

TEXAS

PARKS & WILDLIFE

OK JK
[Redacted]
[Redacted]
[Redacted]
[Redacted]





PRESTON SMITH
Governor of Texas

**PARKS AND WILDLIFE
COMMISSION**

PEARCE JOHNSON, Chairman Austin
HARRY JERSIG San Antonio
JACK R. STONE Wells
MAX L. THOMAS Dallas
JOE K. FULTON Lubbock
BOB BURLESON Temple

**PARKS AND WILDLIFE
DEPARTMENT**

JAMES U. CROSS Executive Director

ASSISTANTS

GEORGE H. COOK Legislative Affairs
GEORGE C. ADAMS Land Acquisition

DIRECTORS

RON D. JONES Planning
ROY T. HUFFMAN Current Operations
JOHN D. MACKLIN, JR. Personnel and
Administration
RICHARD A. McCUNE Information and
Education
SAMUEL W. KENDRICK, JR. Support Services
CLAYTON T. GARRISON Finance and
Data Processing

REGIONAL DIRECTORS

Region I HENRY BURKETT, San Angelo
Region II A. W. LEWIS, Waco
Region III JOHN M. CARLISLE, Tyler
Region IV ERNEST MARSH, JR., La Porte
Region V TOM D. MOORE, Rockport

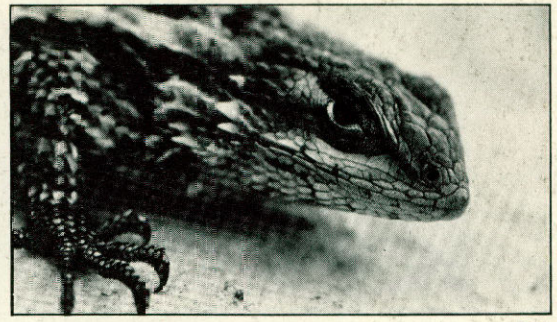
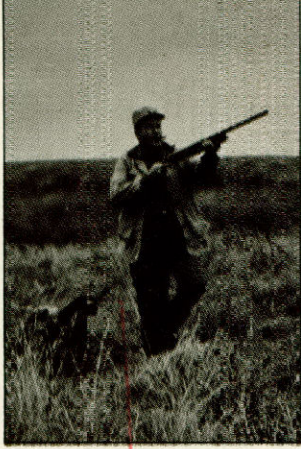
**TEXAS PARKS & WILDLIFE
magazine**

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

NEAL COOK Editor
DON WALDEN Associate Editor
ANNETTE MORRIS NEEL Art Editor
REAGAN BRADSHAW Photo Editor
ETHEL SPECK Advertising-Circulation
ILO HILLER Office Manager

Published monthly by the Texas Parks and
Wildlife Department, John H. Reagan Bldg.,
Austin, Texas 78701. Republication of material
is not permitted except by special written
permission. The inclusion of advertising is
considered a service to subscribers and is not
endorsement of products nor concurrence
with advertising claims. Rate schedule available
upon request. Subscription rates: \$3.15
for one year and \$5.25 for two years. Single
copies and all back issues, 53¢. Prices include
5 percent sales tax for Texas residents. Foreign
subscription rates: \$4.00 for one year,
\$7.00 for two years.

Postmaster: If undeliverable, please send
notices by form 3579 to Reagan Building,
Austin, Texas 78701. Second class postage
paid at Austin, Texas, with additional entry
at Oklahoma City, Oklahoma.



30

24

WEST TEXAS STATE UNIVERSITY
FEB 18 1972
UNIVERSITY LIBRARY

TEXAS PARKS & WILDLIFE

Kicking up Quail by James E. Lewis 2
Quail hunting is some of the finest outdoor sport available to
Texans. Let's go bird hunting.

The Texas Army by David Baxter 6
To keep alive an older way of hunting, the Texas Army an-
nually hunts with their muzzle-loaders.

Red Snapper — Fishery by Ed Bradley 12
In the 19th century a fishing schooner, becalmed over the red
snapper banks, founded an important part of the Texas fishery.

Lines from our Readers 16
The outdoors always inspire people, and Texans proud of their
state have written many poems.

First Aid by W. R. Long 20
What to do and how to do it may someday save your life or
the life of a friend.

Lizards by David Baxter 24
Lizards range from tiny geckoes an inch long to gigantic Komodo
dragons 10 feet long.

Your Children's Heritage? by Neal Cook 30
If litter continues to pile up, the legacy you leave your children
may be a pile of garbage.

Outdoor Books 10 Long Shots, Short Casts 11
Photo and Art Credits 11 Letters to the Editor 12

Front Cover: The lookdown fish, *Selenia vomer* is in the family
Carangidae with jackfishes and pompano. Photo by Bill Reaves.
Inside Front: A male bobwhite on the right is distinguished from the
female by his white throat. Photo by Jim Whitcomb.

Kicking up Quail

by James E. Lewis
Wildlife Biologist

Wherever you live in Texas, you are probably within minutes of some of the finest sport available anywhere — quail hunting.

There are four species of quail in Texas: Mearns or harlequin quail, *Cyrtonyx montezumae*; Gambel's quail, *Lophortyx gambelii*; scaled or blue quail, *Callipepla squamata*; and bobwhite, *Colinus virginianus*. Only three of these species can be hunted, and one of these three is so restricted in its range that it offers little recreation to Texas hunters.

The Mearns quail, sometimes known as fool's quail, is very rare in Texas and protected from hunting. Formerly it was found in Texas west of the Pecos River. Several factors contributed to the decline of this colorful little fellow. The name fool's quail was not given accidentally; the Mearns quail is not particularly wary and is easy prey for any predator including man. This fact, combined with land use changes, has put the Mearns quail out of the Texas game bird picture.

Another desert dweller is the Gambel's quail. This beautiful quail is relatively abundant from around Presidio to El Paso. However, when comparing the annual harvest of approximately 2,000 Gambel's quail with approximately 2,000,000 scaled quail, one can see that the bird is not of major recreational value. Nevertheless, he is very popular with those fortunate enough to hunt him.

A kissing cousin to the Gambel's quail, at least in habitat preference, is the scaled quail, commonly known as the blue quail. If a line were drawn from Wichita Falls to San Angelo then southward to McAllen, the eastern edge of the blue quail range would be fairly well pegged. Fifty to 150 miles further west, depending on the part of the state, blue quail and bobwhite occur together. Much farther west is strictly blue quail country.

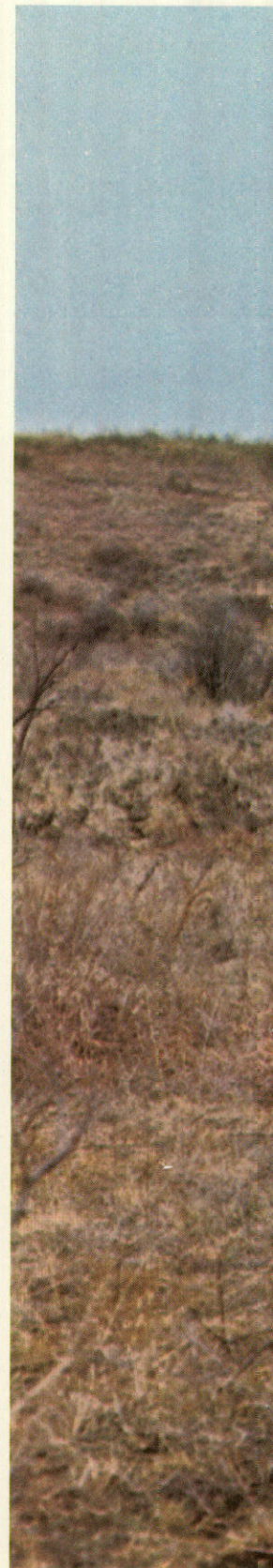
Blue quail can be found in the thick South Texas brush country where everything has thorns and grudgingly tolerates intruders. However, they also seem to thrive in the open country of West Texas where only a few blades of grass and a bush or two cover their swift retreat; and retreating is their specialty. These tough speedsters seem to avoid flight whenever possible and challenge even the most fleet-footed hunter.

One can see trucks, jeeps and horses carrying hunters over creosote flats and thick brush in search of this evasive prize. In fact, in far West Texas the blue is the number one small game bird and, no doubt, the cause of many an exhausted and frustrated hunter.

Because of his unceasing movement, the blue quail is not quarry for the bird dog. If dogs are used, not only will there be an exasperated hunter, but even the most tenacious bird dog will soon be ready for the Old Dogs' Home. The continual movement of the blue quail makes hunting them with dogs impractical and almost inhumane.

When hunting this hardy game bird most people choose what seems to be the easy way out. Riding in a pickup or some other vehicle seems downright unfair. One must bear in mind, though, that most hunters use their vehicles to find or flush the birds, then do their shooting from ground level; and here is where the fun begins. Whether or not the hunter can keep up with the furtive blue and make him fly becomes a test of will and wits.

Although methods of hunting blue quail may vary from one part of our



Tate Pittman



state to another, two things should be kept in mind when pursuing our topknotted friend. He is fleet of foot and will shun the air unless hounded persistently.

Blue quail hunting is exciting, but to most Texans quail hunting is synonymous with bobwhite. This remarkable bird is probably the source of enjoyment to more hunters than any other game bird except the mourning dove.

Bobs occur over roughly three-fourths of Texas and can be found in almost every conceivable type of habitat. They are found in the piney woods of East Texas wherever there is a network of cultivated openings, the rolling plains and cross timbers of North and Central Texas or the brush country of South Texas.

Bobwhites depend on the quality of their habitat for survival and react rapidly to any adverse changes which may occur. A constant food supply throughout the year and ample cover for protection from enemies are absolutely essential to quail populations.

Various seeds and fruits compose the diet although weed seeds are the primary source of food. Leaving small weed patches or stimulating weed growth by disturbing the soil are simple ways of producing quail food. This also creates cover necessary for feeding and roosting. Bobwhites also require woody cover. Food may be abundant, but without woody cover it will all be for naught.

Some people consider quail hunting an opportunity for an occasional outing. Others may change their whole life-style when bird season opens. How one hunts quail depends on the number of quail available, the part of the state and the type of terrain. As an example a person who used dogs in North Texas may be leery of hunting with them in South Texas because of the heat and danger of rattlesnakes.

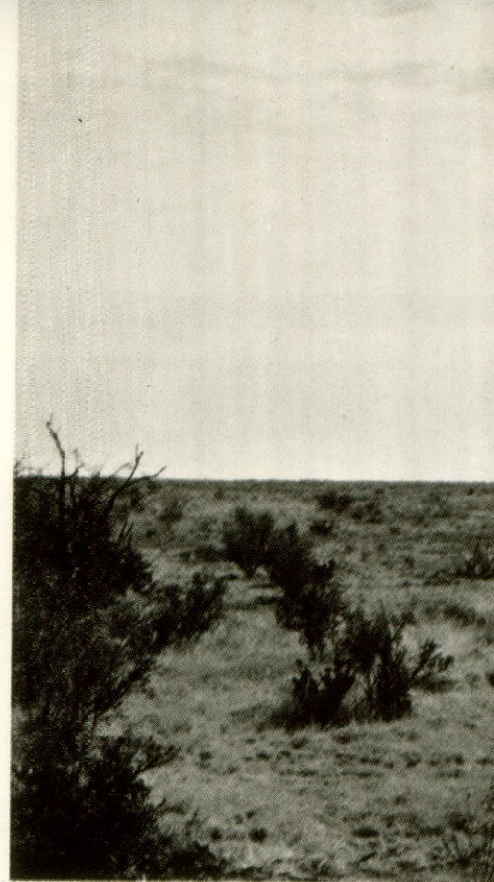
For bobwhites a 12-gauge is probably the most widely used. To keep from mangling birds too badly to eat, most hunters use a fairly open bore. Number eight is the most popular size of shot.

An important point to consider is the expense of quail hunting. The avid hunter will have hundreds of dollars tied up in his hobby by the time he buys guns, ammunition, clothes and a dog. Add dog food,

veterinary bills and the cost of living away from home and the amount keeps growing. Let's not overlook the cost of a lease. Lease expenses are growing every year, both in cost per unit of land and in the amount of land changing from free hunting to paid hunting.

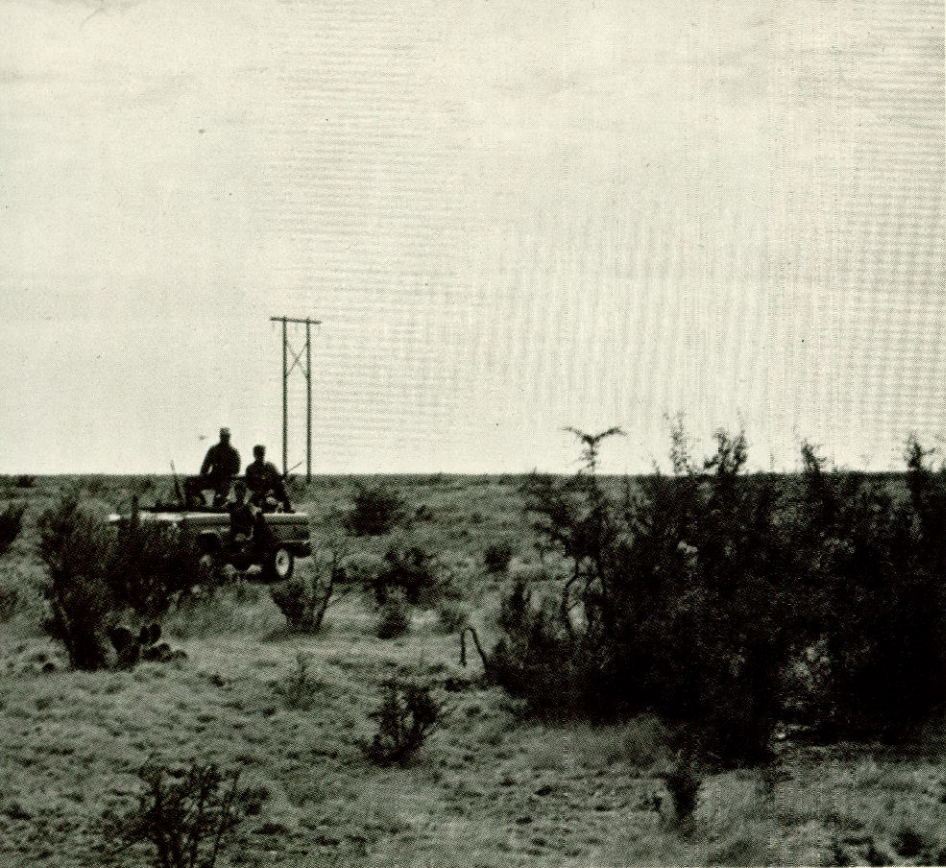
Not everyone wants or needs the headaches which go with a bird dog. For instance, in parts of our state, the quail habitat is so arranged or limited that one can almost predict where to find quail. In this situation the hunter merely sticks to likely looking fence rows, drainage ditches and gullies and hopes to stumble onto quail. When hunting in this fashion, one should remember quail need cover to move under without fear of predators. Open areas without woody cover will not be very productive except early in the morning or late in the afternoon when the birds are feeding or going to roost.

