

# TEXAS

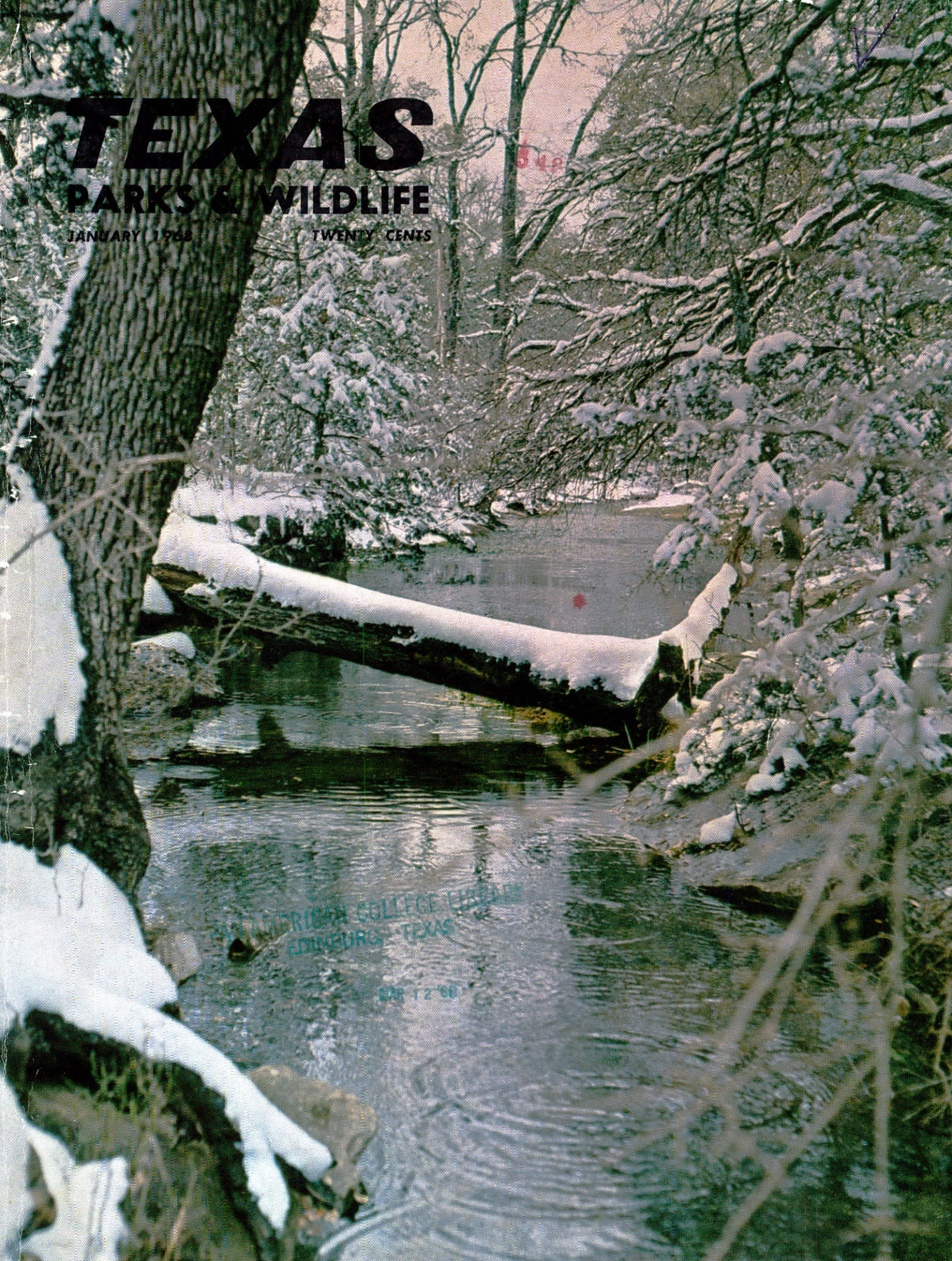
## PARKS & WILDLIFE

JANUARY 1968

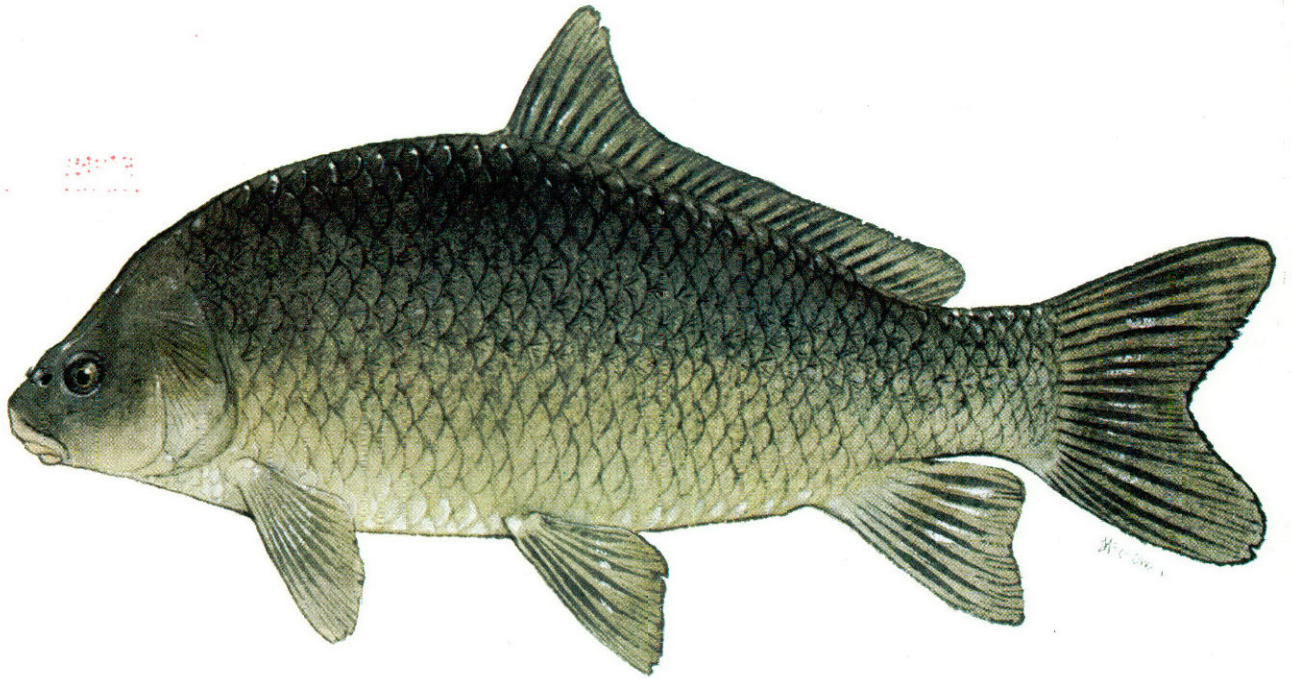
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