up with an expensive fishing trip.

The mainline of a trotline consists of heavy cotton or preferably nylon braided line with a breaking strength of 400 pounds or better that is suspended between trees, stakes or weights. From this line, droppings or stagings of a smaller diameter line with a hook tied on the end are attached. Methods of attachment vary from using barrel swivels, snap swivels, combinations of both, clips or just tying the staging directly to the mainline. The swivel combinations are preferred because twisting fish have a much harder time getting off.

Hook size will vary with the size of the fish you're after, but smaller hooks will usually produce more fish. It's more probable to catch a 20-pound cat on a 1/0 O'Shaughnessy hook than it is to catch a one-pound cat on a 10/0 hook. When fishing primarily for channel cats, #4 hooks upwards to 2/0 or 3/0 range will produce the most consistent catches.

The mainline is usually suspended above the bottom of the lake by plastic bottle floats or any buoyant material, but some just let the line rest on the bottom and drag a large hook of some sort to locate and pull up their line. If floats are used, the line between the float and the mainline can be shortened or lengthened to raise or lower the trotline and control the depth of your set.

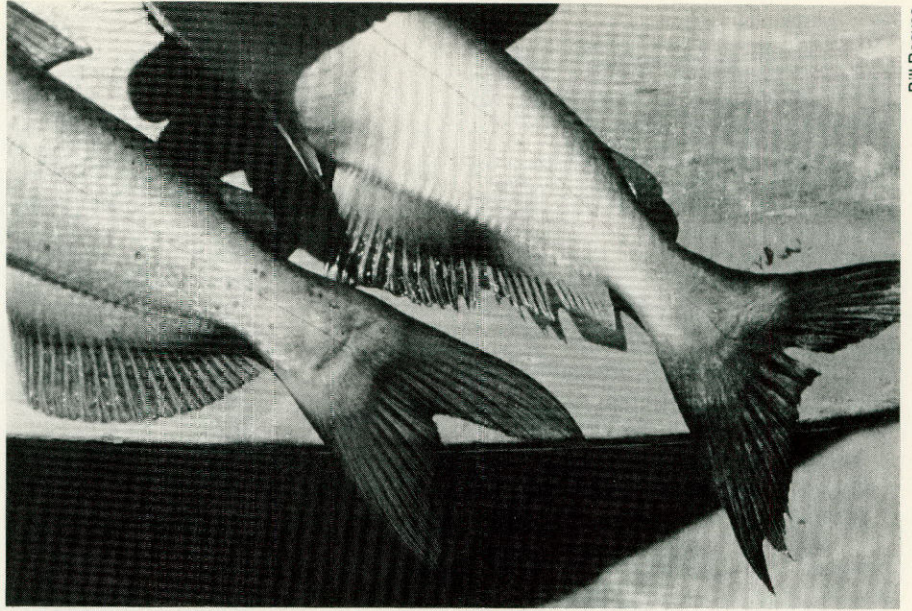
Two things are important when using floats on deep lines that are weighted at each end. Locate your float line at least 20 feet from the weight for every 10-foot increase in depth of the trotline. Otherwise, if your mainline is tight, you won't be able to raise your line to the surface of the water where you can work it. You also need to use a fairly heavy line for the float line so that you don't risk losing your trotline.

Other considerations might include using lines strong enough so that you can stretch them tight when putting them out, and so they won't break when you are running your trotline by boat with the wind blowing. The same thing applies to the trees or stakes that you tie to, or the weights that you use. They must be firm or heavy enough to keep the line from giving too much with the boat pulling against them. It would also be advisable to make sure that your trotline is set deep enough to keep passing boats from cutting the line.

Carelessness while trotlining can

result in serious situations. Remember, you're working with a tight line, sometimes in deep water, that has as many as 50 hooks dangling from it. You might be alone on the water late at night when no one could hear your cries for help if you were to let the line slip, get hooked and pulled over the side of the boat. Always hang on to the mainline and not just the stagings or hooks when you are baiting the line or removing a fish, and don't lean too far over the side. It's not a bad idea to keep a knife handy, just in case.

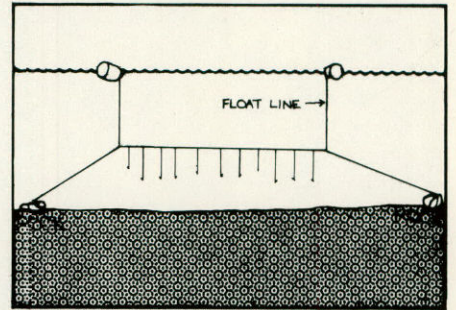
Respect trotlining. Work hard at it and develop your own ideas as to sets, baits or locations, and maybe your rewards will be greater than just a fantastic meal of channel catfish fillets and hush puppies. **



Bill Reaves



Jim Whitcomb



The channel cat (left) and the blue cat (right) are easily distinguished in the top photo by counting the rays in the anal fin. The channel cat has 24 to 29 rays while the more square anal fin of the blue cat always has 30 or more rays. The above set has been found to be convenient for lake trotlining. By varying the length of the float lines, the mainline can be tightly set at the desired depth.

A Trip to the Banks

Party boats put offshore fish within the reach of all fishermen

By Ed Dutch

Before the anchor touches bottom, you've released the brake on the reel and are feeding out the line. It's as if you are back in grade school, pushing and shoving to be first in line, except this time you want to catch the first fish.

When you peer into the deep, blue water and feel a tug at the end of your line, anticipation mounts quickly. The excitement builds as you begin to reel in, and when you're still reeling a minute and a half later, you hope the end is near. Finally, the climax comes as you behold that beautiful red-tinted fish flashing through the clear water

and know you have caught a red snapper.

It may be a small one of less than a pound or a big sow snapper that will tip the scales at 50 pounds or so, but the thrill is the same. Fishing the open Gulf with no land in sight is an experience in itself. There's nothing equal to it when you are using a heavy boat rod with hundreds of feet of line and a pound of lead for a sinker to carry the line through the strong ocean currents to the depths where schooling snappers are feeding over the reef. You might even be using an electric reel because the constant cranking in of the



The dock may seem cold and lonely in the middle of the night as you prepare to embark for offshore fishing on a party boat, but the company aboard is usually warm and friendly.

Activities vary on the trip to the snapper reefs, or banks, as they are more commonly known. Some choose to sleep while others talk or play a few hands of poker. By the time the sun rises, almost everyone is topside with their lines in the water hoping to hook a big sow snapper, grouper or maybe a kingfish.



line when fish are biting will tire even the stoutest fisherman.

Although it sounds as if deep-sea snapper fishing is only for the hardest sportsmen, it really is an exciting trip for people of all ages, from the youngest on up to grandparents. The accommodations available at several ports along the Texas coast will provide a pleasant fishing trip.

Freeport, Galveston, Port Aransas and Port Isabel are the most popular areas for they have the larger party boats which accommodate from 20 to 91 people. That sounds like a lot of people, but the boats seldom carry full capacity and do have ample room to fish. Trips to the snapper reefs, or banks as they are more commonly known, vary in time and cost at each port because of the distance traveled.

Boats out of Freeport leave the dock at 3:00 a.m. and return around 5:00 or 6:00 p.m. the same day. Traveling to either 30- or 60-mile banks, fishermen catch snappers in 90 to 190 feet of water for a price of \$23 which includes bait and tackle. Fish are gutted and gilled on the boat during the return trip.

Morning until evening 10- to 12-hour trips to 50- or 80-mile banks are available out of Galveston with the cost ranging from \$13.50 to \$20.00 per person depending on how far out you want to go and whether you want to rent tackle. Bait and fish stringer are furnished on each trip and fish are put on ice. Boats out of both of these ports fish seven days a week, weather permitting. It is advisable to make reservations a couple of days before and to check the evening of the trip to be sure it wasn't cancelled.