The hunter who walks his quail up must stay alert, because when least



John Suhrstedt





Neal Cook



On the opposite page are two of the major quail species in Texas, the blue (or scaled) quail and the bobwhite. The bobwhite is distinguished from its cousin by a red-brown color and striped head. A good bird dog like the one above is an asset in hunting bobwhites. A well-trained dog finds more birds for his master in a shorter period of time and routs out crippled ones for the game sack. Unlike bobwhites, blue quail prefer to stay on the ground and scurry through the thick brush. Pickup trucks can be substituted for dogs to locate and flush the active birds, but a hunter still has to have a strong pair of legs to add a blue quail to his game sack.

expected the birds will explode from that unlikely looking bush on the other side of the fence. By the time the hunter gets up his shotgun, it will be too late for anything but a desperate shot.

A well-trained dog is a thing of beauty, especially to its master. Many quail hunters consider using a well-trained bird dog as the epitome of quail hunting. A good bird dog will increase the hunter's shooting, locate more birds in a shorter period of time and find crippled birds which might otherwise get away. While a bird dog brings much pleasure to his owner, the dog also carries a good deal of responsibility with him, and a man who wants a dog must be ready to accept this responsibility.

Some hunters hunt from vehicles while using dogs. Vehicles may be necessary because of the distribution of birds, the inability of the hunter to walk long distances or various other reasons. The procedure is generally to follow the dogs until they point and then dismount and flush the birds.

The fellow who puts quail hunting at the top of the list will probably want to watch his dog work from ground level and put in many a mile on foot before the day's hunting is over. His dog working the hills and draws, honoring other dogs when they point, coming to that sudden stop that means "here they are," then eagerly retrieving the shot birds—these are the things that thrill that man the most. Although the majority of us must settle for something less than the ideal dog, we really don't mind. Just knowing that the dog is ours and it is trying hard to please generates great pride.

Quail hunting is similar to other types of hunting in that the individual chooses the style that best fits his interest and resources. There are hours of enjoyment in following a bird dog or just stomping around the countryside trying to kick up a bird or two.

It is our responsibility as sportsmen and conservationists to insure a bright future for this gallant game bird. In theory, this goal is relatively simple. If we can preserve suitable habitat, we will forever be blessed with quail. We are the ones who must decide the fate of our quail, for when habitat is gone, the quail won't be far behind. **

THE TEXAS ARMY

Men dedicated to preserving a big part of Texas' heritage gather for a hunt once a year.

by David Baxter
Photography by Leroy Williamson



A reluctant November sun started up over the mesquite and oak on a frosty Texas morning. A buckskin-clad man rubbed the sleep from his eyes and shouldered a long-barreled muzzle-loader.

Exploding black powder sent a minié ball deep into a white-tailed buck, and the hunter scrambled from his perch. The deer had been killed at less than 100 yards with a single shot; there was rarely a second chance with the slow-loading old weapon.

An elated hunter shouldered his kill and marched back to the camp. He was greeted by hunting companions and simmering stew in a huge old cast iron pot. As he washed in the nearby stream, he could hear in the background, "The temperature in downtown San Antonio is 34 degrees, and now with the Dow-Jones averages here is . . ." It would sure feel good to curl up in the back of the old camper and catch a few winks.

Dow-Jones? Camper? What kind of frontier is this?

The "frontier" is a hunting lease in Medina County, and the buckskin-clad Texans are Houston businessmen and officers in the Texas Army. There are no enlisted men.

Back in 1969, several businessmen with an interest in old weapons and Texas history organized an honor guard for the speaker at the San Jacinto Day celebration. This provisional army was turned over to the Governor of Texas, and he officially proclaimed the reactivation of the Texas Army. The reactivation has a historical basis. According to the terms of annexation of 1845, Texas can legally maintain both an army and a navy.

The members of the army are dedicated to preserving the memory of the army's heroes. They send volunteers to state functions dressed in the attire of early Texas soldiers. The volunteers are expert in the use of muzzle-loading weapons and some of the members get together each fall for a muzzle-loading hunt on the Albert Beck ranch near Castroville.

The ranch is closed to high-powered rifles. Most of the members of the army have used modern weapons and have grown bored with them. The purpose of the hunt is to maintain proficiency in the use of muzzle-loading weapons. They feel that muzzle-loaders are more sportsman-like and safer.

The maximum effective range of the old weapons is about 200 yards with muzzle velocity less than that of a





The Texas Army lives! Reviving the romanticism of the muzzle-loading rifle, members of the army gather for an annual muzzle-loader hunt in Medina County. Weapons used in the hunt include both originals and replicas. Muzzle velocity of the old black powder weapons is less than that of a modern .45 caliber pistol, and most of the shots are taken inside 50 yards.

modern .45 caliber pistol. Most shots are at less than 50 yards.

Rifle calibers used by the army include .45, .50, .54 and .58; and there is one .78 caliber smoothbore musket. No modern handguns are allowed in the hunt, and cap-and-ball pistols such as Colt Navy revolvers are familiar side arms around the campsite. These pistols hold six .36 caliber lead balls in a revolving cylinder and were popular military side arms contracted from Colt around 1851.

Both original rifles and replicas are used with a full complement of authentic accessories. The buckskin-jacketed hunters use original powder horns and flasks and cartridge boxes and mold their own bullets from original bullet molds.

The rifles use black powder, which is ignited by flintlocks or percussion caps. The older pieces shoot solid balls, but the newer rifles use minié balls. The minié ball is a cylindrical piece of lead with a hollow base and conical head. It was named after a 19th century French officer and extensively used in late 19th century weapons.

Medina County is an appropriate place for such a hunt. The Beck ranch was settled in the 1840's, and the first ranch house still stands in a back pasture. Not far off, an oak still grows where one of Beck's relatives shot a Comanche chief.

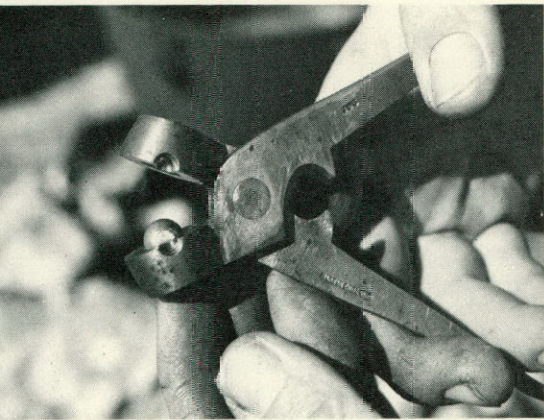
Nearby Castroville was founded in 1844, about the same time the Beck family came from Germany. Many of the old buildings built in the town's youth remain in good condition, including the Landmark Inn, built in 1846 with walls 22 inches thick.

By the end of 1970, the army had 62 members. To join the army one must own a muzzle-loading weapon and be able to use it.

The army offers two awards to its officers for proficiency with their weapons during the hunting season. The "Davy Crockett" award is given each year to the officer who kills the deer with the most points. The "Pioneer Hunting Award" goes to the shooter who kills his season limit with a muzzle-loader. The hunters accounted for 10 deer in the 1970 season and 21 the year before.

In Texas alone there are about 5,000 members of muzzle-loading clubs. Such clubs are the only way a muzzle-loader fan can learn about the old guns since most of the gun-





smiths who worked with such weapons have passed away.

Obsolete for three-quarters of a century, the muzzle-loading rifle of the frontier has a tremendous amount of romantic appeal for gun enthusiasts and history buffs. **

The Texas Army accounted for 10 deer in the 1970 season. Modern weapons are forbidden on the Medina County ranch, and any deer killed must be taken with a muzzle-loader. The old weapons are used

with a full complement of accessories. Members of the army mold their own bullets in original bullet molds, the plierslike tools, and pour their loads of black powder from old powder flasks.



OUTDOOR BOOKS

THE RA EXPEDITIONS by Thor Heyerdahl, translated by Patricia Crampton; Doubleday and Co., Garden City, N.Y., 1971; 360 pages, \$10.00.

Drifting across the Atlantic on a reed raft is more incredible than spanning the Pacific on a balsa wood raft. But Thor Heyerdahl did it, in fact he did it twice.

Heyerdahl caught the public's eye and its imagination by crossing the Pacific in *Kon Tiki* in 1947. Later, he led an expedition to Easter Island.

On his latest trip Heyerdahl hoped to prove that ancient Egyptians sailed across the Atlantic in rafts made of papyrus, a reed used by several ancient civilizations as paper and as material for small boats. The remarkable thing about the latter use is that papyrus boats still sail on Lake Titicaca high in the Andes.

By traversing the Atlantic, the author hoped to pull together some 60 parallels between Egyptian and Peruvian culture. The reed boats are one parallel, the practice of embalming the dead another.

The idea of a reed boat came from the extensive tomb paintings in Egypt. Heyerdahl found that if he carefully followed every detail of the paintings, from the upswept sterns of the boat to the different sizes of rope, he could turn brittle reed into a boat capable of weathering heavy seas.

Such detail is prevalent through *The Ra Expeditions*. Heyerdahl must have total recall, or he must have kept his notebook dry. The author has recalled everything from tidbits of conversation to the facial expression of a crewmember.

The details of the background of papyrus and of the civilizations which used it get a bit tedious. It takes over 150 pages of narrative from the beginning until *Ra I* is christened in the Moroccan harbor of Safi.

The expeditions were composed of a black African, an Egyptian, an American Jew, a Russian doctor, an Italian mountain climber, a Mexican anthropologist, the Norwegian Heyerdahl and, on *Ra II*, a Japanese photographer named Ohara.

Ra I began to fall apart as soon as it left the harbor in North Africa. The stiff, wooden rudder-oars shattered, the stern began to sink and the entire raft

started to list to the windward. The first *Ra* had to be abandoned, over protest from the crew, just short of the West Indies. Next year, *Ra II* made it all the way and sailed into the harbor at Barbados.

What did Heyerdahl prove? Not really much of anything according to his postscript. Even the *Kon Tiki* journey is discounted by most anthropologists. He did prove that a reed boat could take man across the Atlantic to America. And as if he anticipates the scoffs of his contemporaries, Heyerdahl closes by emphasizing the fact that he sailed across an ocean, not a map.—David Baxter

BLOWOUT AT PLATFORM A, THE CRISIS THAT AWAKENED A NATION by Lee Dye; Doubleday and Co., Garden City, N.Y., 1971; 231 Pages, \$5.95.

Any Texan who walks along the Gulf beaches is as careful about not stepping on globs of "tar" as he is beached jellyfish. The tar is congealed oil discharged from the bilges of tankers or formed by natural seepage.

On January 28, 1969, the people of Santa Barbara, California, had more than just isolated globs of oil on their beach. A Union Oil drilling platform blew out and for days after dumped millions of gallons of crude oil into the Santa Barbara Channel.

As is typical of 20th century Americans, the residents of Santa Barbara assumed that the technology of such a huge industry was capable of disposing of the oil before it reached the beaches. But the oil industry was unprepared to handle the crisis.

Lee Dye was a reporter for the *Los Angeles Times* and covered the blowout with zeal. *Life* magazine followed up on the story, and many conservationists pronounced the waters of Santa Barbara damaged and practically void of marine life.

Months later the oil industry cranked up its public relations department and out came a publication called "Santa Barbara Lives!" It is a summation of a report made by southern California scientists on the effects of the oil spill. The study said that all was not as bad

as it seemed. The study was financed by the Western Oil and Gas Association.

Lee Dye says that the oil industry literally blew it in Santa Barbara and is continuing to do so throughout the United States. Not so says the Committee on Public Affairs of the American Petroleum Institute. Conservationists in Alaska say that the Alaskan pipeline would destroy the last frontier of America. The developers of Prudhoe Bay say that it is a matter of national security to get the oil to market.

For an average American with no more sources of information than the local newspaper, it's rough to make up your mind.

Somewhere between the stand of Get Oil Out! (GOO!) and the oil companies lies the workable compromise of how to keep the beaches clean and still provide the country with fuel.

I'm sure that in January of 1969 the citizens of Galveston and Corpus Christi wondered when they would begin to find more oil covering their beaches. But then again, a lot of the same citizens probably heard the news of Santa Barbara on their way to work for oil companies.—David Baxter

SLEEPING BAGS Supply Limited!!

Army mummy style, down and feather filled. Same bag as used by Armed Forces in Korea and other cold climates. Comfortable to zero and below. Ideal for backpacking, hunting, camping, etc. Average weight is 6 lbs. 3 oz. Regular size only for individuals up to 6'2" or 200 lbs. SATISFACTION GUARANTEED.