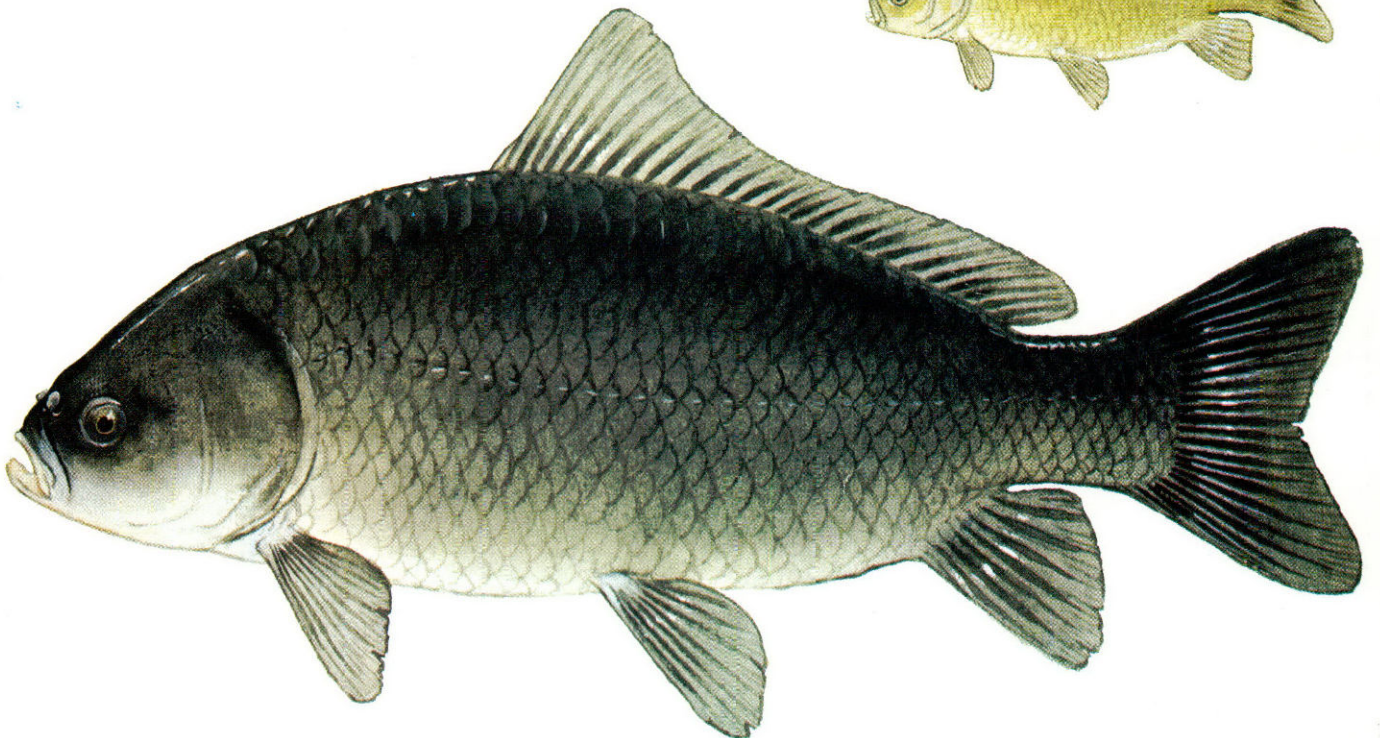
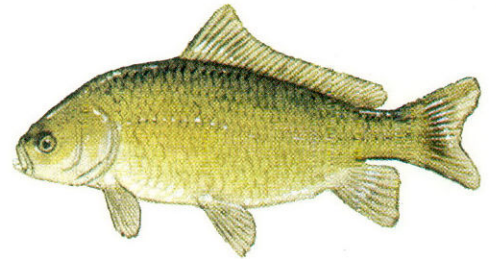
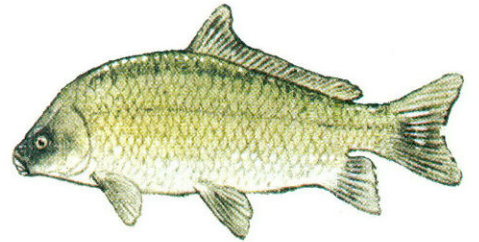