A 7:00 a.m. to 7:00 p.m. trip is available out of Port Aransas on weekends for a cost of \$23 which includes bait and tackle and the fish are put on ice. Also, for \$30 you can board one boat at 12:00 a.m. and travel to the snapper banks for a day's fishing, returning late that afternoon. On this trip air-conditioned bunks are available for those who don't participate in a card game or the usual bull-session that takes place on the way out. Needless to say the bunks are well utilized on the trip in. Electric reels are furnished, if desired, and all bait and tackle is provided. This trip runs daily, weather permitting. Reservations are recommended.

Charter boats make trips for smaller groups of people out of other ports on the Texas coast. You might check into one of them if you prefer a smaller boat.

For those who haven't acquired their sea legs or haven't experienced baiting hooks with cut squid, it is recom-



mended that some sort of sea-sickness preventative be taken before one of the trips. The boats cannot return to shore if you begin to feel nauseated. Many brands of medications are available without prescriptions such as Dramamine, Merizine and Bonine or your doctor may recommend others. These types of medications must be taken the night before your trip to be effective. One good preventative, Emetrol, can be taken immediately before the trip and also during it if you feel your stomach is trying to turn inside-out.

If the snappers will oblige, as they most always do since they have a tremendous appetite for natural bait and gather in large numbers, you will be rewarded with a heavy stringer.

One exciting part of this type of fishing is that there's always a chance that you might hang into anything of almost any size. You never really know what to expect—maybe that's why you wanted to be first in the water. **



Trips to the snapper banks vary in time cost, comfort and accessories furnished. To make the trip more pleasurable, some boats are equipped with air-conditioned cabins and bunks, a snack bar and other conveniences. All

boats include bait in their basic price and tackle is available at a small charge for fishermen who need it. Fish are put on marked stringers on ice for the trip in, but deckhands on some boats will gut and gill the catch.



OUTDOOR BOOKS

FISHES OF NORTH AMERICA by Earl Herald; Doubleday & Company, Inc., Garden City, N. Y., 1972; 254 pages, \$9.95.

Doubleday has released another book in its North American wildlife series; this one entitled *Fishes of North America*.

With the assistance of friends and diving associates, Earl S. Herald has compiled this interesting volume which contains not only facts about the fishes found in our waters, but incorporates information obtained through various underwater study programs conducted by colleagues.

Herald divides the various fishes into the three major classes—jawless fishes (hagfishes and lampreys), cartilaginous fishes (sharks, skates, rays and chimaeroids) and bony fishes (all others). These major classes are then divided into their respective families which are discussed individually.

Because the author is both the Associate Director of the Steinhart Aquarium of the California Academy of Sciences in San Francisco and a veteran diver, he is able to describe with authority the distribution, feeding, mating, breeding, commercial use and present status of hundreds of species. For example, he cites the feeding methods of the lamprey. This jawless fish attaches itself by means of its piercing teeth to a host fish and then proceeds to suck the victim's blood. An anticoagulating substance in the lamprey's saliva keeps the host's blood in a fluid state.

Supplementing the text is a remarkable collection of illustrations by some of America's leading underwater photographers. Precision underwater photographic equipment has enabled them to record the mysteries of aquatic life for our enjoyment. Yet, the fantastic colors of some fish are still hard to believe; the deep red of the migrant sockeye salmon; the fluorescent pink of the red brotula; the neon blue of the blue hamlet; and the rainbow colors of the basslets, angelfishes and parrotfishes.

Superb photography, however, is not limited to the color illustrations. The black and white sequence on the nest-

building and courtship of the American stickleback also catches the eye. The first breeding activity of the male of this species is the construction of a nest. This by itself is not unusual, but unlike the nests of some fish which are no more than shallow depressions in the sand, the stickleback prepares its nest by using as a base the leafy stems of aquatic plants. The male then "sews" the nest together with a threadlike material which is secreted during the breeding season from a section of his kidney. This sewing is accomplished by his swimming around the nest several times while paying out this binding thread. Bits and pieces of aquatic plants are then used to complete the nest which resembles a bird's efforts.

When the nest is finished, the male drives the egg-laden female into the nest by nipping at her fins and biting her tail. After the female deposits her eggs in his leafy bower, she leaves the nest, often burrowing a hole through the bottom of it. Fertilization, aeration of the eggs during the six-day incubation period and supervision of the young is accomplished by the male.

Fishes of North America, written in a non-technical style, will provide hours of reading pleasure for the layman interested in knowing more about our underwater inhabitants. The book is not recommended for use as a technical reference because the material is too general.—Ilo Hiller

THE GILA MONSTER by Iona Seibert Hiser; Steck-Vaughn Company, Austin, 1972; 30 pages, \$2.95.

In cowboy tales and class "B" horror movies, the gila monster is shown as a creature to be despised and feared.

But in *The Gila Monster* children can read to better understand this fascinating animal and see the unique adaptations it has made for living in the arid Southwest.

Iona Seibert Hiser presents the gila monster to young readers in a descriptive fashion. Drawing the reader in, she tells about the animal's physical appearance, relatives, natural habitat and poisonous venom. Pronunciations of difficult words for the inexperienced

reader are spelled the way they sound in parentheses following the word.

Fun facts to remember are revealed throughout the book. For instance, during the spring and summer months, the gila's tail becomes elongated and fat as it stores food for hibernation. At birth, in another example, the gila has a tiny "hatching tooth" that it uses to peck through the egg shell. Later, this tooth is shed.

Black and white as well as color drawings by J. M. Roever show the gila monster's relatives, its desert region habitat of the Southwest and its unusual skin, head and claws.

The major threat to the gila monster's existence is destruction of the wilderness areas it needs. Already, they are protected by law in Arizona. —Terrie Whitehead

TEXAS RIVERS AND RAPIDS, CANOEING GUIDE TO THE RIVERS OF TEXAS compiled, edited and published by Ben M. Nolen and R. E. Narramore, P. O. Box 673, Humble, Tex., 1972; 63 pages, \$3.00.

Canoeing and floating Texas' 80,000 miles of waterways is one of the fastest growing participation sports in the state. From the quiet jungle-bordered bayous of East Texas to the exciting white water rivers in the western half of the state, outdoor recreationists are discovering previously passed-over beauty, serenity and excitement. However, to fully enjoy the waterways requires some very specific knowledge on the part of the would-be river runners.

Texas Rivers and Rapids provides the basic information necessary for both the novice and expert to float the scenic rivers of Texas. The guide is written by Ben Nolen and Bob Narramore, experienced outdoorsmen who have been exploring Texas rivers for many years. Detailed information on clothing, equipment, fishing, cooking, canoe rental and sales agencies and general canoe lore is provided. Also, 31 suggested trips on eight Texas rivers are covered by maps and verbal descriptions. Information on river trips includes: access points, reference points, campsites, water flow and danger points.

Texas Rivers and Rapids is a paperback magazine publication. The major shortcoming is that some important rivers are not covered. However, the authors promise a supplemental edition in the future covering additional trips.—Harold J. Belisle

PHOTO AND ART CREDITS

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Inside Front — Reaves; Nikon-F, 80-200mm; Kodachrome II.
Pages 2-3—Ed Dutch; Hasselblad 500C, 50mm; Ektachrome.
Page 5 (top)—Reaves; Nikon-F, 55mm Micro; Kodachrome II.—(bottom)—Jim Whitcomb; Hasselblad 500C 50mm; Ektachrome.
Page 6—Whitcomb; Nikon-F, 55mm Micro; Kodachrome X.
Pages 7-9—Whitcomb; Hasselblad 500C, 50mm; Ektachrome.
Page 13—Martin T. Fulfer; Hasselblad 500C, 50mm; Ektachrome.
Pages 16-17—Fulfer; 4x5 Graphic View Camera, 150mm; High Speed Ektachrome "B".
Page 20 (top three photos)—John L. Tveten; Minolta SR-7 55mm with 2X extender; Ektachrome. — (bottom) — Tveten; Minolta SR-7, 250mm with 2X extender; Ektachrome.
Page 21—Reagan Bradshaw; Nikon-F, 500mm; Ektachrome.
Page 24 (top)—Dutch; Nikon-F, 80-200mm; Ektachrome. — (bottom) — Reaves; Nikon-F, 55mm Micro; Ektachrome.
Page 25—Reaves; Nikon-F, 400mm; Kodachrome II.
Page 26 (top left and bottom right)—Reaves; Nikon-F 80-200mm; Kodachrome II.—(top right)—Dutch; Nikon-F, 80-200mm; Ektachrome.
Page 29—Fulfer; Nikon-F, 400mm; Ektachrome.
Page 30 (top left)—Fulfer; Nikon-F, 50mm; Ektachrome.—(other photos)—Fulfer; Nikon-F, 55mm Micro Ektachrome.
Page 31—Fulfer; Nikon-F, 21mm; Ektachrome.
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LONG SHOTS SHORT CASTS

compiled by Neal Cook

Don't Start Fires: In Texas anyone who intentionally starts a forest fire is liable for fines from \$300 to \$1,000 and/or imprisonment up to five years.