10% DISCOUNT WHEN YOU ORDER 3 OR MORE!	Unused 28.00
	Used but excellent 18.00
	Postage & insurance 1.50
	Sales tax 5%

Check or money order, no C.O.D.'s please.
SLEEPING BAG SALES
303 HENSEL DR.
BRYAN, TX. 77801

STATEMENT OF OWNERSHIP Management and Circulation

TEXAS PARKS & WILDLIFE is published monthly by the Texas Parks and Wildlife Department at the Reagan State Office Building, Congress at 14th Street, Austin, Travis County, Texas 78701, Neal Cook, editor. During the past 12 months, the average net press run has been 97,741, paid circulation 92,061, free distribution 2,876, and 2,804 for files, spoilage, etc. September issue ran 98,000 press run, 92,072 paid circulation, 2,892 free distribution and 3,036 for files, spoilage, etc.

LONG SHOTS SHORT CASTS

Cover—Bill Reaves; Nikon-F, 55mm Micro-Nikkor; Kodachrome-II; Sea-Arama.

Inside Front—Jim Whitcomb; Nikon-F, 300mm; Ektachrome-X; Aransas National Wildlife Refuge.

Pages 2-3—Tate Pittman; Nikkormat, 135mm; High Speed Ektachrome; Baylor Co.

Page 4—John Suhrstedt; Hasselblad 500C, 250mm; from Ektachrome-X.

Page 5 (top)—Neal Cook; Nikon-F, 50mm; from Kodachrome-X; Val Verde Co. (bottom)—Pittman; Nikkormat, 35mm; from High Speed Ektachrome; Baylor Co.

Page 6 (upper left)—Leroy Williamson; Hasselblad 500C, 80mm; Ektachrome-X; Medina Co. (lower right)—Williamson; Nikon-F, 50mm; Ektachrome-X; Medina Co.

Pages 6-7—Williamson; Hasselblad 500C, 80mm; Ektachrome-X; Medina Co.

Page 8 (both)—Williamson; Hasselblad 500C, 80mm; from Ektachrome-X; Medina Co.

Page 9 (upper)—Williamson; Hasselblad 500C, 80mm with extension tubes; Tri-X; Medina Co. (lower)—Williamson; Nikon-F; 50mm; Ektachrome-X; Medina Co.

Page 12—Suhrstedt; Hasselblad 500C, 50mm; Ektachrome-X.

Page 13—Annette Morris Neel; Pen and ink on illustration board.

Page 14—Neel; Pen and ink on illustration board.

Pages 16-17—Neel; Pen and ink on illustration board.

Page 24 (upper)—Whitcomb; Hasselblad 500C, 250mm; Ektachrome-X; Palo Duro Canyon State Scenic Park. (lower)—John L. Tveten; Minolta SR-7, 55mm Auto Rokkor with Soligor 2X extender; Ektachrome-X.

Page 25—Tveten; Minolta SR-7, 55mm Auto Rokkor with Soligor 2X extender; from Ektachrome-X.

Page 26 (upper left)—Williamson; technical information not available. (upper middle)—Tveten; Minolta SR-7, 55mm Auto Rokkor with Soligor 2X extender; Ektachrome-X. (upper right)—Bradshaw; Nikon-F, 300mm Kilar; Kodachrome-II; Travis Co.

Pages 26-27—Tveten; Minolta SR-7, 55mm Auto Rokkor with Soligor 2X extender; Kodachrome-II.

Page 27—Tveten; Minolta SR-7, 55mm Auto Rokkor with extension tubes; Ektachrome-X.

Page 30 (upper)—Bradshaw; Hasselblad 500C, 80mm; Ektachrome-X. (lower left)—Williamson; Nikon-F, 50mm Ektachrome-X.

Pages 30-31—Reaves; Nikon-F, 50mm; Ektachrome-X; Mustang Island.

Page 31—Reaves; Nikon-F, 50mm; Kodachrome-II; Zilker Park, Austin.

Inside back—Bradshaw; Hasselblad 500C, 80mm; Ektachrome-X; San Jacinto Battleground State Historic Park.

Back cover—Williamson; technical information not available.

Lead Poisoning: Following the death of a leopard in the Staten Island Zoo in New York City, a team of medical researchers tried to find reasons for the death. As their research continued, they found high concentrations of lead in almost every animal in the zoo. Many of these concentrations were higher than the levels considered toxic in man. At first it was suspected that the animals had gotten the lead from the paint in their cages, but this was ruled out as a major source. Areas around the cages were then analyzed. The grass, leaves and soil were found to contain as much lead as is found along major highways where traffic spews lead-filled exhausts. The team concluded that the animal died from lead which occurred as atmospheric fallout. If these poisons concentrate in the Staten Island Zoo, the team concluded that atmospheric lead pollution could pose a health threat to humans.

Hard-to-See: Hunters and fishermen who are often out before dawn or at dusk should mark their belongings with a strip of fluorescent tape. Tent pegs, dog collars, tackle boxes, boxes of ammunition and many other items will be easy to find with the help of the tape.

Crow Hunters: Any old piece of fur such as part of a fur coat can be used as a decoy for crow hunting. Place the fur in a place where the crows can see it such as a small tree or fence post and hide nearby. The fur will attract and hold the crow's attention while you call and shoot.

Environment Deterioration: The National Wildlife Federation reports that the environmental quality index continued to drop during 1971, but public arousal slowed the decline of environmental quality. They report that air quality continued to decline but at a slower rate than in 1970. Mineral depletion increased at even a faster rate in 1971 than in 1970. Wildlife showed a decrease as habitat destruction continued. The quality of our water is about the same and the trend toward improvement is encouraging. The amount of living space continued to decrease last year as more people concentrated in the cities. The quality of our soil also decreased, but the United States is still blessed with good soil as a whole except when land development companies use up soil and start erosion. The quality of our timber lands showed a slight gain as imports of lumber, recycling of paper and good timber management all helped make timber growth exceed timber cut.

Poisonous Pictures: The U. S. Forest Service repeats their warning that the emulsion in self-developing film is toxic to wildlife if eaten. Never discard the paper scraps from these films. Pick them up and take them home with you.

by Ed Eradley
Coastal Fisheries Biologist

RED SNAPPER

John Suhrstedt



FISHERY

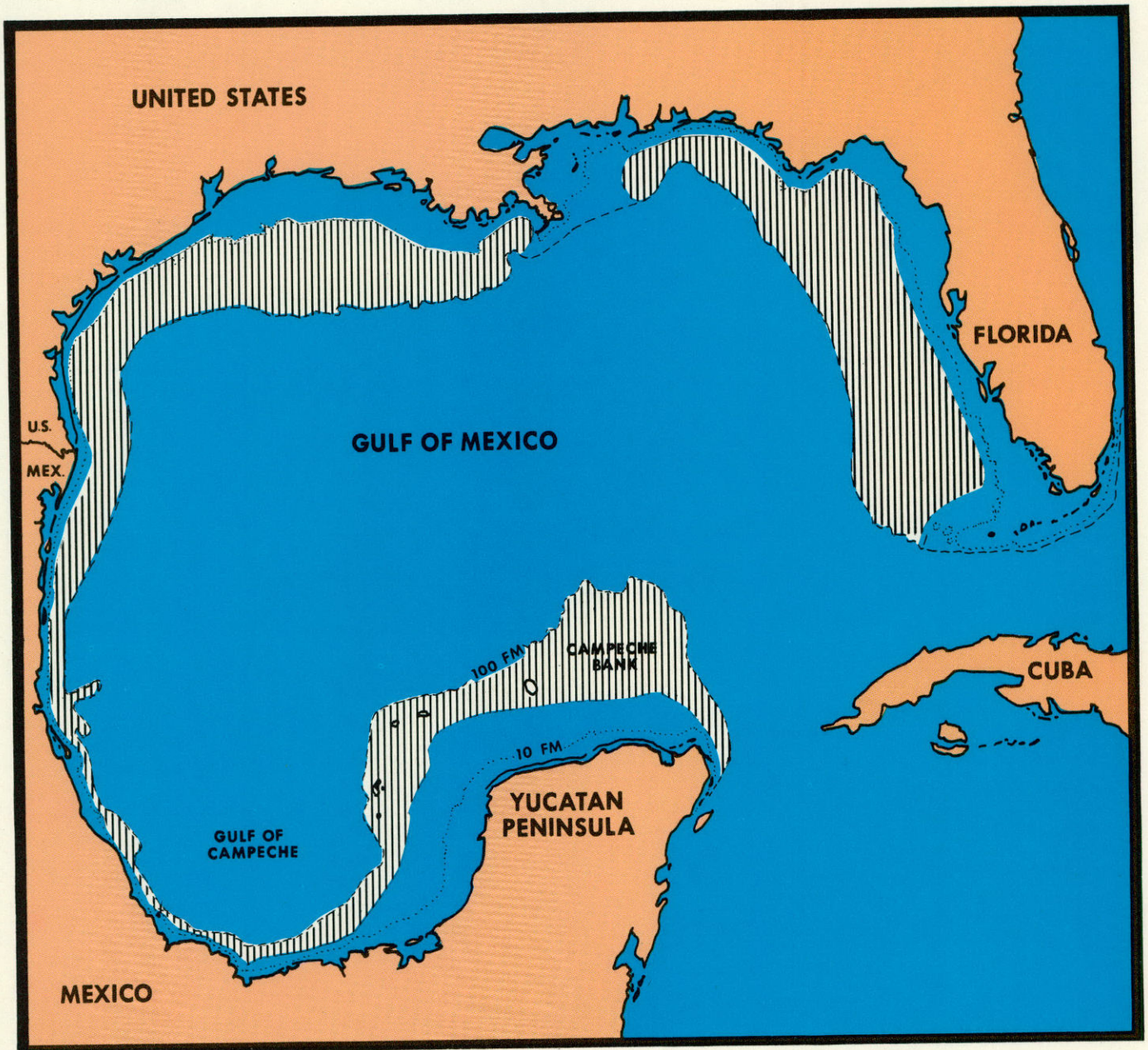
The red snapper is found along almost the entire periphery of the Gulf of Mexico. The bright red fish, "Lutjanus aya," makes up 90 percent of the total snapper production in the Gulf. The remaining 10 percent consists of other species of snapper and grouper.

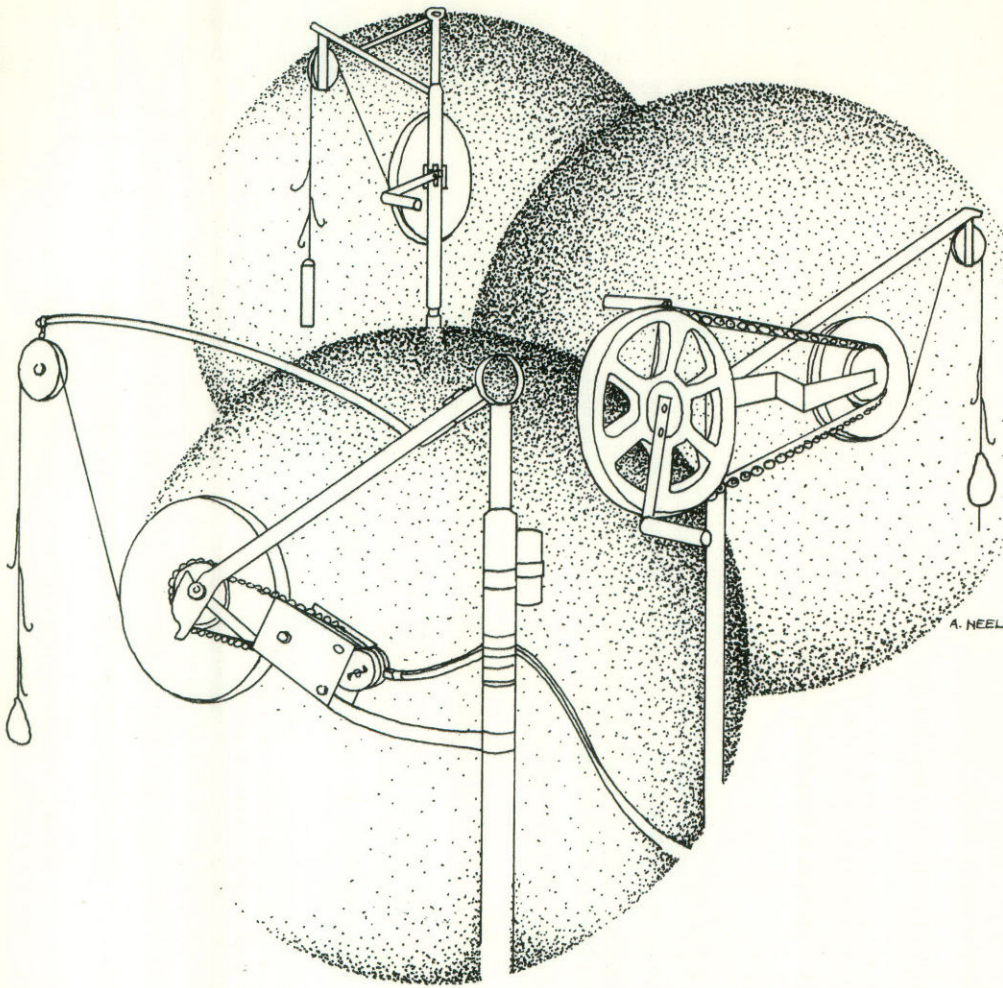
The wind had been gradually easing up for several days, and today there wasn't even a ripple in the old schooner's sails. Captain James Keeny and his crew found themselves temporarily stranded. They had been away from their Florida port for over two weeks and were bound for the Fisherman's Market of New Orleans with their catch of pompano and sheepshead.

Captain Keeny was particularly up-

set over the stillness because several hundred fish had already died in the live tanks and any further delays would probably mean he would reach New Orleans with only half the original catch. There wasn't much that could be done without help from the elements, however, so he and his crew settled down to wait out the calm.

The cook stoked his fire and began preparing a meal composed mainly of fish which had not survived.