### The Fishes of Texas

Young and small adults, above, of the small-mouthed or razorback buffalo, *Ictiobus bubalus*, are slaty. Older fish, and those from turbid water, above right, are pale colored. The subterminal, or "vacuum cleaner" type mouth easily distinguishes the smallmouth from the largemouth buffalo. Distribution is statewide. The slaty-blue largemouth buffalo, or blue rooster, *Ictiobus cyprinellus*, below, is found in clear water. Those from muddy water, lower right, are pale and yellowish. Largemouth buffalo are found in Northeast Texas.





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# TEXAS PARKS & WILDLIFE

January, 1968

548

Vol. XXVI, No. 1

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

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Cover: Snow is not a common visitor to many parts of the state, but a heavy fall in North Texas is very picturesque. Photo by Leroy Williamson.









# Brush Country Blues

by John Houser

**E**LUSIVE as a harried jackrabbit, blue quail would rather run than fight. These challenging sports that inhabit the brush and prickly pear of South Texas can be called a wing shooter's headache.

Bill Matthews, park superintendent of Falcon State Park; two other hunters; and I thought we would try our hand at shooting these fast running scaled quail.

We drove to a ranch in Zapata County to pick up our specialized hunting equipment. I thought we were going to get some dogs, but instead we loaded into a jeep that Bill had borrowed. He said that the dogs wouldn't last half an hour before a rattlesnake would get them.

We jumped into the jeep and took off for parts unknown. The sun was just beginning to come up as we high-tailed it down the dusty dirt road. I gripped the sides of the jeep tight and tried to

keep myself from jumping up and down too hard, but it was a losing battle. At the top of a ridge, Bill made a sharp right turn and we galloped off the road and into the brush. Now we were racing across the countryside, bounding over and into prickly pear, running over mesquite trees, and trying to stay out of the large potholes and steep creek bottoms.

The idea was to stir up the quail and make them flush. Once they flushed we would watch where they landed, jump out of the jeep, and take off running after them. If we were lucky, Bill had said, we might even be able to shoot a couple.

We had been riding for about a half hour, when suddenly a bush exploded in front of us and a covey of about 25 blue quail took to the air.

"Let's get 'em," yelled Bill as he lurched the jeep to a stop. I was way ahead of him. I grabbed my 20 gauge pump and started loading up as I





bounded out of the jeep in hot pursuit of the fleeing quail.

"Watch where they land," Bill yelled.

"Ten yards ahead, in the mesquite," I answered as I ran.

He was about 10 yards to my left, and the other hunters were coming up fast on my right as I neared the mesquite. Suddenly one flushed in front of Bill, and I could hear the burst from his 12.

I slowed up, snapped off the safety, and edged my way closer to the mesquite. I caught a glimpse of one running ahead of me and braced myself. He flushed suddenly and I pulled off a shot, shooting too quickly and missing.

Two other shots echoed to my rear, followed by distant mutterings. The cover got thicker. Mesquite whipped at my face and I barely missed stumbling into a mess of prickly pear.

"I've lost them," I yelled. "It's too thick in here."

"Same here," replied Bill. "Let's go back to the jeep. There's bound to be more somewhere else."

We returned to the jeep, unloaded our shotguns, and lurched off once more.