Hunters Get a Checkup: While you are getting your rifle cleaned and gear ready for the hunting season, don't forget to get a physical exam for yourself. A hunting camp is a bad place for toothaches or heart attacks. Even if the doctor gives you a clean bill of health, do some exercising before the season. Walk or jog in the mornings or evenings and walk up and down the stairs if you are only going a few floors.

Creatures of Habit: Deer follow daily routines, and if you can find where they move by locating concentrations of tracks or by watching the animals before the season, you will stand a better chance of getting the animal you want.

Cook Book: One of the many good leaflets and books available from the Texas Agricultural Extension Service is "Wild Game—Care, Cooking." This booklet is free and can be received by writing the Department of Agricultural Communications, College Station, 77843, and asking for #B-987.

Cottonmouth Control: Dr. Denzel E. Ferguson, a zoologist at Mississippi State University, has found a bizarre new way to kill cottonmouth water moccasins. He has discovered that the chain events following pesticide spraying cause pesticide buildup in some animals such as mosquitofish, sunfish, toads and shrimp. When these pesticides reach extremely high levels in certain individual animals that are resistant to the poisons, the animals themselves become poisonous to higher animals which eat them. Bass, pickerel and frogs all died after eating pesticide-laden fish and 91 percent of the cottonmouths died after eating mosquitofish.

Slimy Speedster: The Pacific barracuda has been clocked swimming at 27 miles per hour, and new research indicates that this speed is related in part to the fish's natural slime which reduces the resistance that flowing water offers its body. When the fish is swimming rapidly, the slime dissolves and the fish's body becomes enveloped in a thin layer of diluted slime solution which suppresses turbulence, lowers water friction and thus helps the fish swim even faster.

Mt. Trashmore: In Virginia Beach, Va. an 18-acre, 65-foot hill that will become a city park was formed by dumping the area's solid waste in layers for five years and covering each layer with dirt. The hill contains about 400,000 tons of solid wastes and 280,000 tons of dirt. The city's next goal is to make a 200-acre hilly recreational area over the next 15 to 20 years.

STATEMENT OF OWNERSHIP Management and Circulation

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Voluntary Hunter Safety Program

by Ilo Hiller

No one wants to be a hunting accident statistic, but thousands of hunters still go into the field each season without the benefits of hunter safety education. In Texas, passing a course in safe gun handling is not mandatory for a hunting license as it is in many states, but most young hunters could profit greatly by taking advantage of the voluntary safety training classes offered throughout the state by Parks and Wildlife Department certified instructors.

The Texas Voluntary Hunter Safety Program was initiated on June 4, 1971, when it was accepted by the Parks and Wildlife Commission, and it is sponsored by the department in cooperation with the National Rifle Association.

The primary purpose of a hunter safety program is to encourage safe gun handling to reduce hunting accidents. Careless gun handling was responsible for a large percentage of the 92 hunting accidents involving 144 people in Texas in 1971. If the hunters had attended safety courses and put their knowledge to use in the field, these accidents could have been avoided and 24 people might still be alive.

Although our program is designed primarily for the young hunter, individuals of all ages will benefit from the course. However, no student will be certified who has not attained the age of 12 years prior to completion of the program.

Volunteer instructors follow this basic outline:

1. KNOWLEDGE OF GUNS AND AMMUNITION
 - A. Types of guns
 - B. Gun sights
 - C. Cleaning and care
 - D. Types of ammunition
2. PROPER GUN HANDLING
 - A. Primary rules
 - B. In the field
 - C. In transit
 - D. In the home
3. SAFE HUNTING METHODS
 - A. Zone of fire
 - B. Target identification
 - C. Self control
 - D. Accuracy
4. THE RIFLE
 - A. Parts
 - B. Aiming
 - C. Sighting-in
 - D. Position and trigger squeeze
5. THE SHOTGUN
 - A. Parts
 - B. Position and pointing
 - C. Lead and swing
6. THE HUNTER'S RESPONSIBILITIES
 - A. Safety
 - B. Proper game identification
 - C. Principles of game management
 - D. Courtesy and sportsmanship

The instructor is not limited to the above outline and may expand his course, based on student needs, to include archery safety, live-firing on approved ranges and other subjects of interest. A minimum of six hours must be spent on the course to qualify the student for certification, but additional hours may be necessary if the course is expanded.

If you are 21 years of age or older; of good moral character; experienced in working with young adults; knowledgeable concerning firearms, hunting and shooting; and interested in teaching hunter safety, contact Theron D. Carroll, Hunter Safety Coordinator, Texas Parks and Wildlife Department, John H. Reagan Building, Austin, Texas 78701. An application-examination blank will then be sent to you.

If you are interested in attending a hunter safety course, contact your local game management officer for the name of an instructor in your area.

Let's make this year's hunting season a safe one for everyone. **



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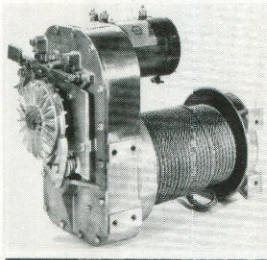
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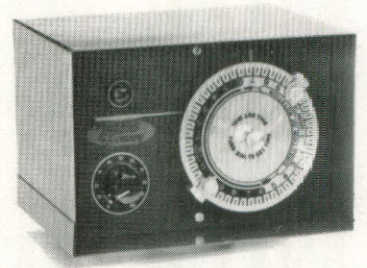
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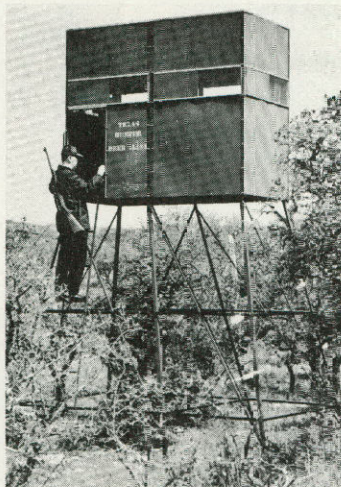
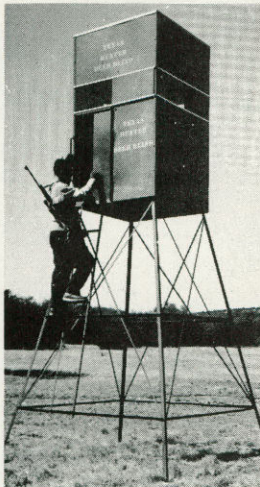


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topwaters

by Ilo Hiller





Millions of words have been written over the years about top-water lures and how to fish them, so this may seem a bit repetitious to old-time lure users. But since each year brings another group of novice fishermen into the ranks, the story bears repeating again.

One of the first requirements for using top-water lures, or any lures for that matter, is the ability to cast accurately. The fisherman must be able to drop the lure exactly where he wants to take advantage of brush piles, rocks, logs and stumps which provide cover for game fish. Since accuracy is so important, time spent practicing in the yard with a hookless casting plug until the plug consistently lands on target is well invested.