Fishing techniques have come a long way since Captain Keeny happened onto the snapper banks. Modern sonar has replaced the weighted lines used to sound for shallows. Crews of the 19th century fished with direct-drive reels shown in the top drawing. Some ingenious fisherman used the sprocket wheel and frame of an old bicycle to haul the fish from the water. Later, an electric motor was added to the frame, and now fish can be hauled aboard at the touch of a button.

nine-pound weight ahead of the boat. This method of sounding might last all day without success, or a hooked snapper might be brought to the surface on one of the first casts. Whenever a catch occurred, the crew quickly got their handlines over and the "bite" began.

At first, all of the fishing smacks were provided with wells for bringing the fish in alive. The normal load of live snappers was 5,000 to 6,000 pounds. Ice was first used by a daring captain in about 1868 to preserve his catch, and once the value of this method was established, the practice became common.

By the early years of the 20th century, the red snapper was established as an important source of income along the entire Texas coast. During the depression of the 1930's, fishermen on the Lower Texas Coast used rowboats to get to the inshore reef areas north of Port Mansfield. The work was hard, but the results helped the men and their families through some of the hard times.

Modern scientific techniques began to have their effects on the fishery in the early 1940's. Submarine sonar equipment was utilized for sounding out fishing grounds, and radio direction finders aided in course plotting. The new equipment helped conserve a lot of travel time which was applied to the fishing operation. Within the last few years, the advent of LORAN (Long Range Navigation) transmitters in the Gulf of Mexico has enabled vessels to find their locations and course headings quickly from any point, regardless of the weather conditions.

The meal was quickly prepared and dished out, but the men had long since lost their appetite for fish, no matter how it might be served. Consequently, there were plenty of scraps remaining. The cook gathered all the leftovers into one pot, carried them to the side and dumped them. He was just turning to find himself a resting spot when a movement in the water caught his eye.

Peering more intently into the clear, Gulf waters, the cook saw a beautiful bright red fish attacking the scraps. As he watched, several more of the fish appeared and began devouring the food. "Hey Captain," the cook cried, "look at this." Soon all the men were pointing at the strange fish and talking excitedly. Captain Keeny suddenly realized the opportunity and called out, "Grab your lines!"

The captain and his crew were amazed at the way the fish bit the hooks, and before they were finished nearly 200 of the beauties had been

landed. These fish filled the live holding tanks to capacity. Luck remained with Captain Keeny; the wind soon came up and carried the vessel on to New Orleans. In the Fishermen's Market, the new fish sold quickly.

The incident described above occurred somewhere off the Florida and Louisiana coasts between 1840 and 1845. At that time, fishermen knew nothing about the red snapper grounds in the Gulf of Mexico. In fact, Captain Keeny didn't even realize he was in less than 600 feet of water. Because of this lack of information, red snapper catches remained sporadic for many years, until fairly reliable soundings with handlines led to the discovery of snapper banks along the entire Gulf coast.

Techniques used in the snapper fishery were at first primitive by modern standards, but they were usually very successful. The position and course of a vessel was plotted using a compass, sextant and dead reckoning plus the experience of the skippers. When the fishing grounds were neared, one of the crew began casting a line with baited hook and

More up-to-date methods have also had their effects on actual fishing operations. Fishermen in their search for a better way than the old hand-lines, eventually developed reels made from used bicycle frames and sprockets. Today, on many boats, these have given away to electric reels which bring in the catch at the push of a button. In most present fishing fleets a combination of all three methods is used.

As with most fishery resources, the red snapper has been the topic of much discussion over the years, especially in respect to its abundance. As far back as the late 1800's, people reported sharp declines in the number of snappers and stated fears for the industry. Throughout the 1900's, red snapper production has fluctuated.

The greatest annual production that has been reported from our coast was over 2,252,000 pounds in 1908. During the depression years which followed, the yearly catch fell to almost

a half million pounds, and the fishermen's price dropped to as low as five cents per pound. Since 1937, the Texas catch has fallen below a million pounds only once. That was in 1945, at the close of World War II. After World War II, the annual poundage of snappers gradually increased. Over two million pounds were taken each year during 1963-1965. Since then, the production has decreased and was barely over a million pounds in 1969.

There are many unanswered questions about the snapper population and the various catch fluctuations. Are we catching the same size snappers that we used to, or have the individual sizes changed within the population? Total poundage figures will not tell us this because many factors have been introduced into the situation to complicate matters. Different vessel types have evolved over the years, sophisticated equipment is being used by fishermen, increased numbers of shrimp boats are trawl-

ing in juvenile snapper nursery areas, popularity of party and sport fishing has grown on the banks and pollutants have been introduced into the snapper environment. These and other conditions have added to the problem of knowing how the Texas snapper fishery really stands.

Because of the importance of the present fishery to Texas, and because the future effects of the various pressures upon the fishery are in doubt, the Parks and Wildlife Department has undertaken a project using the research vessel *Western Gulf* to study the fishery and biology of red snappers along our coast. This project will be discussed in the next issue of *Texas Parks & Wildlife* magazine. **

Information for this article is from a study conducted in cooperation with the Department of Commerce, National Marine Fisheries Service, under Public Law 88-309, Project 2-109-R.

FREE CATALOG

HUNTING SUPPLIES
CALLS & CALLING TAPES

WRITE TO BURNHAM BROS.

Box 101, Dept. E-111-CT Marble Falls, Texas 78654

Black Tail (Mule) Deer Hunting
88,000 acres in the Davis Mountains
For Details Write or Call
Frank Probst
Rt. 1, Box 312
Odessa, Texas 79760
Phone
915-563-1999

Eastern Wild Turkeys Suited for East Texas

8 to 10 weeks old Poults
\$10.00 per Bird
Place order now for
fall delivery

The Woodlands
Box 228
Magnolia, Texas 77355

Area Code 713-356-8411 or
Area Code 713-597-4360

EXOTIC GAME HUNT

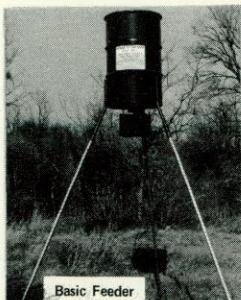
Mouflon Ram
Fallow Buck
Axis Buck
Red Deer
Black Buck Antelope
Guaranteed Rifle Hunts.

Excellent Bow and
Arrow Hunting by
the day.

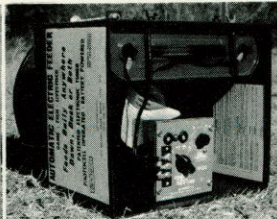
KELLER LAND & CATTLE COMPANY

P.O. Box 393
Fredericksburg,
Texas 78624

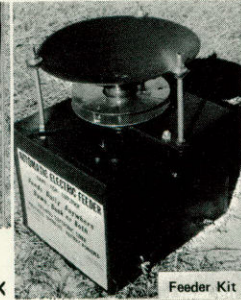
Telephone 512 - 997-2118



Basic Feeder



**AUTOMATIC ELECTRIC
FEEDERS for
GAME • FISH • LIVESTOCK**



Feeder Kit

Feeds daily anywhere at Dawn or Dusk or Both. Patented electronic timer, photocell operated, battery-powered. Feeds at optimum times regardless of the seasons for greatest effectiveness and feeding efficiency. Adjustable dispensing rate and time. 110 volt A-C powered models also available.

	Shipping Weight	Price
Basic Feeder — Model PTF (Includes battery)	85 lbs.	\$139.50
Feeder Kit — Model PTFK (includes battery, universal funnel for 5 gal. cans and larger, complete except for feed container)	20 lbs.	\$89.50
Pipe Leg Suspension — Model PLS (As shown)	38 lbs.	\$10.00
Tripod-Winch Suspension — Model TWS (Not shown)	140 lbs.	\$69.50

Send for free brochure of complete line.



SPENCO, Inc.

5913 Bullard Drive, Austin, Texas 78731 Phone 512/454-3355

SPECIALTY PRODUCTS
AND ENGINEERING

Now

The air is smoke, the sky is gray;
To save our land, I'd like to say
The street is filled with waste and dust;
The chain of Life it is a must;
Then for man's sake we can not toil
For the balance of nature is sure to spoil,
And while we sit then scream and shout
The symbols of our country are dying out,
And for to have our nature there
We can and must learn now to share.

*Ray Scholl, Jr.
Seventh Grade
Dallas*

The Plateau (Waltz)

In the springtime the green of the Spanish oak tree,
And the wild turkey's call are like music to me;
The sotol is green on the hillside so high,
And a red-tailed hawk screams as he wheels thru the sky.

A doe and her fawn on the old live oak flat,
And a cottontail runs from the stalk of a cat;
His gray furry hide blends so smooth with the brush,
And his muscles all tense for his swift lethal rush.

From the top of the trees comes a cardinal's song,
And the call of a jay on the air loud and strong;
The mockingbird sings where the bluebonnets grow,
And an old wild boar roots in the valley below.

So soft on the air comes the mourning dove's coo,
And feather white clouds drift along in the blue;
A thunderhead peaks o'er the rim of a hill,
While the cabin walls ring to a wren's liquid trill.

Then the evening star shines and gone is the sun,
And our supper is over, our chores are all done;
In the moonlight the call of an old whippoorwill,
And the hoot of an owl from the brush on the hill.

The cricket's song drifts on the cool evening breeze,
While the katydids call from the sheltering trees;
From the pasture the chime from the bells of the sheep,
Comes soft on the air as we drift into sleep.

Up in the hills on the Edward's Plateau,
That's where my heart takes me,
That's where I must go.

*Jack R. Chafin
Bandera*

LINES FROM OUR READERS

The Piney Woods

Let me live my life in the piney woods,
And behold its secret ways.
Where the trees reach up toward heaven,
To whisper out their praise.

Streams that ripple through these woods,
Give the varmints drink.
Fish that wait for the strangers' hook,
Swim beneath its brink.

Tiny hoofprints in the sand,
Say a deer's been there.
Foraging out its breakfast
Away from society's stare.

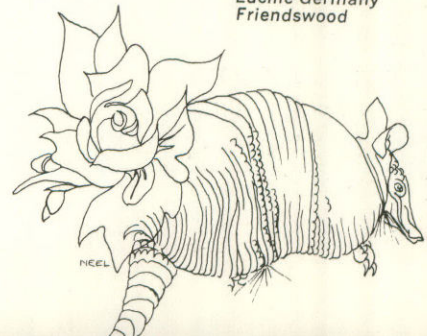
Shelter for the homeless,
Refuge for the wild.
Oh, the beautiful piney woods,
That give memories to the child.

*Dot Harston
Smithfield*

Sweet Nothings to the Little Armored Thing

Some armadillo roto-tillered my land
Upending a handful of dearly-priced day lilies,
All hybrids.
Snout-shoveled up my garden path
Cleaving a curly wake through asters,
Late-blooming and wholly poised.
Destroyed in one masterfully-rendered statement
A flock of callas, arrow-leaved, serene,
And for an afterthought
In case I might have doubted who he was
Threw down the slope with an amazing violence
Two dwarf azaleas, fat and in full health,
Ending their long dominance over
That fiefdom by the stream.
He must have laughed in passing
With the thought
That in a single night he could arrange to his own tastes
A studied landscaped scene
Long labored over by the earth's elite.

*Lucille Germany
Friendswood*





The Indian Mound

There's an Indian mound in our pasture
'Neath a giant, gnarled, oak tree,
The treasures I've found digging deep in the soil
Are worth a fortune to me.

But the thoughts that I think, and the pictures I see
As I dig with my pick and my hoe
Are treasures too and the stories they tell
Of the people who lived long ago.

I can picture brown children running fleet as the deer
As they splashed by the water front,
And see the great warrior fearless and brave
Returning home from the hunt.

And the dark-eyed maiden grinding corn for the bread,
And keeping the campfires aglow
Drawing water from a spring nearby
Her life wasn't easy I know.

What did they do when the winters were cold,
And where did they plant their grain?
How did they fare when the summers were hot,
And the Great Spirit sent them no rain?

Was a great battle fought on this very spot,
And who took part in the fray?
Did the point I just found make swiftly its mark
On that long past historic day?

Oh, if the trees and the rocks could just speak
The tales I'm sure they'd relate
The name of the tribe, whence they came, where they went;
The events that led to their fate.

I stop my digging and rest for awhile
I lay down my pick and just dream.
So happy they chose in the days long ago
To live a while by my stream.

Fay McElroy
Fredericksburg

Big Bend

An array of nothingness first.
Spans of sandy dryness, eerie quietness.
Hot. Very hot. Hard and harsh—empty waste, empty.
The most sudden thing commences: cool in the midst of vast desert the
ghosts loom, dark and unimaginably huge, beckoning, warning.

Enter. Enter soft with fear.
They rise on all sides dashed in bloody sun-cragged, cracked, and
completely unexpected, unbelievable but very godly.
The lush verdure cushions the valley floor and all is peace in the basin.

West becomes exotica among lofty hidden forests whose pines and oaks and
firs reveal nothing but their succulent beauty.

I am alone here
I am happy here.
A thousand lives in this place.
For springs run quick and cold,
And life is fresh and wild.
My God is close to this, and thus am I.

Mystery-shrouded—out of time,
This place will bless me.

Tony Chiodo
Houston

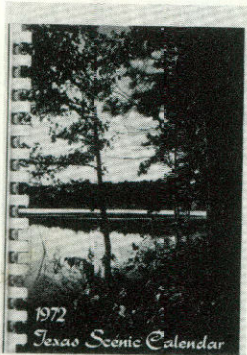
Pollution

The Lord made the air fresh and pure,
And made the water fresh and clean;
But we made the air dirty,
And made the water polluted, it would seem.
Wildlife is beginning to die away,
And we will too, I suppose;
Plants and trees soon disappear,
And everything else, who knows?

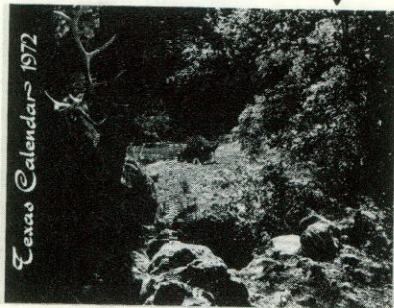
Kennie Garlington, Jr.
Third Grade
Port Neches

Though certainly not all the verse we have received from our readers, these are representative of the types of poems which arrive in our office. In editing these poems we have noticed that they fall into two categories. Poems written by adults are reminiscent of places they have been and enjoyed. Poems written by young people are about pollution and disfigurement of the land, things with which they are growing up and see every day. Our question is this: Will the young people of Texas be denied the beauty their parents enjoyed and remembered in verse?