"Keep to the ridges," Jack, another hunter, said. "With all the dew on the ground, they won't be going down into the grass until it's dryer."

Bill headed for the ridge. We drove through brush so high that sometimes the only way we could see was up.

Jack stood up on the back seat and tried guiding Bill through the dense brush.

"Keep to your left, now head right," Jack ordered.

"What about the mesquite?"

"Don't worry about it. Go over it. Now, to your right. Watch it; there's a ditch there. Cut back to

*You've got to flush the birds before you can shoot them. It's not so easy where the brush is thick and the blue quail do plenty of running.*

your left. Don't be afraid of that high brush; go over it."

And then it happened. KER-PLUNK. Right into the ditch.

"Didn't you see that?" Bill asked disgustedly.

"About the same time you did," Jack answered. "Might as well get out. We've got a high center and you aren't doing any good. Let me have a try at it."

Five minutes later we were barreling through the brush once more. We jumped another covey and Jack was over the side of the jeep before I even realized that it had stopped.

They flushed about 15 feet in front of him, and he got two out of his three shots. I saw where another had landed and moved in for the kill. The bird flushed less than 20 feet in front of me . . . I didn't miss.

I walked over to the brush where the bird had fallen and hesitated. I remembered what Bill had said about rattlers lurking behind every bush. I looked around, but no rattler, so I hurriedly picked up the bird and went back to the jeep.

We headed out into more dense brush. This time the jeep almost impaled itself on an eight-foot high prickly pear. I flinched as we rolled on. A disturbed rattlesnake nearby voiced its disapproval, and I thanked my lucky stars that I wasn't walking around in that dense brush.

We jumped another covey of blues and took off running after them. This time everybody scored, but the trouble was that the brush was so dense that we lost a few of our downed birds. Now was when we really needed a good dog.

We returned to the jeep and lurched off once more.

"There goes a covey," pointed Bill.

The blues kept on running and didn't flush.

"Watch where they run," Bill suggested, "In this dense brush they can disappear faster than a worm in a bluegill's mouth."

We ran after the quail, but, sure enough, it was as if the earth had opened up and swallowed them. Not one bird flushed.

By this time we were too exhausted to care less. Bill headed the jeep back to the ranch house, and we called it quits for the day.

Although we hadn't got our limit, our hunt was still very successful. Each of us had shot a couple of birds, and nobody had been snake bitten.

Quail hunting in South Texas is much like quail hunting anywhere else—you've got to flush the birds before you can shoot them. The difference in South Texas is that after you flush them you've still got a lot of running to do, because blue quail would rather run than fight. \*\*



## Animal Biographies

**THE AFRICAN LION** by Mervyn Cowie, Golden Press, New York, 1966, illustrated, 96 pages.

Although thought of as man's traditional enemy, the lion living in the African national parks is beginning to look on man as a friendly creature, and vice versa. The lion's development from one of the fiercest of predators to a somewhat predictable beast who will usually not attack man is traced in Cowie's short, well-written book.

The author is an admitted lion lover, and he succeeds in making the lion come in focus by explaining the animal's habits and instincts. Roaming in groups called prides, the male lion takes no part in raising a family after mating. Lionesses often gather to raise their litters and usually have three or four cubs each. Although the cubs are guarded, their mortality rate is high, often reaching 50 percent during the first year of life.

As Cowie points out, lions are obviously lazy animals and if particularly hungry will attack anything convenient. Only a few become man-eaters, and these are old or crippled lions or ones used to eating human flesh. In national parks such as Nairobi, where African tribes wander freely, lions grow accustomed to living with man and will not attack him in usual circumstances.

The living habits of the lion, such as raising its cubs, killing animals for food, and wandering about in prides, are well illustrated by photographs. Most of these are black and white, but some of the larger ones are color photographs. All clearly show fascinating close-ups of the lion and his way of life.

Quite predictably, legends have been spun about the African lion and his characteristics. Due to a varying hunger for human flesh, lions have been blamed falsely for murders by natives. When witch doctors plan a murder, they often train young tribe members to kill victims to resemble death inflicted by a lion. This "witchcraft" associated with the lion is explained fully by Cowie.

Employed as director of the Royal

National Parks of Kenya since 1946, Cowie is knowledgeable in African legends, customs, and wildlife. He describes the experience of making friends with a pride of lions to the extent that he was remembered by a lioness three years later. His expertness on lions and other wild animals is obvious, and his choice of anecdotes reinforces his empathetic tone towards them. —*Mary Ann Bennett*

**WILD RODENTS**, by C. B. Colby, Meredith Press, New York, 1967, illustrated, 155 pages.

"A rat is always a rodent, but a rodent is not always a rat by any means . . ." C. B. Colby points out in his collection of short articles about unusual rodents of the world. Rodents vary from the agouti hunted for food by the natives of South and Central America to the capybara, a South American animal often weighing 100 pounds and known for its docility.