Another requirement is alertness at all times. The fisherman must learn to keep his eyes constantly on the lure during the retrieve because a bass striking a plug hits and releases it in a flash. It takes quick reflexes to set the hooks, and a little twitch of the rod tip won't bury the barbs in the hard mouth of a bass.

There are seven commonly known types of top-water lures. The *popper*, with a cupped head, which makes a popping noise when retrieved; the *chugger*, with a sloping head, which makes a "chugging" noise; the *shallow-runner* which floats when still, but dives under the surface when retrieved; the *stick* which has little or no action and must be worked by the fisherman; the *puddlers* which wobble along the surface; the *tail spinner* which generally floats at a 45-degree angle and kicks up its tail when the rod tip is twitched; and the *crippled minnow*, a torpedo-shaped lure with a propeller front and back which produce a purring sound in the water.

Although the size, type and color may vary, top-water lures can be used in both fresh and salt water. Black bass and white bass are the major freshwater fish which strike these lures, but an occasional crappie, bream, channel catfish or blue catfish will be caught. The spotted weakfish (trout), redbird (channel bass), tarpon and snook along with others can be taken in saltwater.

Far be it from me to try to tell another fisherman which color or which type of lure is best. We all have our favorites, but remember that fishing is not an exact science. The lure which was hot on one fishing trip may not produce a strike the next time out. Don't be afraid to experiment with the different kinds and colors.

Experimenting should not be limited just to the selection of the lures. The

more ways a fisherman can figure out to retrieve his lure, the more effective his fishing will be. As a rule, top-water lures are fished slowly in calm water and fast and with lots of splashing in wind-roughened waters.

In one slow method of retrieving, the lure is cast high and allowed to enter the water without making a big splash. To accomplish this, draw the tip of the rod backward as the lure hits the water. Take up the slack, but don't move the lure for a minute or more. Now, make the lure wiggle a bit by jiggling the rod tip. Take up the slack, let the lure rest again and repeat the wiggle. Continue the cycle until the lure is back to the boat or snatched up by a tempted fish.

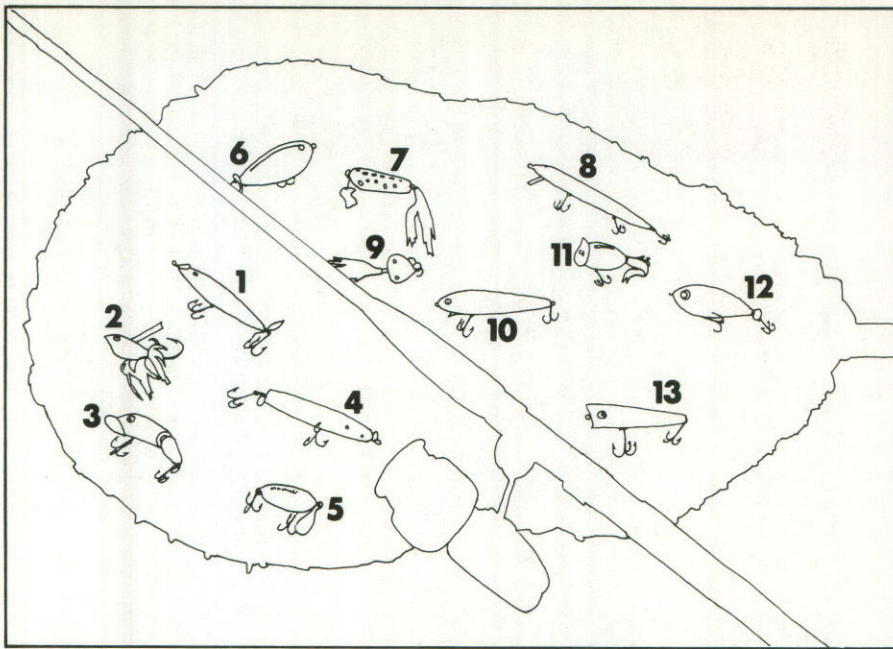
Accuracy of casting comes into the picture at this point. The lure should be cast several times into the same spot, and if no strikes occur, the cast should be moved a few feet to either side. In this way, a whole area can be fished thoroughly. Once a strike is made, cast several times to that same spot. Chances are that if one bass is present, there will be others.

If the water is a little choppy, vary the slow method. When the lure strikes the water after the cast, jerk the rod hard to make a big splash and lots of noise. Take up the slack fast and jerk the lure for another splash or two. Repeat this process until the lure has traveled about 15 or 20 feet, then let it sit still for a minute. Retrieve the rest of the distance to the boat with the slow method.

One of the easiest retrieves is the popping or chugging method. As soon as disturbance from the lure hitting the water disappears, pop it with a hard jerk. Take up the slack quickly and repeat the pop. A mild pop is made with an upward movement of the rod tip, and a loud pop with a sharp downward jerk. Continue popping the lure back to the boat or vary the retrieve by allowing the lure to rest a minute half-way to the boat.

Disputes arise between fishermen concerning the frequency of the pop. Some claim that popping too often spooks the fish instead of attracting them. They feel that the fisherman should wait until the ripples made by popping the lure have completely vanished before popping again. Others think that the more noise the better. Experiment and draw your own conclusions.

Fishermen sometimes like to slide or skip the lure across the top of the water. To accomplish this action, as the lure travels through the air, follow through with the rod tip so that when the lure



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hits the water, the rod is pointing at it. As soon as the lure hits, pull the rod tip up and reel as fast as possible. This will cause the lure to skip along the top of the water. After the lure has traveled 15 to 20 feet, let it come to a stop. Quickly take up the slack, point the rod tip at the lure and jerk the rod to cause the lure to dig into the water and make a lot of noise. Let the lure rest a minute before repeating the cycle. Fishermen claim this method will bring those lunkers up from deep water.

The whip retrieve is basically a rod action and works well with the "stick" lures which have little or no action of their own. Follow through on the cast and point the rod tip horizontally at the lure. Now pull the rod quickly in a 90-degree arc to the side of the body. When the rod stops, quickly take up the slack and move the rod back to point at the lure. Repeat the cycle of whipping and reeling to give the lure a rhythm of darting in a curved path above and below the surface.

A retrieve which calls for a lot of patience is known as the nodding method. Any surface plug will do, but best action is achieved with one which has a weighted tail section and a propeller in the rear. The face of the plug should stick out of the water to resemble a swimming frog resting on the surface. Tip or nod the lure every few minutes, but do not cause any forward motion. After several nods and minutes have passed, bring the lure forward a few feet, let it stop and resume the nodding action. It takes a long time to retrieve a lure in this manner, but it worries a cautious fish into striking.

Since the crippled minnow has the

purring action of its propellers to attract fish, the ways to retrieve it and the combinations of retrieves are limited only by the fisherman's imagination. An extremely slow but steady retrieve can be used to lead the lure around rocks or near brush in shallow water. Combine a slow retrieve, a stop, a fast retrieve and another stop for different action. To make the lure surge, rely on the rod tip. Point the rod at the lure while reeling, and then pull the rod tip to the side to cause the surge. Reel fast to take up the slack, point again at the lure and repeat the surge being careful to keep the lure moving at all times. The gentle jiggle of the rod tip in the slow-method retrieve will not only cause this lure to wiggle, but will also cause the spinners to lazily turn and flash without splashing the water.

The shallow-runner combines top-water as well as underwater action. Fish this type of lure slowly and twitch the rod tip slightly to make the lure move from side to side. Let it rest a minute and repeat the action. Then give the lure a jerk with the rod tip held down near the water's surface. This action causes the lure to dig and run underwater. Reeling fast at this point will keep the lure underwater, making it dart from side to side and swim with an erratic action. When it has traveled 15 feet or so underwater, stop reeling and allow the lure to rise to the surface. Let it rest a minute, twitch the rod tip and repeat the cycle.

Although it is not considered a top-water lure, no article on top-water fishing would be complete without mentioning the spoon. The type of spoon used for top-water fishing has

a single upright hook with a weed guard, and most fishermen add a commercial pork rind strip on the back to help keep the lure on the surface.