1972 TEXAS CALENDARS



1972 TEXAS SCENIC CALENDAR 6" X 8"



1972 TEXAS CALENDAR 10 5/8" X 8"

1972 TEXAS SCENIC CALENDAR

- Weekly appointment-style Calendar Book.
- 54 pages color & black & white scenics of Texas
- Daily space for notes and appointments.

1972 TEXAS CALENDAR

- Monthly Calendar—with full color Texas Scenics
- Daily note space
- Plastic bound.

Please send _____ quantity
1972 TEXAS SCENIC CALENDARS ONLY \$3.35 @ (includes postage & applicable sales tax)

Please send _____ quantity
1972 TEXAS CALENDARS ONLY \$2.80 @ (includes postage & applicable sales tax)

Enclosed is \$ _____ Check _____
Money order in full payment
Gift list enclosed

NAME _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____

TEXAS CALENDAR INC.
P.O. Box 9812, Austin, Texas 78757

ATTENTION TROT-LINE FISHERMEN

A simple and inexpensive way to identify trotlines. Just write on these durable metal tags with a pencil. Writing becomes permanently embossed. Dealers' inquiries invited.

SEND \$1.50 FOR 12 TAGS TO TROT-LINE I.D. TAGS
BOX 3006, WICHITA FALLS, TEXAS 76309

WANT TO HUNT?

Dove, Deer, Quail, Turkey, Exotic Game, Varmints, etc. We have paid listings from all over Texas, both season and day hunting. Tell us what, where and when you want to hunt, and we will send information on who to contact. Enclose \$1.00 for postage and handling to:

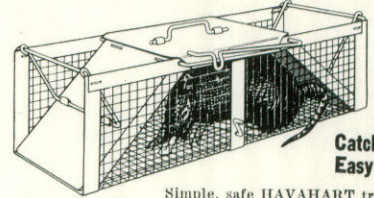
TEXAS HUNTING LEASE ASSOC., INC.
640 E. Front Street
Arlington, Texas 76010
Phone 265-1161

ELECTRONIC FEEDER KIT

Build a game, fish, or livestock feeder. Electronic control operates once or twice a day with adjustable feed rate. Kit includes control, motor, and complete assembly instructions for only—\$39.50 postpaid.

JACKSON MANUFACTURING
P.O. Box 1216, La Porte, Texas 77571

CATCH ANIMAL RAIDERS!



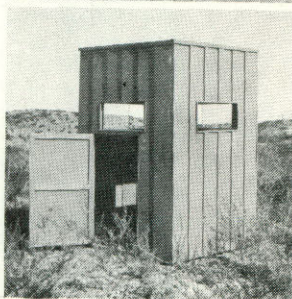
Catch more!
Easy to use!

Simple, safe HAVAHART traps catch raiding armadillos, rabbits, coons, squirrels, pigeons, sparrows, etc., without injury. Straying pets, poultry released unhurt. No jaws or springs to break. Galvanized: many in use 20 years. Open ends give animal confidence. Sizes for all needs. Write for valuable illustrated guide and price list.

HAVAHART, 149 Water St., Ossining, N. Y. 10562
Please send new guide and price list.

Name _____
Address _____ Zip _____

Portable Hunter's Stand



NEW "PORTABLE BLIND"

Light weight total 70 lbs. Can be assembled in 5 minutes.

Dimensions — 4' x 4' x 6'3"

\$97.50 F.O.B. San Angelo, Texas

PORTABLE HUNTER'S STAND for the discriminating sportsman who wants greater hunting success as well as comfort, pleasure and safety. Sixteen years of proven success.

Tubular steel construction with full 360° bannister gun rest for perfect shots. Full view of game offers selection before killing. No odor when above. Excellent for hanging game while cleaning. Stand is light and sturdy. Can be assembled or taken down in three minutes for portability from one location to another.

NEW!

Portable
Hunter's
Stand

for

1971

All New Seat
More Leg Room

Other uses: varmint calling, photography, wildlife observation, viewing and judging sporting events.

10 Ft. Model with Fiberglass Swivel Seat as shown \$79.50, 12 Ft. \$85.00, 15 Ft. \$95.00. Other models and seats available. Canvas Windbreaker for weather protection, \$13.95.

All prices f.o.b. plus 5% sales tax.

For brochures of other models and prices, write or call:

HUNTER'S
EQUIPMENT MFG. CO.

P. O. Box 5254

PHONE: 653-5262 or 949-6459
SAN ANGELO, TEXAS 76901

CALL QUAIL
for the best shooting you ever had



MONEY-BACK GUARANTEE

Exciting way to bag Bob White Quail. Call and locate coveys and singles with this easy-to-use call. Guaranteed to work in any part of the country or your money back. Free instructions and catalog included. SEND NOW.

SPECIAL OFFER FOX CALL KIT: Long and close range call, instruction record (78 or 45 rpm). A \$7 value, ONLY \$5.

NEW BOOKLET "Thrills of Game Calling": Rare and exciting photos. Send 35c.

BURNHAM BROTHERS
Box 101, Dept. E-111-Q, Marble Falls, Texas 78654



The FEED-ALL
Game-proof, 5-gallon feeder dispenses dry grain and pellets. Self operated by breeze; only one moving part. Simple control cone adjusts opening to dispense and provide positive control of flow of various types of feed. Rust-resistant steel construction. \$6.95 prepaid plus 4 1/4% tax. PAT. #2,972,334

See your dealer or order direct from:
P. O. Box 5087
BRADEN WIRE & METAL PRODUCTS, INC.
San Antonio, Texas 78201

GENUINE RIO GRANDE WILD TURKEYS

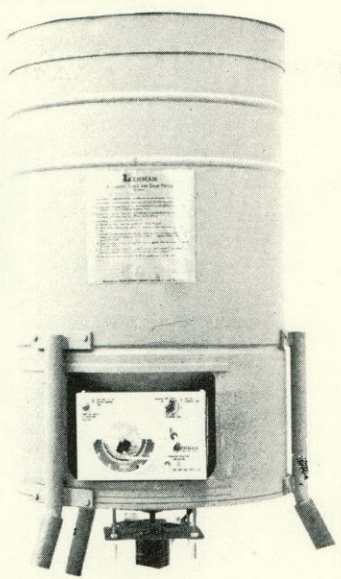
- *Enlarged and improved facilities enable us to reduce operating costs and pass special savings on to you.
- *Vigorous, healthy birds—"Hatched to Live"
- *Prices quoted, delivered in Texas
- *Hatching eggs & Day-old poults (Available Feb. 1-June 1)
Select Eggs \$11.95 dozen
Day-old Poults \$2.50 each
- *Started Poults: 3 weeks, \$3.50
6 weeks, \$4.50; 8 weeks, \$5.50
12 weeks, \$6.95; 16 weeks, \$8.95
- *Years of experience qualify us to assist our customers with stocking and range management problems.
- *We're as close as your telephone.

TEXAS GAME BIRD RETREAT
ROUTE 2, FREDERICKSBURG, TEX.
CALL 512-997-4586
or 512-257-7072

NEW LEHMAN AUTOMATIC FEEDER
FISHERMEN — HUNTERS BIRDWATCHERS

1. New 24-hour 4-jewel movement.
2. Feed one or more times day or night any selected time regularly unattended.
3. Distributes 6 oz. or several pounds of feed 25 to 75 ft.—depending on installation height. Install suspended—or on pipe legs.
4. Operates on 6 volt dry cell — 2 to 6 mos.
5. Capacity 250 and 1,000 lb. sizes.

WRITE FOR FREE BROCHURE
LEHMAN EQUIPMENT CO.
Route 3, Box 53, Corpus Christi, Texas 78415




EXOTIC GAME FOR STOCKING and All Year Trophy Hunting

Exotic breeds from Asia, Africa and Japan available for Fall and Winter 1971 delivery in the Southwest. Guaranteed top quality game, all breeds well adapted to Texas short grass ranges. Hunting: 10 guaranteed trophies during 1971 for individuals or company entertaining.

- AXIS DEER FALLOW DEER EUROPEAN RED STAG BLACKBUCK ANTELOPE
MOUFLON SHEEP JAPANESE SIKA DEER AOU DAD SHEEP SAMBAR

THESE EXOTIC BREEDS ALSO AVAILABLE ON SPECIAL ORDER
SITATUNGA • ELAND • 4 HORNED SHEEP • ELK
CORSICAN RAMS • BARASINGHA

THE WORLD FAMOUS PATIO GAME RANCH

P. O. BOX 21100 • SAN ANTONIO, TEXAS 78221 • 512 WA 3-3411

First Aid

by W. R. Long
Information Officer, San Angelo

Accidents and illnesses are often aggravated by improper treatment. The ability to render first aid should be foremost with all Texas outdoorsmen. Although many injuries are beyond the ability of anyone except a medically trained person, knowledge of first aid may at least prevent you, or someone who cares for you, from doing something only a doctor should do.

Before leaving for a trip, there are a few precautions you should take. First consult a physician. Some items you may need are available only by prescription, and most doctors are quite willing to help prepare an adequate first aid kit. Tell him the nature of the country where you are going, injuries which might occur and the physical condition of those going; listen well to his advice.

A standard, complete first aid kit has bandages, including elastic bandages, sharp scissors, tape and gauze compresses. Also useful are a hemostat, a scalpel and a thermometer. If your physician advises, include a non-narcotic pain reliever, an antiemetic and an antihistamine. Invest a few dollars in a complete snakebite kit. Be sure to take a first aid book and some remedies for the discomforts of colds, rashes and skin blisters. Be familiar with all the tools and medications in your kit before you leave; a person can lose a great deal of blood while you learn how to operate a hemostat.

Once in the field, you may experience any of several types of misfortunes, and you will have to render aid knowledgeably and quickly.

CUTS AND LACERATIONS: Steady but firm pressure with gauze or clean handkerchief directly over the wound will usually halt blood flow in four or five minutes. If blood is still evident after this length of

time, continue pressure without easing up.

A hemostat is handy for stopping blood if the flow is too heavy to be stopped with direct pressure. Hemostats are little more than inexpensive long-nosed medical pliers with self-locking devices. They are used to compress a severed blood vessel. Hemostats are available at most medical supply houses. The "mosquito" is the smallest size. Spread the cut with fingers and clamp the blood vessel with the hemostat. The bleeding will stop. Hemostats are also handy for removing splinters and for removing thorns.

If the wound is dirty, wash it with clean water and a liberal application of sterile soap. Do not use iodine or alcohol; such chemicals are for skin sterilization and have no place in open wounds because they devitalize tissue and retard healing. Remove particles of dirt with the hemostat. Apply an absorbent tissue available from any drugstore to prevent the bandage from sticking to the wound and cover the tissue with a gauze compress. Wrap or tape the bandage in place.

A tourniquet is to be used to control severe bleeding only in cases of loss of limb when there is no alternative to saving a man's life. Use strong material such as a twisted handkerchief immediately above the wound, and twist with a stick until the blood stops. Strap the stick down and do not remove it. Get the patient to a doctor immediately.

NOSEBLEED: Forget old home remedies. When nosebleed occurs, have the victim sit upright, breathing through the mouth, and squeeze his nose tightly with fingers just below the bone. Hold for five minutes. Cold compresses on the back of the neck may help. "Wet" cold com-

presses can be made from gauze pads soaked in cold water then wrung dry. This will stop 98 percent of nosebleeds. If bleeding does not stop, pack gauze into the nostrils and pinch.

SHOCK: The symptoms of shock are cold, clammy skin, shallow breathing, nausea, weak pulse and possibly unconsciousness. Shock usually follows severe injury. Keep the victim lying down with the legs elevated 12 to 18 inches above the head. Conserve the victim's body heat, but do not make him sweat. If he is conscious, administer a solution of one teaspoon of salt and one-half teaspoon of baking soda in a quart of water. Known as shock solution, this often prevents or delays the appearance of shock.

GUNSHOT INJURY: Stop the bleeding, treat for shock and get the victim to a doctor. All chest and abdomen wounds should be considered serious. In the case of a chest wound, air is sucked into the wound with each breath. Cover the wound with several layers of gauze and seal with adhesive. Do not apply any ointment; it will be sucked into the lungs.

Wounds to feet, legs and arms should be carefully checked for bone damage. Wash such wounds with sterilized water after you have used direct pressure or hemostat to check bleeding. Gunshot wounds usually contain gunpowder residues and lead particles, and should remain open. An antibiotic recommended by your doctor should be given, but do not probe for the bullet. In all cases, prompt professional help should be sought for X-rays and necessary shots. If bone damage is suspected in the field, apply a splint made from short pieces of wood and binding material.

FRACTURES AND SPRAINS:

Make the patient comfortable, administer medication to alleviate pain and check for signs of shock. Ankles and wrists account for most sprains and they can be treated with an elastic bandage. Immobilize the affected part, or the patient if necessary, and make your way to a hospital. Use a sling for an arm injury, carefully splint a finger sprain, but do not ever attempt to set an obvious fracture. Setting a broken bone may cause tissue damage. Cold compresses are usually the best to use during the first hours of injury.

Wrist or finger dislocations, if you are sure there is no fracture, may be eased by pulling upward, outward and then downward. This will be painful, but the part will go back. If the first attempt does not remedy the dislocation, do not continue; move the victim to a hospital.

HEART ATTACK: Unaccustomed exertion or change of altitude may cause heart attacks. During an attack there is severe pain which may extend up into the left neck area or down the left arm. The victim's skin is pale and sweaty, and his pulse is rapid. Keep him comfortable and evacuate at once. If a member of your party has a history of heart ailment, insist that an oxygen bottle and prescribed drugs be a part of his camp gear. It's better to leave him home than to allow him into a remote area without at least this much protection.