Other uncommon rodents such as the chinchilla, Egyptian jerboa, and eastern pack rat are also discussed as well as better known ones—the beaver, muskrat, red squirrel, and woodchuck. Each article is brief and easy to read and can be enjoyed by readers of all ages. Colby has written about rodents which he is particularly interested in and ones that are more unusual than the rat or mouse. The articles are informative, and interesting characteristics of the animals are included.

One of the strangest rodents, the Egyptian jerboa, is called a two-footed "mouse," although he really has four feet like other rodents. His much longer hind legs support him, while his front legs are used for grabbing food. When water is not available, the jerboa can obtain moisture from seeds and insects for almost indefinite periods.

One of the jerboa's cousins, the chinchilla, is living natively in the high Andes from Chile to north of Bolivia. Besides being valuable for his thick, beautiful fur, the tiny animal makes a good pet since he tames easily and is affectionate. The price for one chin-

chilla pelt is about \$20, but from 100 to 150 of these are needed to make one coat.

*Wild Rodents* is one of a series of books by Colby, including *Wild Cats*, *Wild Dogs*, and *Wild Deer*. He is currently camping editor of *Outdoor Life*.

—*Mary Ann Bennett*

**THE WORLD OF THE PORCUPINE**, by David F. Costello, J. B. Lippincott Company, Philadelphia and New York, 1966, illustrated, 157 pages.

Although accused of being stupid, the porcupine is an unusual animal that can learn to free itself from a cage faster than a monkey. It can eat with its paws, swim a creek, climb a tall tree with agility, live there for days eating the bark at each meal, and sing to a prospective mate. In addition to its sharp quills, it has clawed feet excellent for climbing, teeth that will grind up the toughest bark, and inner fur that is sometimes two inches thick in cold climates.

These traits and other habits of the porcupine are discussed in David F. Costello's study of the animal. In an easy to read style, the book goes into the porcupine's activities during each season; the way it eats, lives, and breeds; and its behavior toward man. Costello's scientific background is obvious in the quantity of facts he uses, such as the size of the porcupine's teeth, number of quills on the adult's body, and amount of tension required to pull the guard hairs out of its body. The book is apparently well researched and is also based on personal experiences.

Even though the porcupine is relatively harmless to everyone, man has become its greatest enemy. The small animal is being killed by reckless drivers and by foresters who resent one of its feeding habits—eating tree bark. Weasels and fishers are other enemies of the porcupine.

Although baby porcupines often make good pets, the animals are loners in nature. They travel solitarily except during the autumn mating season. The female gives birth to one baby that is quite independent after only a few weeks of life. While it is still nursing, it begins eating foliage to supplement its mild diet. Costello discusses these aspects of the porcupine's life adequately and fairly interestingly, but in some parts the book drags.

Many of the photographs are instructive, although all are in black and white and some would have been more effective in color. The close-ups of the porcupines are fascinating, but some do not add much to the book's quality.

As a whole, the book is worth reading or skimming. Costello's enthusiasm for the porcupine can't help but be caught by most readers of his book.

—*Mary Ann Bennett*



# Marauding Shadow

by Wayne Tiller

**M**ALEVOLENT eyes mounted on a broad, flat, hammerlike head have scared many Texas coast swimmers and divers, and rightly so. The eerie underwater appearance of the hammerhead shark has caused him to be reputed to be one of the world's most ruthless marauders of the sea.

Unlike many of the sharks known to be dangerous, the hammerhead is disturbingly plentiful, although the larger ones seldom frequent the Texas coast. Known breeding areas of these fish include two popular swimming beaches—Long Island and Hawaii. Yet, considering their reproductive capability of giving birth to great numbers, and their murderous capacities, the hammerheads have relatively few shark-bite incidents attributed to them.

Along the Texas coast, at least four different hammerhead-type sharks are found. The most common is the smooth hammerhead, labeled *Sphyrna zygaena* by biologists. He grows to at least 13 feet in length and has a scalloped mallet-shaped head. Also common is the bonnetnose or shovelhead, *Sphyrna tiburo*, so called because his head is shaped more like a shovel than a mallet. He is smaller, rarely exceeding five feet in length.