Retrieve the spoon as slowly as possible, but fast enough to keep it on the surface. This lure is deadly when fished over weed beds, moss or lily pads. When the lure comes to a clear area in the vegetation, stop reeling and allow it to sink a bit to tempt a hungry bass to leave the sheltering weeds. If one does not respond, resume the retrieve until another clear area appears and repeat the action.

Now that you know a few ways to fish top-water lures, here's a few suggestions on when and where.

The late spring and late fall months usually produce the best action, and the last two hours before dark are considered the most productive in the fall. When fishing in the early morning, late evening or on cloudy days, watch the water's surface for signs of leaping, darting bait fish or the wakes and swirls of the big fish chasing them. This will show you where to cast to get in on the action. Since feeding bass often move into the shallow waters on cloudy days, the lake's lee shore may be productive.

During the summer months, night fishing brings results. Many fishermen claim that a moonless night is best; but try different types of nights and draw your own conclusions. Listen for the disturbances made by feeding fish and try to place your cast in the general

area. Bring your boat in close and cast parallel to the shore. This will help prevent getting tangled up on a dark night.

Lures that splash, pop, chug, purr or wobble are good for night fishing; and according to night fishermen, black ones are best. Remember to keep the line tight at all times because a bass can spit a lure in a hurry if the line is slack. The hooks must be set in the dark, so listen for the splash at your lure.

Once your eyes have become accustomed to the dark, try not to use a flashlight or lantern because the light may spook the fish, and will blind you until your eyes can adjust to the dark again. However, sometimes a light is absolutely necessary when night fishing produces a surprise. Reports have it that snapping turtles, owls and at least one mad muskrat have mistaken top-water lures for choice food items, and I wouldn't advise trying to release one of these creatures without adequate light.

Since you now know how, when and where to fish top-water lures, it's up to you to find them. Good luck! **

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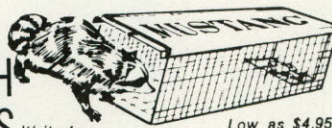
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Featured in the above two pictures are black-headed grosbeaks, found throughout West Texas and the Panhandle. The more colorful is the male of the species. Considered a summer resident of the state, there is no question as to why the male blue grosbeak (upper right) was so named. Perched in the leafless branches of a tree, the male rosebreast (lower right) surveys his territory. Two male evening grosbeaks (extreme right) present a front and back view of their colorful plumage. With their coloration and songs, all grosbeaks are welcome visitors to our state.

grosbeaks

by Ilo Hiller

Vivid coloring gives an almost tropical appearance to the rose-breasted, black-headed, blue and evening grosbeaks.

These colorful members of the Frigillidae family of birds, which also includes cardinals, finches, sparrows and buntings, are obviously seed-eaters because of their short, stout bills. They do, however, vary their diets with insects and wild fruit. Grosbeaks are readily attracted to home feeders with seeds, and are especially fond of sunflower seeds.

Rich, pleasing songs are produced by these birds, and upon hearing the rose-breasted grosbeak in 1834, Audubon described it in this manner: "The evening was calm and beautiful, the sky sparkled with stars. . . . Suddenly there burst on my soul the serenade of the Rose-breasted bird, so rich, so mellow, so loud in the stillness of the night, that sleep fled from my eyelids.

Never did I enjoy music more."

The rosebreast prefers woodlands and thickets for its habitat and builds its saucerlike nest of twigs and weeds five to 10 feet above the ground. Open woodlands, orchards or streamside thickets are choice sites for the black-headed grosbeak. Habits of these two species are similar, and when their ranges overlap, they sometimes hybridize. Both parents share in the incubation of the eggs.

The blue grosbeak breeds mainly in the southern states in fields overgrown with brambles, streamside thickets, orchards or house shrubbery. The female builds the nest and incubates the eggs, but the male assists in feeding to the young.

A shallow nest 20 to 60 feet from the ground on a horizontal limb serves as home for the evening grosbeak. The female of this species incubates her eggs alone.

All four species are migrant visi-

tors to our state. The evening grosbeak is an irregular winter visitor to West Texas and the Panhandle area. It occasionally shows up in the Edwards Plateau region. From April to October, the blue grosbeak makes its home in Texas and is considered a summer resident of the state. The blackhead and rosebreast both visit Texas from April to May and September to October. The rosebreast is found throughout eastern and coastal Texas and less frequent in the central part of the state. The bird occasionally moves west to the Panhandle and south to the Staked Plains. The blackhead, on the other hand, breeds in the mountains of the Trans-Pecos and is found throughout West Texas and the Panhandle. It occasionally strays into Central Texas and the coastal region.

Wherever these birds are found, they add beauty and song to the surrounding area. **



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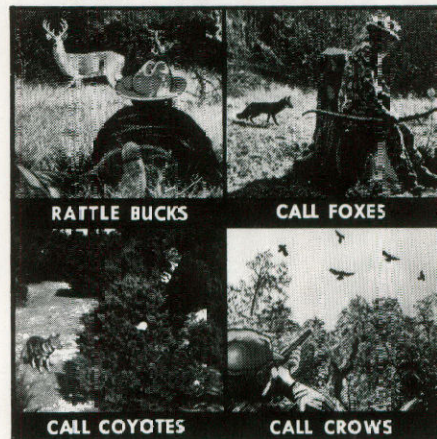
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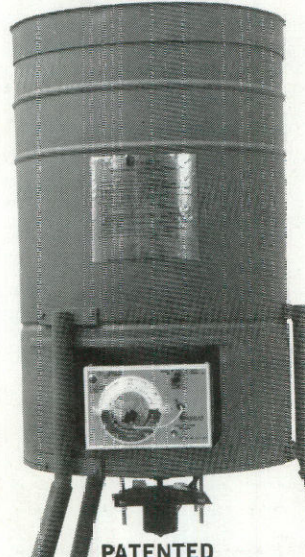
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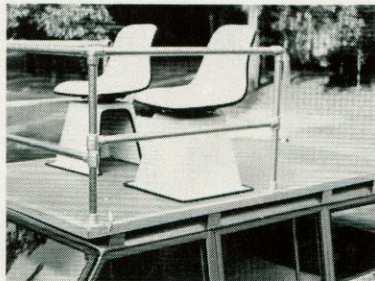
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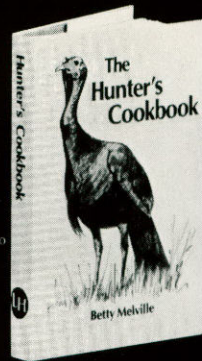
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sand, sand,

Ed Dutch



Whether historian, naturalist, photographer, anthropologist or just plain tourist, visitors to the Monahans Sandhills State Park are intrigued by the recreation and camping areas, the interesting plant and animal adaptations such as the mature three-foot havard oak (page 26, top right) or maybe just the sand itself. Crinkled sand at right was caused by the sun's evaporation of water from a shallow depression. The park is a pleasant place to visit year-round because winter afternoons are unseasonably warm and the early mornings and late afternoons are cool in the summer.



Bill Reaves

and more sand

Monahans Sandhills State Scenic Park

by Ed Dutch

There is a mystique about Monahans Sandhills State Park that beckons visitors year round. Some may question the sanity of people who drive hours in the hot sun to spend an afternoon on the dunes of the "Sahara of the Southwest." But once they visit the area themselves, they no longer have any questions.

Maybe the answer is in the howl of the lonely coyote as he sits upon the crest of one of the wind-sculptured dunes silhouetted by eerie moonlight. It could be the fascinating adaptations of plant and animal life to desert habitat, or maybe the sight of sand, sand and more sand. For the younger group, it may only be playing an afternoon football game in the soft sand or sand-surfing down the face of a 50-foot dune.

Located on U.S. Highway 80-Interstate Highway 20, five miles northeast of the city of Monahans and less than an hour's drive west of Midland, the park is more than just a 3,840-acre sandpile. The wind-blown sands are constantly changing and occasionally reveal remnants of an intriguing past.