POISON PLANTS: Poison oak and poison ivy cause small red bumps and clear blisters, which may easily rupture if rubbed or scratched. Wash affected and adjacent areas with soap and water. An antihistamine administered every four hours usually controls itching. Apply calamine lotion. If the condition worsens, cut short the trip and seek medical help.

VOMITING: Do not eat or drink anything, moisten mouth with cool water or ice. After spasm is over, take one five-milligram antiemetic tablet every four hours. Take light liquid nourishment for a day or so until symptoms are gone or until symptoms indicate a more serious ailment and the need for a physician.

Acute abdominal pain could be appendicitis. If appendicitis is suspected, look for abdominal tenderness. Place a hand over the area of tenderness, press deeply and then quickly release the hand and allow

the abdominal wall to rebound. A minor pain may be present, but if a severe pain is present, there is also a danger of peritonitis. To be sure, place a hand over a nontender area, press and snap away. If pain shoots into the area, surgery is required; lose no time getting medical help.

HEAT EXHAUSTION: Weakness, dizziness and fainting are indications. The victim may be pale, weak and clammy to touch. Let the victim rest in a cool place and give him a salt solution of one teaspoon of salt to one quart of water. Heat exhaustion is not serious if recognized and treated in time.

HEAT STROKE: This is extremely serious and could be fatal. The body temperature may be 110 degrees or more, and quick aid is vital. Lower the body temperature with cool baths, cool towels or cold water rub-downs. Do not use ice because it may force blood into the body and away from skin. The patient should be removed to a physician at once.

BURNS: There are three categories of burns—first degree, which is simple sunburn, second degree with blisters and third degree with charred skin and damaged tissue. For small first or second degree burns, apply cold water or ice. For third degree burns, remove clothing in affected area but do not tear away any cloth which may have stuck to the burn. Do not place any ointments on the burn. Cover the burn with a loose sterile dressing. Treat for shock.

POISONOUS SNAKEBITES: Poisonous snakebites are characterized by at least one and usually two fang marks—two larger marks outside the rows of teeth marks. In all cases except coral snake bites, there is immediate pain followed by swelling and discoloration near the fang marks. As the venom enters the system, nausea, excessive salivation and often muscular paralysis occur.

Tourniquet, incision and suction are the usual first aid measures to be administered by laymen. A ligature, applied early and lightly, will temporarily retard the spread of venom. A tight tourniquet left on a limb for as long as an hour will kill tissues deprived of blood. Periodic brief loosening of the band will release poison into the blood stream.

Incision and suction, properly performed, within the first 30 minutes, may be of some benefit. The majority of venom is withdrawn in the

first 15 minutes of suction, and suction beyond the first 30 minutes removes little or no poison.

Properly made incisions are shallow cuts over the bitten area. Most people make these cuts too deep and only make the situation worse.

There is considerable controversy on the merits of treating snakebites with ice, cold water and ethyl chloride spray. Prolonged chilling of a normal human hand for 12 to 24 hours could cause frostbite and necessitate amputation of fingers or the entire hand. In our opinion, cold treatment should not be used in treating snakebites.

Domestic animals instinctively cease all movement after snakebite. In humans, the simple clenching of the fist after snakebite on the forearm is enough movement to intensify the damage.

The patient must avoid exertion as much as possible. All first aid must be carried out on the way to the doctor.

BLACK WIDOW SPIDER BITES: While rarely fatal, these bites are dangerous. Only the female spider is poisonous, and she can be recognized by her glossy black color and red hourglass marking on the abdomen. Give the victim a pain killer if necessary. Nausea and muscular cramps may occur. Cold compresses on the bitten area may help reduce swelling and delay absorption of venom.

BROWN SPIDER BITE: A bite may form a painful ulcer, but death is rare. An antibiotic ointment on the bite will prevent infection, but pain will persist for some time as dead skin sloughs off. Medical attention is always desirable.

INSECT BITES AND STINGS: Remove the stinger with tweezers. Apply a paste made of baking soda. Cold cloths will help to relieve the pain. Itching may be relieved with calamine lotion. These measures will suffice for ordinary reactions to insect stings, but remember that more people die of such bites and stings than die of snake bites. If a victim has a history of severe reaction to insect bite, do the following:

Use a constricting band above the sting. Loosen the band for a few seconds every 15 minutes.

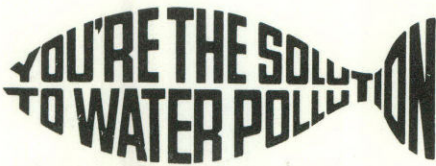
Apply an ice pack or cold cloths. Rush to the doctor.

MOUTH - TO - MOUTH RESUSCITATION: Place the victim on his

back, put one hand under his neck and lift. With the other hand on the top of his head, tilt head back. Clear the airway. Take a deep breath and place your mouth over the victim's, making a seal. Pinch his nostrils to close them. Blow into the victim's mouth until you see his chest rise. Remove your mouth and let the victim exhale. Repeat the process until the victim can breath by himself. For an infant or small child, use the same procedure but with your mouth over both the child's mouth and nose.

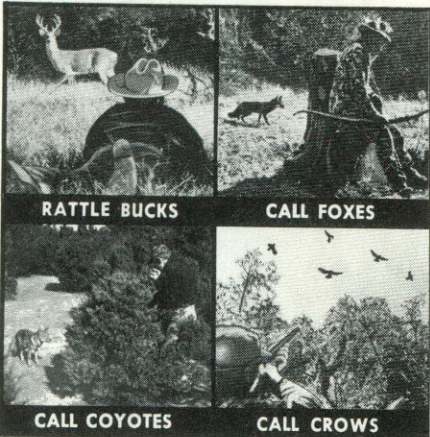
An outdoorsman's knowledge of first aid is just as important as knowledge of his rifle and its proper use. In many instances we have pointed out that improper or excessive treatment can compound the original injury.

First aid is just that — assistance which is temporary and enables the



HUNTERS WON'T BELIEVE ME . . .

'til they try my new game calling sounds and instructions!



Call all birds and animals with the best calling sounds in the world. Make the right sounds and deer almost run over you . . . foxes, bobcats, coyotes, wolves, coons come close, day or night, year 'round! Crows, owls, hawks and other birds will fly within a few feet.

SEND NO MONEY!

I'll send FREE information with photos of wildlife called close. Send me your name, address and zip code today. A card or letter will do.

Johnny Stewart

Box 7594, Dept. TPW 111, Waco, Texas 76710

victim to reach a doctor. Modern medical supplies can work wonders, but they are only as effective as the man who uses them. * *

2 for 1 WAREHOUSE CLEARANCE SALE

©MCLXX Viking



TWO FOR \$1.98 \$3.96 VALUE 10 Year Guarantee

FOR TWO FOR THE PRICE OF ONE
Razor sharp lifetime steel blade opens easily and automatically locks in place. PUSH-BUTTON release. Tough, razor steel blade honed and polished to mirror-like finish. Balanced for target throwing. Blade GUARANTEED 10 YEARS. If blade breaks we replace free. 30-day MONEY BACK GUARANTEE. A favorite with sportsmen. Makes excellent gift for any man or boy. Two for \$1.98 plus 50¢ shipping. Send cash, ck. or M.O. to VIKING KNIVES, Dept. K-56, Box 10880, Houston, Texas 77018.

Bottle Collectors

WHAT ARE YOUR BOTTLES WORTH? Identify and price over 2,500 new and old collectible bottles. Beams, Avons, Fruit Jars, Medicines, Inks, Snuffs, many others. "BOTTLE COLLECTOR'S HANDBOOK AND PRICING GUIDE", by Yount is the most complete bottle book you can buy. All 18 categories. Illustrated new edition! Plus, free bonus directory: "Where To Buy and Sell Bottles". \$3.95 Postpaid. Infobooks, Box 5001 San Angelo, 15 Texas 76901

VARMINT CALLING TAPES



NOW! ORDER TODAY Post paid

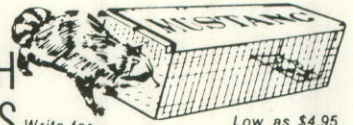
Exciting Action! 37 different authentic game calling tapes for portable recorders. Results Guaranteed. Young rabbit 3" reel \$2.95 - 5" \$3.95. Auxiliary speakers avail. Write for FREE CATALOG.

All electronic callers available

BURNHAM BROTHERS,

Box 101, Dept. E-111-R, Marble Falls, Texas 78654

LIVE-CATCH TRAPS



Write for FREE CATALOG

Low as \$4.95

Traps without injury squirrels, chipmunks, rabbits, mink, fox, raccoons, stray animals, pets, etc. Sizes for every need. Also traps for fish, sparrows, pigeons, turtles, quail, etc. Save on our low factory prices. Send no money. Write for free catalog and trapping secrets. MUSTANG MFG. CO., Dept. N-37, Box 10880, Houston, Tex. 77018

BIRD DOGS

Chandler Kennels, one of the largest in the business offers to you for your selection over 100 top trained POINTERS, SETTERS & BRITTANIES. These dogs are all registered out of top blood lines. We guarantee all our dogs as advertised to suit you, the Hunter. Also puppies & started dogs.

Call, write, or come by:

CHANDLER KENNELS

P. O. Box 1011, La Porte, Tex.

Call: Area Code 713-GR 1-4023

Hollen Chandler - Owner

LLANO COUNTY LEASES

Excellent hunting available for season, week, or weekend. Individual pastures with cabins and/or campsites for each group. Deer, Turkey, Dove, Quail, Hogs. Reservations accepted now at reasonable prices.

BEN A. WALLIS & SON

LLANO, TEXAS 78643

(915) 247-5207

NOW Set or Take up Trotline in 5 Minutes!

BOOKLET ON HOW TO 20 PAGES

Catch 'em!



"TROTLINE FISHING SECRETS" . . . written by experts.

How, when, where to set trotline, illustrated. Bait laws, tackle. Send 25¢ for mailing cost.

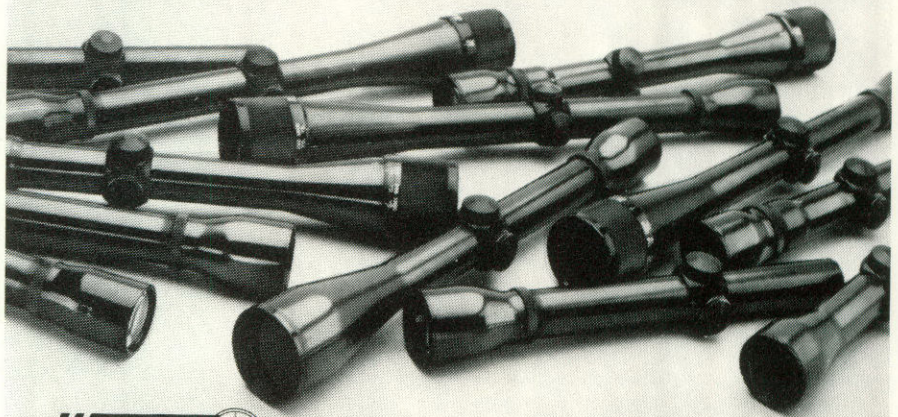
LAWRENZ MFG. CO., DEPT. T, P.O. BOX 3837, DALLAS, TEX 75208

They've taken more game than any other scope.

Can you think of a better reason to buy a Weaver-Scope?

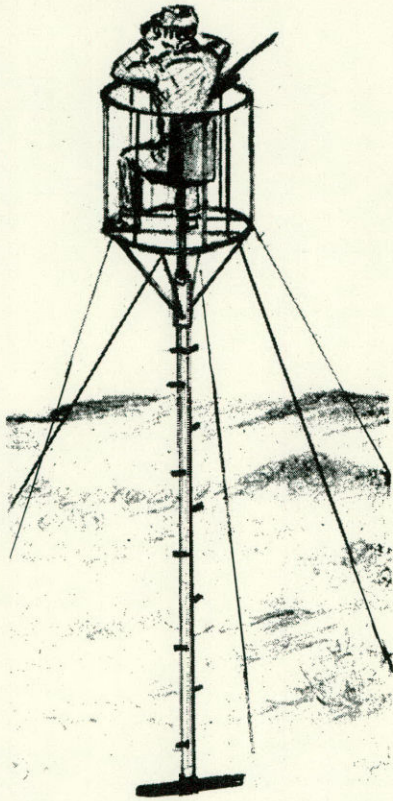
Most people can't. Because performance is what counts in a hunting scope. That's why thousands of shooters count on Weaver-Scopes. For good reason. Each delivers consistent accuracy. At long or short range. In good or bad

weather. And they keep on delivering the goods year after year. That's all there is to it. Except to say that there are eight fixed-power and four variable-power models. Prices start at \$29.95. That hasn't hurt their popularity either.



WEAVER-SCOPES

Write for free catalog: W. R. Weaver Co., Dept. 34, El Paso, Texas 79915.



- Circular seat assembly.
- Swivel seat and gun rest for full 360°.
- All steel painted construction.

EASY TO . . .
 TRANSPORT
 ERECT
 DISASSEMBLE

— MODELS —

- A-10 - 10 FT. TALL - 59.95
- A-15 - 15 FT. TALL - 67.95
- A-20 - 20 FT. TALL - 74.95

HINGE TYPE STAND

- B-25 - 25 FT. TALL - 101.95
- B-30 - 30 FT. TALL - 121.95
- B-35 - 35 FT. TALL - 138.95

SEGUIN FABRICATORS
 INCORPORATED

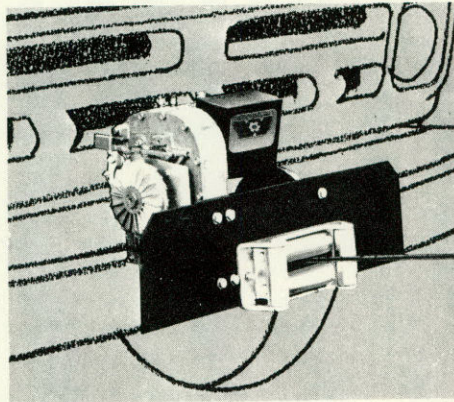
779 WEST COURT STREET
 SEGUIN, TEXAS 78155

AC 512 / 379-4129

DEALERSHIPS AVAILABLE

**WE
 WARN
 YOU!**

Equip your vehicle now with a WARN Winch. Anytime you have a pulling job, freeing a bogged down vehicle in the boondocks, snaking in a heavy load in a pickup, jeep, camper or truck, it's a breeze with a WARN Winch. When you go to the rough places, get back sure with a Warn Winch.