The scalloped hammerhead, *Sphyrna lewini*, occasionally grows to only eight feet in length, while the great hammerhead, *Sphyrna mokarran*, is believed to grow in the South Pacific to a length of 17 to 20 feet and a weight up to 1,500 pounds. A great hammerhead caught at Port Aransas in

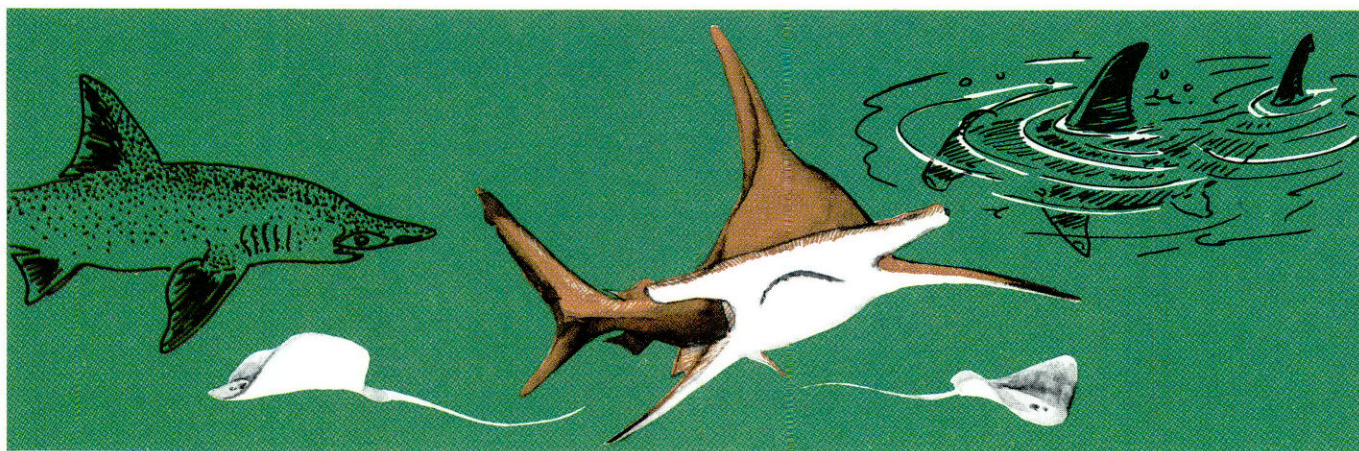
1950 measured 16 feet long, but the weight was not recorded.

Hammerhead sharks are found around the world in the more temperate waters. Their haunts include the open seas and shallow shore areas where they are commonly sighted cruising with their dorsal fins cutting the surface of the water. Young sharks, and occasionally adult ones, are caught by fishermen all along the Texas coast.

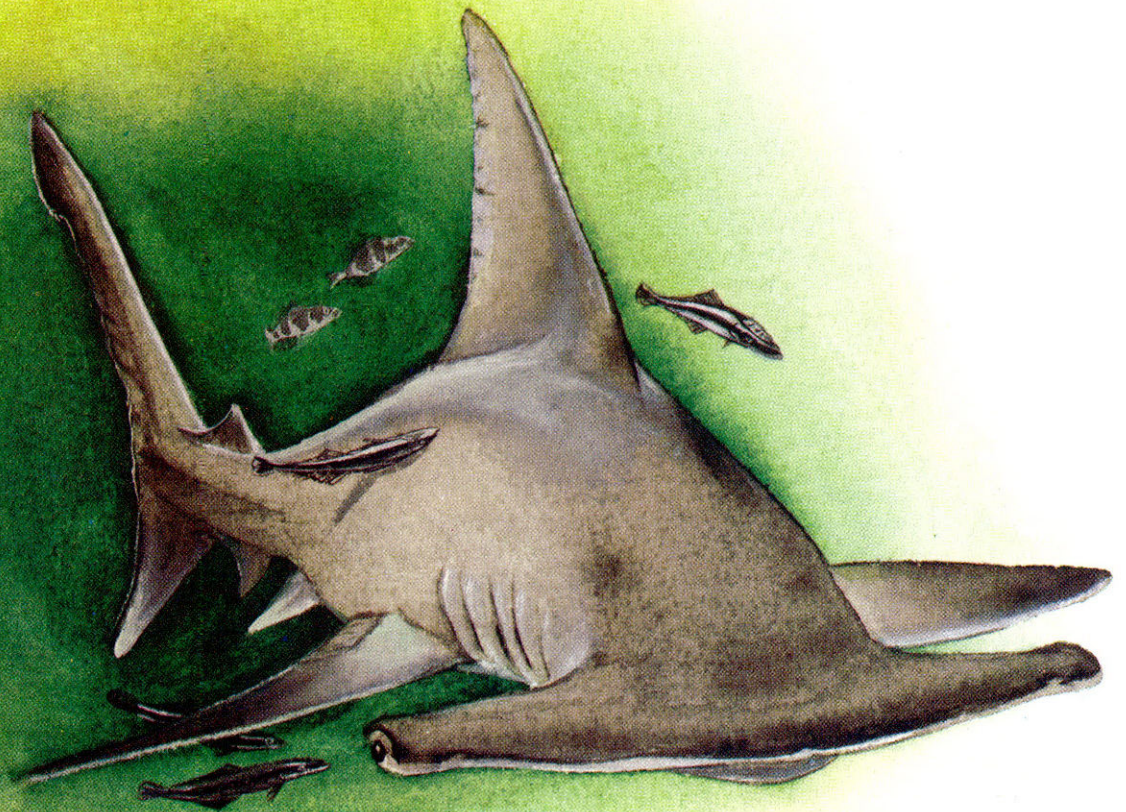
Swimming in the shallow waters near shore, hammerheads feed on various fish, squid, stingrays, crabs, other sharks, and just about anything that moves or emits an odor strong enough to attract their attention. Cannibalism has been observed in their eating habits; for example a 13-foot, 10-inch female was seen to devour four smaller hammerheads. Stingrays seem to be relished by the larger hammerheads, who apparently are immune to the poison of the rays' sting.