The pure sand which stretches for miles north and south of the park is believed by geologists to have been eroded from a sandstone formation and collected by the Permian Sea that covered this area during most of prehistoric time. As the sea receded, the sand drifted in the wind and accumulated.

It is difficult to believe that at one time in history, during the late Pleistocene period, the area was a land of lakes and streams where mammoth creatures roamed freely, hunted by primitive men with stone



Bill Reaves



weapons. However, fossilized skeletons of prehistoric elephants and weapons uncovered by the wind evidence the theory.

Even though the area has a desert appearance, water remains in the sandhills even throughout the dry season. The clay-hardpan under the sand traps the water and creates clear pools between dunes devoid of vegetation. This permanent water supply provided the means for subsistence for many primitive tribes.

In the sandhills is situated one of the most unusual oak forests in North America. When you look at a clump of the "havard oak" trees which seldom exceed 30 inches in height, it is quite difficult to realize you're in the middle of a forest.

The late Dr. Roy Bedichek once wrote of the forest in *Adventures with a Texas Naturalist*:

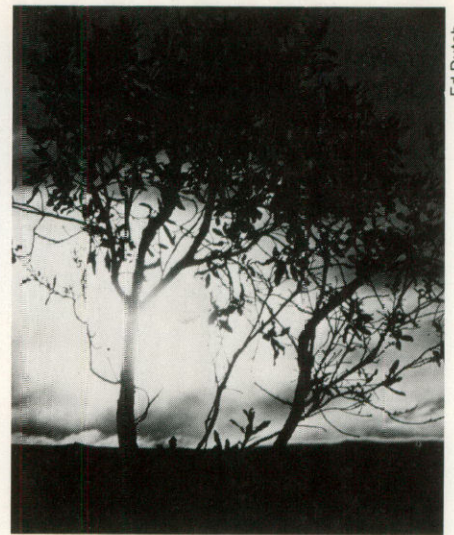
"I found myself in the midst of a miniature forest of oak and mesquite. Each dune is crowned by an oak tree, 10 to 24 inches tall, loaded with acorns. Interspersed among the oaks and towering above them is scrub mesquite,

heavy with clusters of long, yellowish beans hanging nearly to the ground.

"I venture the statement, without research, that in no other forested section, the Amazon Valley not excepted, is there to be found a higher proportion of fruit to wood than in this Lillipution jungle in the northern part of Ward county. Vegetatively considered, it is as much a natural curiosity as the Painted Desert or the wonder areas of Yellowstone.

"Dr. B. C. Tharp informs me that the little oak (*Quercus havardii*) is confined to the sandy south plains of Texas and of eastern New Mexico. Rarely reaching to a height of 30 inches, its slender stems arise from a thick rootstock buried four to eight inches below the surface. It bears a fat acorn nearly an inch long and more than a half an inch thick. Thus the old proverb 'Great oaks from little acorns grow' is reversed in this topsy-turvy land where only miniature oaks from giant acorns grow."

The oaks are large in one respect. Their roots may stretch as far



as 90 feet into the sand in search of water.

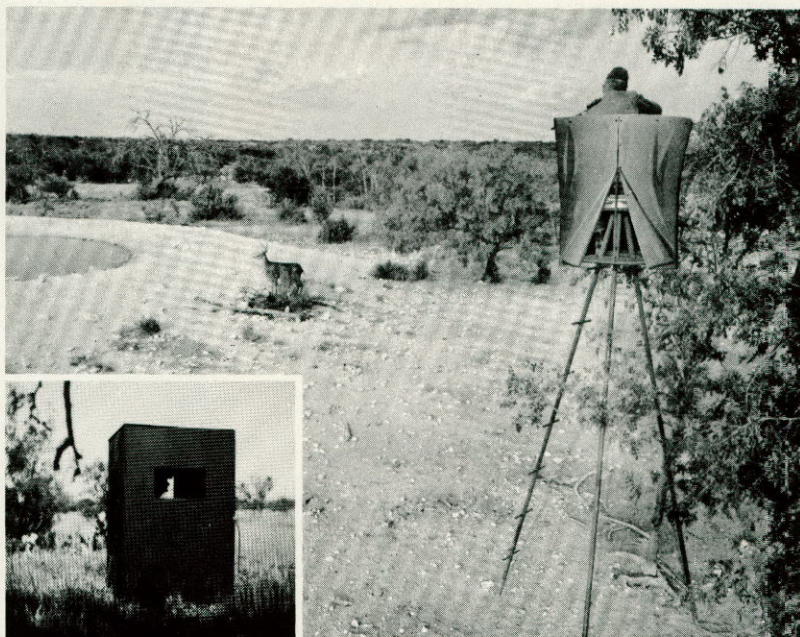
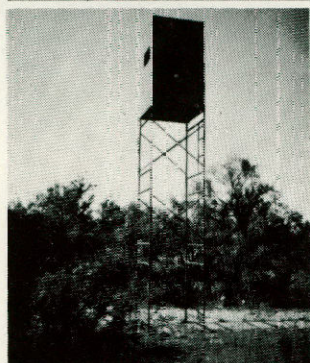
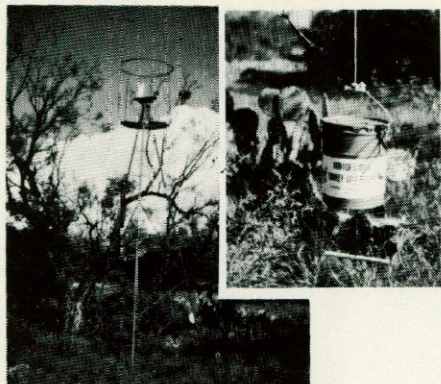
The park is an ideal setting for family and group picnics, if you like the sun and sand. Some shelters are located among the many barbecue grills, picnic tables and scenic areas. A windmill in the recreation area provides cool water for all visitors. Camping is permitted in the park and restrooms are available. Trailer campsites have water and electrical hook-ups and a trailer dump is also available.

Souvenirs may be purchased at the park souvenir shop, a colorful replica of a western saloon. The most pleasant activity is sitting in the shade of the shop's wooden porch and watching the excited reactions of people returning from a breath-taking dune-buggy ride. Arrangements for this ride are made at the shop.

If you can keep a feeling of monotony from creeping into your thoughts, the Monahans sandhills are a fantastic place to visit; and if you can't make it soon, don't worry—it's doubtful they'll ever blow away.

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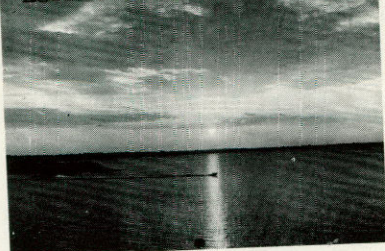
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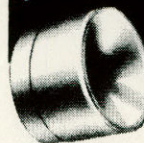
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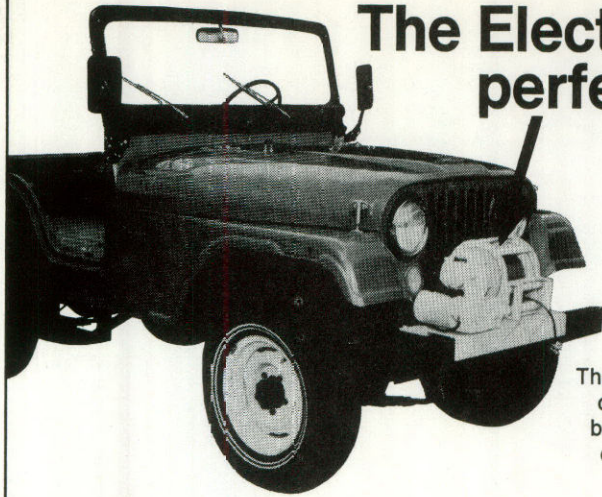
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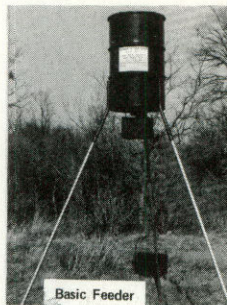
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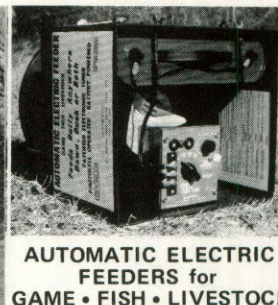
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Young Naturalist

Nature Walk

Article by Ilo Hiller
Photographs by Martin T. Fulfer

Few individuals walking through a nature area are aware of the many things in full view, much less the features which require closer observation. As young naturalists, you should become more aware of your surroundings and strive to develop your powers of observation.