Now see the new Model 8200 do-it-all! Develops 8,000 pounds pull on a single line. Operates on 12 volt battery . . . power in or power out. Fits all 2 or 4 wheel vehicles and is transferable one to another.

A full line of Warn Hubs priced \$70 and up. Warn Winches begin at \$145.

For catalog on Warn Winches and Hubs, and full information, write or call

E. N. DEAN SUPPLY CO.

1515 ROGERS STREET

SAN ANTONIO, TEXAS 512-226-8231

Dealer inquiries invited.

HUNTERS

The ONLY Deer Stand For You!



Stands 12 Feet High
 Swivels 360°
 Weighs about 30 lbs.

EASY TO CARRY
 Sets up quick & quiet

**ALL STEEL
 CONSTRUCTION**

ONLY 59⁹⁵

Contact

C. E. BLACKWELL

942 Allen St. — 625-7816
 NEW BRAUNFELS, TEXAS

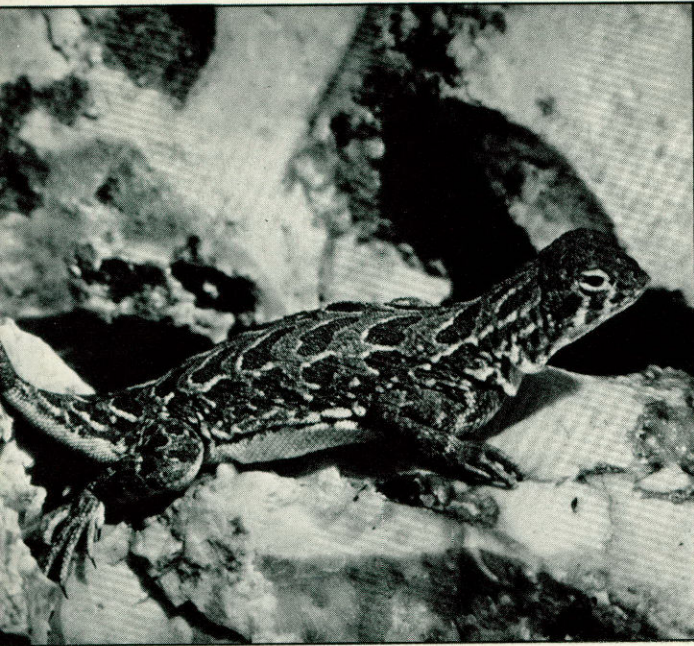
In Austin, Contact CHARLIE STARK, Phone 465- 5965

by David Baxter

LIZARDS

Collared lizards have no voice, but the eastern collared lizard is mistakenly known as the "mountain boomer." The reticulated collared lizard temporarily loses its netlike pattern when it gets chilled. Both species prefer sunny rocks during the daytime. The southern spot-tailed earless lizard is distinguished by two rows of dark blotches down each side of the back.





There are more than 3,000 species of lizards in the world, a shadow of those which dominated the earth in the Age of Reptiles. The lizards are the most numerous group of modern reptiles, but the descendants of the dinosaurs of long ago are diminutive and can hardly live up to their fearsome ancestors.

There is a great variation among modern lizards (saurians). Scattered over the world are noisy little inch-long geckos and the Komodo dragons of the Indonesian Islands which stretch out to a formidable 10 feet.

Most lizards favor the sun because of their metabolism. They are found in trees, on the ground and underground. They eat insects, plants, meat or all three; the species that eat meat include many cannibals. In Texas most lizards are insectivorous and very beneficial.

Physical characteristics of these reptiles vary. Some have short legs, some have only remnants of appendages while others are completely legless. Unlike their close relatives the snakes, lizards have an external ear and an eyelid which is either movable or fixed. Most lizards are able to grow a new tail to replace a lost one.

The lizards of Texas are the iguanids, geckos, whiptails, skinks and anguils.

Iguanids include anoles, collared, earless, spiny, fence and horned lizards. The anole or American chame-

leon can change colors but not as dramatically as the true Old World chameleon. The green anole is one of the most common lizards in the South and is the largest genus of reptiles in the Americas with more than 300 species and subspecies.

The adult anole is like a miniature dragon. It is covered with small scales, and a small crest adorns the head. It has a dewlap, a hanging fold of skin under the throat, which covers a scarlet patch of skin used by the male in times of courtship and combat.

An anole in combat is bright green, with dewlap and crest raised. The pugnacious males lock in combat until one of them loses its long tapering tail. The victor sometimes marches off with this bit of the vanquished in his jaws.

The anole lives in trees, but some iguanids, such as collared lizards, are primarily ground dwellers. The collared lizard is alert, and when pursued it can run along on its hind legs like a dinosaur. The lizard starts running on all four legs, and as it gains speed it rears up on its strong hind legs and uses its tail to maintain balance. From time to time it leaps like a kangaroo over obstacles and depressions in the way.

The collared lizard's favorite place is a sunny rock, which serves to warm his body and as a vantage point to watch for prey.

Also a ground-dweller, the Texas

earless lizard is at home in semi-desert areas and on the plains. As its common name implies, the earless lizard has no external ear opening. How well it can hear or even if it hears at all is still a question.

In the same family as the earless lizards but of a different genus are the spiny and fence lizards. Both lizards live in trees. The spiny lizard is inconspicuous against the bark of a mesquite or live oak and is quite a surprise to someone when the piece of "bark" scurries off.

Often called a pine lizard, the fence lizard is common over most of the state. These lizards have the habit of dodging from one side of a tree to the other while climbing higher to escape capture.

A joy to little boys and a bane to their mothers, Texas horned lizards, or "toads," live in dry, open terrain. They are most active in the hottest part of the day. When they eat insects such as ants, horned lizards move forward slowly toward their prey and then quickly unfurl a thick, sticky tongue which sticks to the prey in an action so quick it's hard to see.

Come nightfall, the unlovely lizards take advantage of their flattened, camouflaged bodies to bury themselves in the loose soil of their habitat. Using its spines, a horned lizard burrows beneath the soil, and only its head is exposed to survey the region for snakes and other predators. As the weather grows colder, the lizard remains half-buried for longer periods of time. By the time winter comes, it is deeply buried and passes the cold months in a state of suspended animation.

Geckos are well-established in the tropics, but only one species is found in Texas. The banded or Texas gecko is terrestrial and prefers rocky areas where it can take shelter during the day. Like other geckos, this little five-inch lizard has a voice. It emits little chirps as it scurries from cactus to cactus in its nocturnal search for insects.

Whiptails are a large family, confined to the New World and especially common in the Southern Hemisphere. There are eight species of whiptails in Texas. Two of the more widespread are the six-lined race runner and the spotted whiptail.

Six-lined race runners are very

Horned Lizard by Leroy Williamson



Western Slender Glass Lizard by John L. Tveten



Greater Earless Lizard by Reagan Bradsha



active and capable of outrunning would-be predators. In Georgia it is known as the "streak-field" and can achieve speeds of 18 miles an hour, the fastest of any North American reptile.

Males of both the race runners and spotted whiptails are gaudy and conspicuous. Male six-lined race runners have pale blue undersides, and the whiptails have orange or pink throats and black or purplish blue stomachs. Male race runners posture and flash these colors at other males as the anoles use the scarlet throat to warn off potential usurpers of their territory.

Almost as difficult to catch as the whiptails are the skinks, an abundant but little known family of liz-

ards. Skinks are not often seen because of their retiring, secretive nature. They live among the litter of woods, in decaying logs and under stones.

Skinks are one of the two largest families of saurians, but nevertheless, they have much less variety of body form than some of the less numerous lizards. They have conical heads, cylindrical bodies and long tapering tails. They are very smooth, shiny lizards compared to most of their more scaly relatives.

Skinks are burrowers and adapted for a subterranean life. The lower eyelid of the skink is a large, transparent window that protects the eye from soil. Most lizards have opaque, scaly eyelids.

The anguils, which include alligator lizards and glass lizards, are characterized by a deep, flexible

groove running the length of each side of the body. The groove expands when the reptile is full of food or eggs.

The alligator lizard gets its name from the heavy, plated scales and an alligatorlike shape. A large reptile, the Texas alligator lizard sometimes exceeds 20 inches in length.

The alligator lizard has a joint where the tail easily separates from the body. There is evidence that the lizard voluntarily discards the tail if threatened by a predator. A whiplike action disengages the tail which wriggles and thrashes on the ground and often diverts the predator as the rest of the lizard escapes.

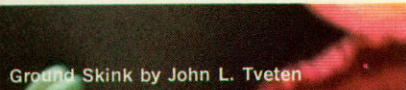
If you can catch more than just the tail, the alligator lizard makes an excellent and interesting terrarium animal. It will readily take insects, smaller lizards, spiders and small mice. Some species dislike being handled and are large enough to inflict a painful bite.

In the same family as the alligator lizard are the glass lizards. The slender glass lizard is a legless species which may grow over three feet long and is usually mistaken for a snake. Like other lizards it has movable eyelids and ear openings, which distinguish it from serpents.

The glass lizard is also known as the "joint snake." The long, fragile tail is easily detached, perhaps voluntarily like that of the alligator lizard, to distract its enemies with a writhing decoy. In time, the lost appendage is replaced by another.

Most of the glass lizard's time is spent underground in search of burrowing insects and earthworms. Aboveground it feeds on the eggs of small ground-nesting birds. The jaws are strong enough to crack an eggshell, and its flat, forked tongue laps out the egg's contents.

Lizards are energetic little reptiles. Not only have they kept pace with their mammal contemporaries, but in many cases, lizards actually prey on the smaller mammal species and birds. A far cry from the "thunder lizards" of 100 million years ago, today's lizards are versatile and can adapt to a greater variety of diets and habitats. **



Ground Skink by John L. Tveten



Popular names for lizards are often wrong. What most people call a "horned toad" is really a lizard, and the glass lizard can be mistaken for a snake. Both are lizards because they have movable eyelids and external ear openings. The green anole is erroneously called a "chameleon" but it can not change colors as fast as a true chameleon. Bold black stripes on the underside of the tail mark the greater earless lizard. Skinks have small limbs, and some burrowing species have none at all.

Green Anole by John L. Tveten

TEXAS
WHITETAIL
DEER



8 POINTS OR BETTER

"NO DEER—NO PAY"

GUIDES, RANCH TRANSPORTATION
FURN-SHED

MEALS, LODGING AVAILABLE
TROPHY FOREIGN GAME
AVAILABLE

**Y. O.
RANCH**

Box 220, Mountain Home, Texas 78058

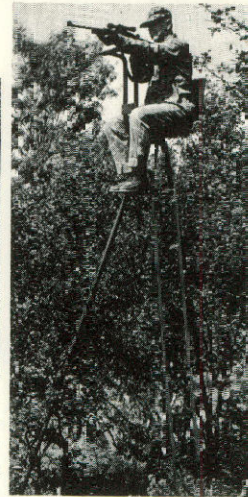
CALL NOW

TELEPHONE (512) 654-2076



TEXAS HUNTER®
For Safety and Comfort!

**FOR THE HUNTER
ON THE MOVE**



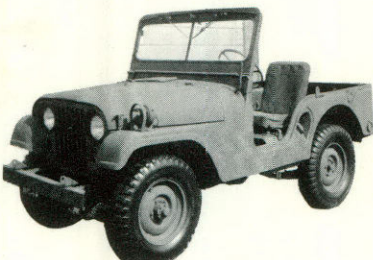
THE RIGID LIGHTWEIGHT TRIPOD STAND, allows the hunter to move from one location to another with ease. The stand is fabricated of aluminum with handle for easy carrying. The seat is fabricated of aluminum and wood with gun rest and silent 360 degree swivel. Stand is shipped assembled, the seat knocked down. **Complete on 10' stand 44 lbs. \$89.00.**

**SWIVEL
ARM CHAIR**



Full-turning, aluminum and wood chair is extra strong and roomy, with proper tilt for comfort. Designed for use in the enclosed blind. **\$16.00.**

JEEPS

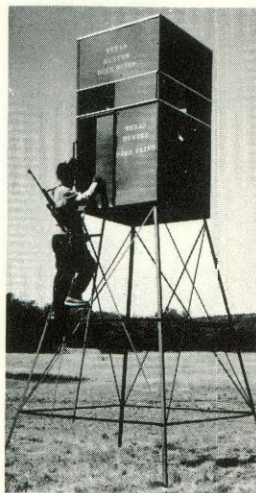
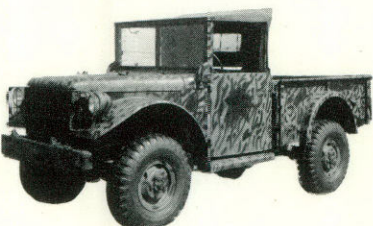


M38 and M38A1
\$950 to \$1150
DODGES
M37 4 x 4

Parts and Service
Experienced Personnel
24 Volts our specialty

GUY'S GENERAL SERVICE

2303 Capitol
San Antonio, Texas 78201
512 732-7268
Nites 512 344-8902



Warm, Dry ENCLOSED DEER BLINDS

feature rigid steel frame construction, galvanized metal roof, 1/4" tempered masonite sides and 3/4" plywood floor. Steel ladder to free-sliding door and safety hand-bar at left side allows easy entrance and exit. Improved shooting ports on all four sides provide complete visibility. Bypassing glass sections and panels are in divided channels of non-warp, extruded aluminum. Inside height of both blinds 6'3". Blinds may be used on ground or on Texas Hunter's portable, rugged all-steel towers. Shipped knocked down.