On one occasion in North Carolina, a large hammerhead was harpooned while chasing several large stingrays. When he was dissected for museum preservation, 54 fragmentary stingray barbs and four ocean catfish spines were found in the neck region and around the jaws. These mementoes of previous meals did not seem to have hindered the shark's actions as he was in excellent condition and fought viciously when harpooned.

Immunity to poisonous stings from other fish is only one of the reasons why hammerheads, as







McGOWAN

well as other sharks, have survived since splitting off the evolutionary tree 350 million years ago. They are a strange combination of primitiveness and adaptation. Primitive characteristics are presence of cartilaginous rather than a bony skeleton, and toothlike bony plates instead of regular fish-like scales.

They lack the air-filled swim bladders of other fish, thus making it necessary for them to keep moving to stay afloat. Although their brains are small, their heads are packed with highly sensitive nerve sensors. Only recently the theory that sharks have bad eyesight was disproven, but they are slow to distinguish one type of prey from another.

The hammerhead's eye is protected by a movable nictitating membrane, attached to the lower edge of the eye, that acts like an eyelid to protect

this vital organ. It is an unusual wonder of nature since the same structure is only found in certain birds and reptiles.

Extreme sensitivity to noise is also noticed in hammerheads, as well as in other sharks, because they are attracted to any splashing or disturbance in the water. Even the lapping of water against a floating object is believed to attract their attention. Geological seismograph crews working at sea have noticed sharks are even attracted to explosions.

A well-developed sense of smell also helps sharks find food, but there are indications the hammerhead may have an edge on the others. The forward edge of the hammerhead's mallet-shaped head is covered with small grooves for scent detection. So powerful is this sense that they can



detect small amounts of blood in the sea from a source several yards away.

Another unproven theory of the reason for such an unusually shaped head is that it functions as a steering plane, similar to diving planes on the hulls of submarines. By agilely moving their heads, these sharks can quickly dive, ascend and turn on a sand dollar.

Hammerheads are extremely active, and for this reason many anglers have adopted the sport of fishing for them around Corpus Christi, Galveston, and Port Aransas. Proving his determination, one hammerhead put up such a fight when he was hooked that he died of exhaustion. People seining on Galveston Island one day accounted for 40 hammerheads, thus attesting to the prolific capacity of the fish.

Reproduction of the hammerheads is viviparous with internal fertilization, and the young are born fully developed. Although embryo development is similar to that of mammals, the exchange of nourishment from mother to young is through a yolk-sac, which seems to be an evolutionary prelude to the more direct mammalian system.

The newborn fish, called a pup, enters the sea fully equipped to fight for existence. The T-shaped head is pliable at birth, enabling the lobes to fold back during delivery. Even the spikelike quills in front of the dorsal fin are fully developed and miraculously do not cause problems during birth.

The hammerhead usually produces about 36 young per litter. At birth they measure about 20 inches long, although young of the great hammerhead may exceed 24 inches in length at birth. After delivery there is no parental care, and the young do not even enjoy the safety of a nest. Immediately, the hammerhead is restless, hungry creature, and his first enemy is possibly the mother as there is strong evidence of cannibalistic tendencies.

Young hammerheads rapidly develop the insatiable appetite

and unpredictable temperament of the species. This is exhibited by an excited shark feeding near the bottom of a bay, picking up tin cans as he chases bottom-hugging crabs. Drawn by rapid movement and thrashing in the water, they are definite threats in swimming areas.

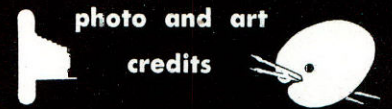
One shark caught at Riverhead, New York, contained various dismembered parts of a man and a tattered striped cotton shirt. Perhaps from that day in 1805, the hammerhead has been listed as a dangerous species. Other accounts from all coastal areas of the nation have indicated the temperament of hammerheads, but attacks along the Texas Gulf Coast have not been of a serious nature.

In some parts of the world this fish is used for food, and the liver oil is extracted since it is usually rich in vitamin A. Liver oil is also valuable for tanning of leather and as a wood preservative in some of the more primitive areas.