What do you see when you look at a tree? If you view it as a single object, you are missing a world of nature. Take a closer look—really study the tree. Now what do you see?

Perhaps closer observation has revealed a bird nest on the high branch where a mother bird is feeding her young; or a songbird hopping from limb to limb pausing to fill the air with his clear, melodious calls; or a woodpecker busily searching for insects in the bark crevices.

What is that on the underside of the lower branch? Look, there it is again; a small tree lizard, so nearly the color of the wood that it seems to disappear when still. This protective camouflage helps conceal the lizard

from both its prey and the hungry predators which seek it for food.

Look again. Do you see the web carefully placed between those branches? In time an unwary insect will blunder into the trap to provide a meal for the waiting spider. However, the insect may not get past the tree frog which is clinging to the side of that small limb.

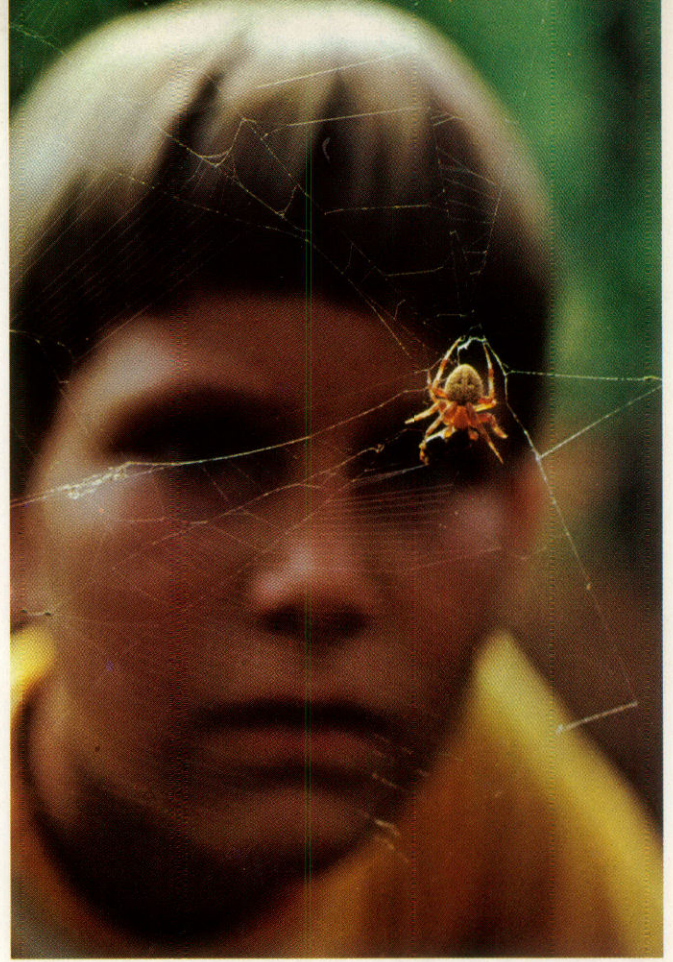
Trees are not all alike nor do they contain the same things. You may look closely and still see nothing, or you may catch a glimpse of a squirrel scampering through the branches. As you gaze intently into the leaves, you may see the eyes of a creature curiously gazing back at you.

If you become aware of the world of nature around you, your curiosity may be aroused. You may begin to wonder what kind of tree you were observing; which species of birds were seen nesting, hopping from limb to limb or gathering insects; which type of lizard was hiding in the tree; what kind of spider had placed her web between those branches; and which tree frog that was and how could it cling to the side of that limb so easily.

To help you identify the plants and animals you see on your nature walk, there are many good field guides available. For example, the Peterson Field Guide Series includes *A Field Guide to Trees and Shrubs* by George A. Petrides, *A Field Guide to the Birds of Texas and Adjacent States* by Roger Tory Peterson, *A Field Guide to Reptiles and Amphibians* by Roger Conant and *A Field Guide to the Insects of America North of Mexico* by Donald J. Borror and Richard E. White.

While making your nature walk, don't limit your observations to trees and their contents. The ground also has its story to tell. The passage of wildlife through an area leaves its signs for all to see. Each species of





animal has its own distinct footprint, and by learning to identify them, you will be able to tell which animals have walked where you are walking. When the deer, raccoon, opossum, bobcat and other animals come to drink, their tracks are recorded in the moist soil around the water's edge.

A Field Guide to Animal Tracks by Olaus J. Murie will help you to identify the tracks you encounter on your walk. If you wish to preserve the tracks and start a collection of them, plaster casts may be made. To do this, first carefully clean the twigs and loose dirt from the tracks. Cut the ends out of a tin can which is larger than the track and cover the inside of the can with a

coating of vaseline to make removal of the cast easier. Place the can over the track. Mix together plaster of paris and water to a consistency of thick cream or pancake batter. Pour it into the can about an inch thick and let it dry for an hour. Remove the cast from the can, let it dry for another hour or so and then clean it thoroughly with water to remove all dirt. Allow the cast to dry for two or three days before adding a protective coating of shellac.

While your eyes are busy observing the world around you, your ears should be listening for the sounds of nature. The call of a bird will pinpoint its location for you. The steady drone of buzzing bees may lead you



Whether young naturalists spend time looking at mushrooms emerging through pine-needle littered earth; watching a spider as it wraps a freshly-caught insect; locating an empty cicada shell still attached to a tree; feeling the texture of a purple berry; gathering a pine cone; or investigating a cave entrance, their knowledge of the outdoors will grow as their curiosity is aroused on a nature walk.

to their nest. Hearing the rustle of dead leaves could draw your attention to an armadillo foraging for food, a lizard scurrying for safety or some other small wildlife creature hurrying about its daily business. These sightings of wildlife could have been missed if your ears were not tuned in on the sounds of nature.

Now that you are excited about going for a nature walk to see what you can see, don't think that because you have no little wooded place in the country you have no place to go. Nothing could be farther from the truth. You can find that your backyard or the vacant lot on the corner can be fascinating if you look and listen hard enough.

Most state parks have areas available for hiking and exploring and many have actual trails, some of which have signs identifying the vegetation along the route. If you are interested in the interpretive trails, you will want to visit Bentsen-Rio Grande, Caddo Lake, Huntsville, LBJ Meridian, Mission Tejas, Palmetto and Tyler. Parks such as Abilene, Atlanta, Bastrop, Big Spring, Daingerfield, Davis Mountains, Fort Parker, Garner, Goliad, Martin Dies and Pedernales Falls have trails, but the vegetation is not identified.

Spend some time in the outdoors on a nature walk. You may be surprised at the variety of living things you will encounter. **

LETTERS TO THE EDITOR

Palomar Knot

I read with interest David Baxter's article on knots which appeared in the March 1972 issue, and would like to pass along information on a new knot that is taking hold in the Portland, Oregon area. I first came in contact with the "Palomar" knot through an item in the March 1972 *Outdoor Life*, and in the short time I have used it, I find I like it better than the several different "clinch" knots.