SINGLE BLIND 4' x 4'	SIAMESE BLIND 4' x 8'
Without Tower \$ 98.00	Without Tower \$179.00
on 10' Tower \$145.00	on 10' Tower \$250.00
on 15' Tower \$192.00	on 15' Tower \$345.00
on 20' Tower \$258.00	



**SWIVEL
"HIGH CHAIR"**

Weather-and-sun protected observation chair enables full view of hunting area. Silent, 360-degree turn-seat, aluminum framework. Side arm rests. Front safety bar provides gun rest. All-steel stand, wide base spread for extra safety. Shipped knocked down.

ON 10' STAND, \$89.00
ON 15' STAND, \$125.00

- Prices FOB San Antonio, plus 4 1/2% sales tax.. • Discount on quantity purchases.
- Special units designed and fabricated on request.



BRADEN WIRE & METAL PRODUCTS, INC.

P. O. BOX 5087 • SAN ANTONIO, TEXAS 78201



Texas State Rifle Association

Organized 1919 AFFILIATED WITH THE NATIONAL RIFLE ASSOCIATION

ATTENTION ALL SPORTSMEN . . .

Once again, the Texas State Rifle Association seeks your membership. The famous "Snortin' Bull," now 52 years "young," grows bigger and healthier each year as concerned sportsmen, landowners, and the general public realize the importance of a unified voice and purpose in public matters. Conservation, wildlife and its environment, ecology, law and order — all pressing issues of our time can be dealt with only through the unified voice and action of concerned citizens. Through your membership in the Texas State Rifle Association, you can stay informed and be represented in such matters.

From its modest beginnings in Austin in 1919, the TSRA remains unwavering in its objectives as outlined in the Constitution and Bylaws:

"... the objects of this Association shall be to educate the youth of this State in marksmanship; to encourage marksmanship throughout the State of Texas among all classes of citizens, both as a sport and for the purposes of qualifying as finished marksmen those individuals who may be called upon to serve in time of war; to encourage competition in marksmanship between individuals and teams in all parts of the State of Texas; to hold one annual competition for each branch on behalf of the Texas State Rifle Association and to declare champions in all divisions; to encourage legislation

for the furtherance of ideals and purposes of the National Rifle Association; to combat all unfavorable laws against such purposes and ideals; to encourage the building of suitable ranges; to secure the issuance of arms and ammunition to practice on such ranges; and to create a public sentiment for the encouragement of rifle practice both as a sport and as a necessary means of National Defense."

To these principles we shall all be absolutely devoted.

Each year, each member receives the "Snortin' Bull" decal with his membership, along with quarterly issues of the TSRA "Sportsman." Periodically and as required, the TSRA publishes special bulletins of interest to its members. For example, in March of 1971, the TSRA arranged for the mailing to sportsmen throughout the state of over 70,000 bulletins concerning legislation pending before the 62nd Texas Legislature. Additionally, the TSRA encourages hunter safety programs and seeks to pass along to younger hunters the skills and high ethical standards of sportsmanship essential to a true outdoorsman. We take pride in our high standards, and our assistance to the Texas Legislature is a matter of public record.

Dues are \$3.00 annually, and memberships run from January 1st through the following December 31st. We urge you to join your fellow Texans and be a member of this honorable organization. You'll be glad you did!

(Please allow 45 days to process your application.)

TSRA MEMBER'S PLEDGE

I certify that I am not now and never have been a member of any organization which has as any part of its program the attempt to overthrow the government of the United States by force or violence; that I have never been convicted of a crime of violence; and that if admitted to membership in the Texas State Rifle Association I will fulfill the obligations of good sportsmanship, and uphold the Constitution of the United States and the Second Amendment thereto.

NAME _____

ADDRESS _____

CITY, STATE _____

ZIP CODE _____

Make Checks Payable To

TEXAS STATE RIFLE ASSOCIATION

Mail Application and \$3.00
Membership Dues To

TEXAS STATE RIFLE ASSOCIATION

Mr. Lafe R. Pfeifer, Secretary
P. O. Box 4084
Richardson, Texas 75080

(Your ZIP code is an essential part of your address. Without it, your application cannot be processed.)

DEDICATED TO • THE RIGHT TO KEEP AND BEAR ARMS • PRESERVATION OF THE SHOOTING SPORTS AND THEIR LAWFUL PURSUIT
CONSERVATION OF NATURAL RESOURCES • WILDLIFE MANAGEMENT • MAINTENANCE OF LAW AND ORDER

by Neal Cook *Your Child's Heritage?*



Lacey Williamson



Bill Reaves

While hunting deer in Southwest Texas far from the nearest town, I saw a cave high on a bluff near the stand from which I was hunting. When I decided to stop hunting for the day, I had the urge to explore the cave and go where I figured no one had been since the Indians lived in the area.

As I climbed the steep rocks, I envisioned finding a cave littered with Indian arrowheads and with walls covered by Indian pictographs never seen by white man. When I finally reached the cave entrance and peered into the shadows I saw not arrowheads littering the floor but bottles, tin cans and paper. The walls were covered with pictographs of explorers who carried cans of spray paint and knives to carve their girlfriends' names.

Once again my illusions of exploring where no one had been in hundreds of years were shattered by the carelessness of my fellow man.

Many of you will be going into the fields and woods within the next few months hunting and camping. Very few of you will be able to stop and not see signs of other outdoorsmen — tin cans, bottles, papers, cigarette filters and other litter.

Others of you will be fishing in our inland lakes or rivers. You will not be able to see much of the litter, but it is there on the bottom of all of our waters — old 55-gallon drums, tires, cars and other junk as well as the ever-present paper, bottles and tin cans.

State, county and local governments spend millions of dollars each year cleaning up this trash, but as long as you as individuals continue to litter or not help by picking up trash we will have few places where you can walk without feeling man's presence.

When you travel don't throw cans, bottles and paper out of the car window. Pick up any litter which

you see and carry it home to be thrown out with the regular household garbage and placed in a landfill. Don't leave spent shotgun shells or rifle cartridges in the field. You carried it into the field; you carry it out.

If you live near the water don't make it your personal garbage can. Pay the extra costs to have your trash hauled away so your children and grandchildren will have a place where their imaginations can allow them solitude.

When you go into our woods, on our waters or along our beaches, carry a litter bag. Take the time to clean up your litter as well as other less thoughtful people's. Americans have more solid waste per capita than any other people in the world. This waste must be disposed of, but let's dispose of it together in one place and not spread it all over our beautiful outdoors. **

... so your children and grandchildren will have a place where their imaginations can allow them solitude



Bill Reaves



LETTERS TO THE EDITOR

Minors

I have a brochure of the Texas state parks listing the rules and facilities of the parks. I have a question about Rule No. 16 which says "Minors will not be permitted to register or stay overnight in a park unless chaperoned and accompanied by adults." My question is what is classified as an adult?

My friend and I (both males) were planning a trip to see as much of Texas as we could. Neither of us has a lot of money and we were planning to stay in some of the parks to save money on hotel rooms.

Please send me information about the age requirement for staying in a state park.

Marvin Mangum
Nederland, Texas

An adult, as defined by this department, is a male 21 years of age or a female 18 years of age. However, provisions of House Bill Number 83, passed by the 62nd Texas Legislature

allows any person 18 years of age or older to camp in Texas state parks without being accompanied by an adult. However, persons less than 18 years old must still be chaperoned and accompanied by an adult. Males 18, 19 or 20 years old may not act as a chaperone.

Sore-toed Coot

My fishing partner, Ronnie Sowers, and I were on Lake Brownwood when we noticed a coot trying very hard to take off. The coot would beat its wings against the water, but it could not get into flight. On investigation, we found a freshwater clam (mussel) holding on tight to the coot's toe. Using a dip net we caught the coot.

We had to break the clam shell to free the coot. The coot suffered only a broken toe and was released. The clam was put to good use as trotline bait.

Wayne Runkles
Midland

Snout Butterflies

During this past summer I saw many large groups of small butterflies in the Austin area. I do not remember ever having seen this many butterflies before, and I was wondering if you could tell me what kind of butterflies these were and why there were so many this year.

Kathleen Klaerner
Austin

Snout butterflies, so-called because of their long noses, moved north of their Rio Grande Valley homes over much of Texas during the late summer. Hordes of butterflies fled the Valley in the face of a population explosion in their species.

When populations of snout butterflies, "Libythea bachmani," build up every 10 years or so, the insects move out. The butterflies move northeast and stay east of the Rockies. Many will reach Canada.

Lovers of warm places, the snout butterflies congregate on blacktop streets and parking lots which radiate the summer heat. The larvae feed on hackberry leaves.

Migration of snout butterflies is not to be confused with the annual migration of the monarch butterfly. The monarch is our only butterfly which migrates both north and south regularly. The movements of the monarch do not seem to be governed by overpopulation.

In the northward movements of both the monarch and snout butterflies it is the offspring which reach the northern United States and Canada. Eggs are laid by the adults while migrating, the caterpillars quickly pass through metamorphosis and the second generation heads north. The next generation probably does the same thing.

TEXAS PARKS & WILDLIFE

Send check or money order to:

TEXAS PARKS & WILDLIFE DEPT.
John H. Reagan Bldg., Austin, Texas 78701

Check one

RENEWAL

Paste your last magazine address label into space indicated and mail with payment.

CHANGE OF ADDRESS

Paste recent magazine label into space indicated, show change on form and mail.

NEW SUBSCRIPTION

Fill out form at right and mail with payment.

GIFT SUBSCRIPTION

Show recipient's name and address in form, indicate gift signature and mail with payment.

CHECK ONE

Out of U.S. (except APO and FPO)

1 yr. \$3.15 incl. tax 2 yrs. \$5.25 incl. tax

1 yr. \$4. 2 yrs. \$7.

Attach recent magazine address label here for renewal or change of address.

Name _____

Address _____

City _____

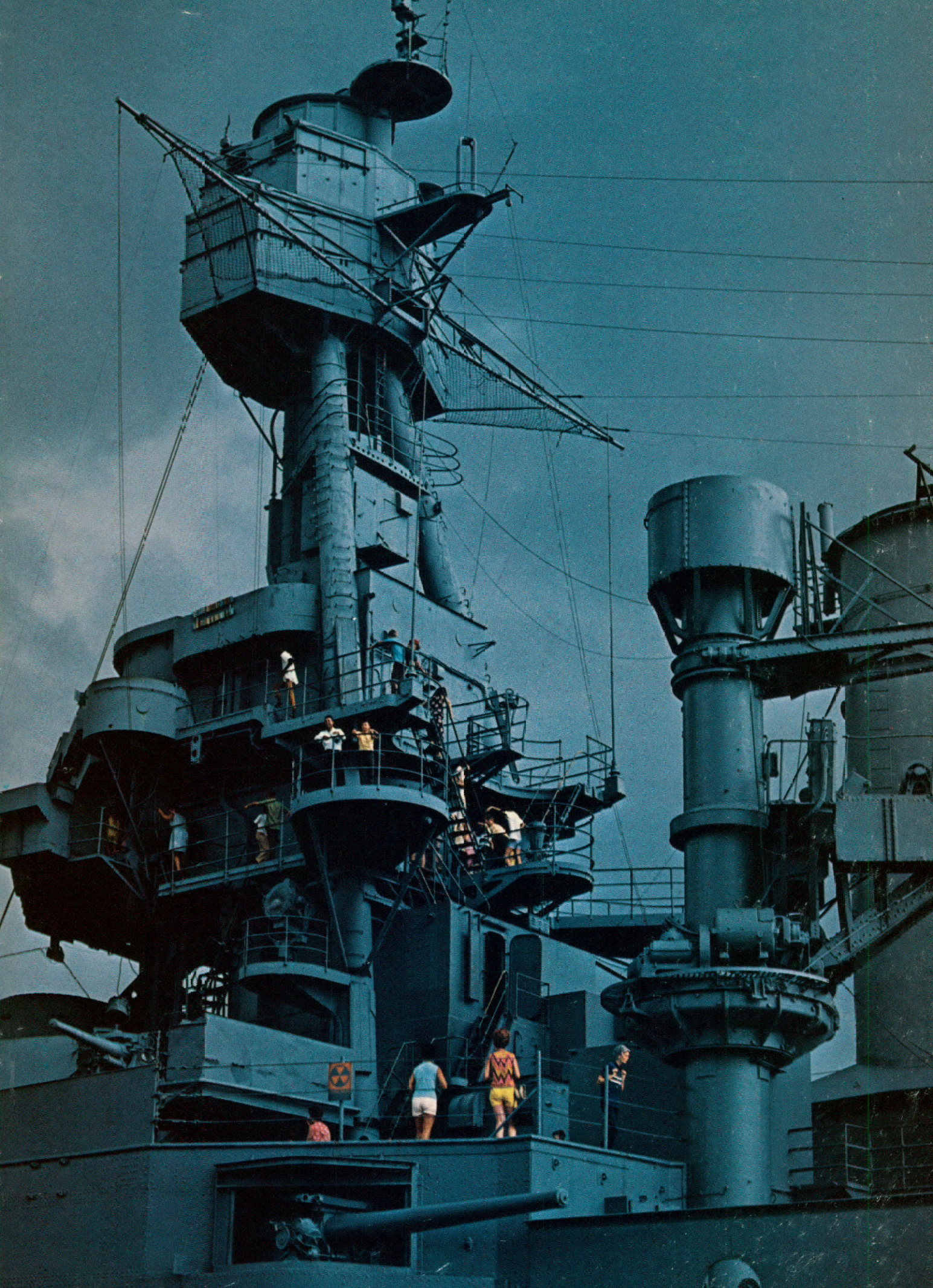
State _____

Zip Code _____

Sign Gift Card

Inside: The battleship Texas is moored in the San Jacinto Battleground State Park near the Battleship Texas museum. Photo by Reagan Bradshaw.

Outside: The round pads on the tree frog's toes are made up of many wedge-shaped cells which penetrate irregularities on a plant's surface and help the frog climb. Photo by Leroy Williamson.



Ms. T. 1940