Robert J. Guild
Vancouver, Washington

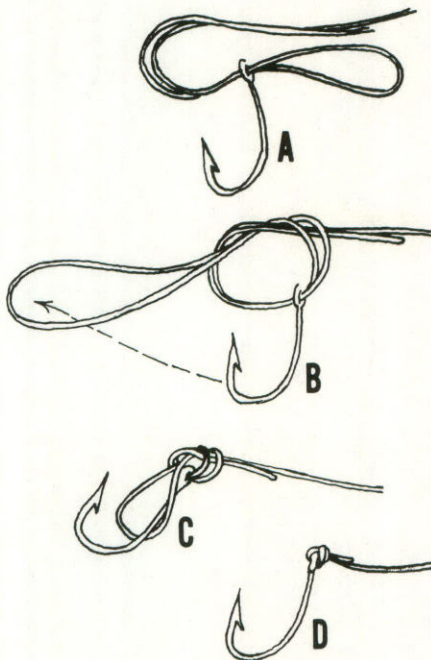
Instructions for tying:

A) Pass line through eye of hook and then return it through eye, leaving a 3- to 4-inch loop.

B) With thumb and finger of left hand, hold lines and hook at eyes; with right hand, grasp loop and tie overhand knot.

C) Hold overhand knot with right hand and with thumb and first finger of left hand, reach through loop to grasp hook; pull hook through loop. Pull on lines in right hand to draw knot to top of eye.

D) With all of knot on top of eye, tighten knot by pulling either running line or short end. Trim short line.



Aoudads

I would like information concerning the aoudad sheep hunt in Palo Duro Canyon. Also, information on the landowners, permits, where I can get a topographic map of the area and information on the sheep would be appreciated.

Sam Helmle
Mico

Aoudad sheep may be hunted in Armstrong, Briscoe, Donley, Floyd, Hall, Motley, Randall and Swisher counties from November 11 through 17. The bag limit is one sheep by permit only, and sheep taken must be checked at Texas Parks & Wildlife Department check stations.

Complete lists of private landowners who have permits for sale may be obtained by writing Texas Parks & Wildlife Department, District Office, 3802 Bowie, Amarillo, Texas, 79110. Topographic maps are not necessary because of cooperation from the knowledgeable landowners. The hunter can expect to pay from \$150 to \$650 for a permit, depending on the location and desired "extras."

On an average, the successful hunter can plan to spend 13 hours and 43 minutes to shoot his trophy. Records show hunters spending from 20 minutes to 26 hours hunting. Of 147 permits issued last year, only 44 aoudads were bagged.

With a half million acres to roam, the sheep prefer shale bluffs for bedding. These bluffs also afford protection from predators because they are difficult to traverse.

In 1957, approximately 44 sheep were introduced as an experiment to increase the hunting potential of the Texas panhandle. Hunts have been instigated to provide valuable data for department biologists.

An estimated 600-plus sheep in the Palo Duro Canyon have been classified in "excellent" condition for the 1972 hunting season.

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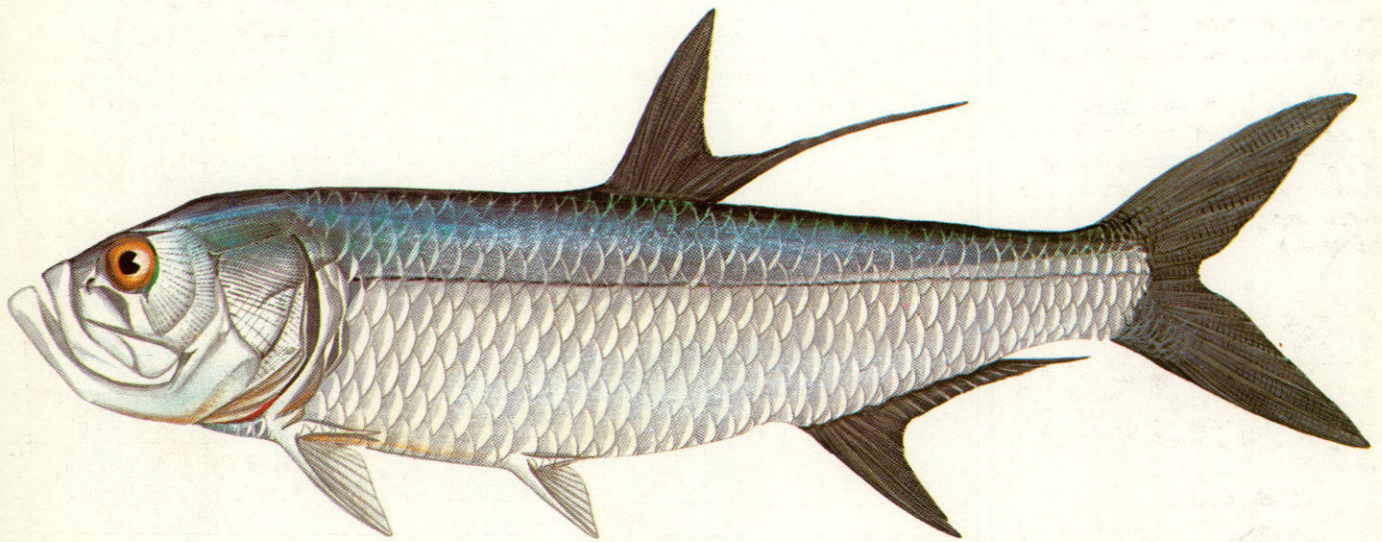
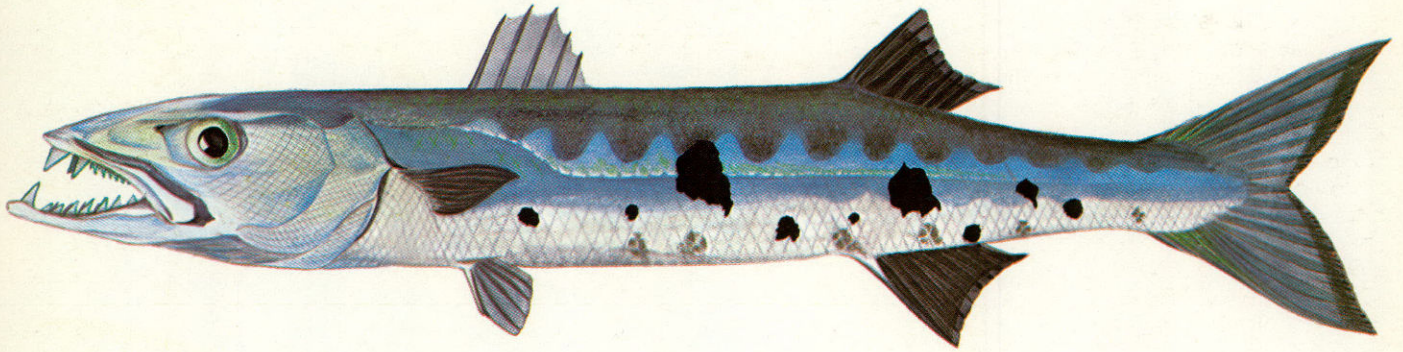
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BACK COVER

The male vermilion flycatcher is a rather small, beautifully colored bird. Feeding entirely on insects, it perches on prominent limbs where it can see in all directions and capture its prey by short flying sorties. Willow and cottonwood groves, or mesquite areas near water in semiarid regions are the preferred habitat of these scarlet insectivores. Photo by Perry Shankle, Jr.



TEXAS SALTWATER FISHES

The great barracuda (top) and the tarpon (bottom) both inhabit the waters of the Texas Gulf. A savage fish with a frightening array of teeth, the barracuda usually swims alone near the surface over reefs, but occasionally occurs in large numbers at the Claypile and Flower Garden Reefs south of Galveston. Anglers usually catch barracuda that average five to 25 pounds, but the Texas record is a 33-pound, 54-inch fish caught out of Port Aransas in 1971.

The tarpon is fancied by anglers for its spectacular fight when hooked. It frequents the coastline of the Gulf and may enter bays, harbors and the fresh water of river mouths in search of mullets, crabs, pinfish, shad or other baitfish. Although it has been known to exceed 300 pounds, the Texas record is a 192-pound, 7-foot 4-inch tarpon caught in the Galveston Ship Channel in 1961.

Artwork by Henry Compton.