Hammerheads along the Texas coast are usually the smaller types and do not pose a threat to divers and swimmers. However, if confronted by a shark, experienced divers recommend the best defense is to keep calm and swim slowly away with as little motion and agitation of the water as possible. If pressed, the swimmer should not retreat but face the attacker and try to spook it—even by hitting it on its sensitive snout.

The best defense against hammerheads and other sharks is to first prevent attracting them in waters where they might be prowling. While fishing never hang a wiggling stringer of fish from your waist. The motion and blood in the water are good advertisements for attracting sharks. Also, any type of clothing will tend to discourage sharks, as will several commercially prepared brands of repellents.

The hammerhead is definitely one of the wonders to be found on the Texas Gulf Coast, truly a curious blend of primitiveness and specialized adaptation. \*\*



- Cover—Leroy Williamson; Mamiya C-33, 80mm; Ektachrome; 1/60 @ f/11; near Llano.
- Inside Front Cover—Nancy McGowan; Grumbacher watercolor; D'Arches board. Largemouth buffalo courtesy of Sea-A-Rama.
- Pages 2, 3, 4.—Reagan Bradshaw; Bronica, 80mm; Ektachrome; 1/125 @ f/16; near Zapata; (3) 1/30 @ f/8; (4) 1/125 @ f/16 printed black and white.
- Pages 6, 7.—McGowan; Grumbacher watercolor; Crescent 300 board; (7) D'Arches board.
- Page 9—Bradshaw; Bronica, 80mm; electronic flash @ f/22.
- Page 10—Norrel Wallace; Kodachrome printed black and white.
- Page 12—McGowan; Casein; Crescent 300 board.
- Pages 14, 15—McGowan; pen and ink; Crescent 300 board.
- Page 16—George McKinney; Graflex 4x5, 150mm; Ektachrome; 1/10 @ f/16.
- Page 17—(top) McKinney; Bronica, 80mm; Ektachrome printed black and white; 1/60 @ f/5.6; (bottom) Ektachrome; 1/60 @ f/22.
- Page 20—(upper left) Richard Moree; Hasselblad, 150mm; Ektachrome; 1/60 @ f/8; (lower left) Moree; 1/60 @ f/8; (lower center) Williamson; Mamiya C-33, 80mm; 1/250 @ f/5.6; (upper left) Wayne Tiller; Rolliflex, 75mm; 1/125 @ f/8; (lower left) Williamson; Mamiya C-33, 80mm; 1/125 @ f/11.
- Page 21—(top) McKinney; Bronica, 200mm; Ektachrome; 1/125 @ f/5.6; (bottom) Bradshaw; Bronica, 80mm; Ektachrome; 1/30 @ f/5.6.
- Pages 24, 26, 27—Williamson; Mamiya C-33, 80mm; Ektachrome; 1/125 @ f/16; Caddo Lake; (26) 1/500 @ f/5.6; Lake Austin; (27) 1/15 @ f/2.8; Lake Austin.
- Page 30—McGowan; Grumbacher watercolor; Crescent 300 board.
- Page 32—McGowan; Pelikan ink; scratchboard.
- Inside Back Cover—Williamson; Mamiya C-33, 80mm; 1/125 @ f/11; near Jefferson.
- Back Cover—Williamson; Mamiya C-33, 80mm; Kodacolor; 1/125 @ f/11; near Wichita Falls.





# Beware the Overdose

by Ray Childress  
Coastal Fisheries Biologist

**A**WARENESS of the need to investigate further into the effects of those deadly chemicals, the pesticides, has been instilled in all of us, layman as well as scientist, by Rachel Carson's "Silent Spring." This is not a sequel to that volume, but is written in the light of recognition of this need.

Pesticides are those chemicals used to control plants or animals considered detrimental to the needs of man. They include insecticides, fungicides,



## Insecticides draining into streams and bays are a major cause of water pollution.

herbicides, rodenticides, and others.

As an ever greater supply of farm products is needed to feed the hungry mouths of this nation, the farmer turns to the use of pesticides to eliminate crop loss due to insect and disease damage. This is the logical path, since very little new crop land is being put into cultivation. Our nation would not have the surpluses of food that it has without these useful chemicals.

After insecticides have served their useful purpose in crop protection they are no longer needed, but many persist in their role as a poison deadly to animal life. At the same time, many other of the chemicals decay into harmless basic elements that go back into the soil. Those that don't decay

are the ones about which we are concerned.

Probably the most persistent of these decay resistant chemicals is DDT, followed closely by such insecticides as endrin, dieldrin, chlordane, and heptachlor. As an example of the persistence of these chemicals, DDT has been found to retain 10 percent of its viability after 10 years of exposure.

Pollution of waters has been defined as the specific impairment of water quality by agricultural, domestic, or industrial wastes (including thermal and atomic wastes) to a degree which has an adverse effect upon any beneficial use of water, yet which does not necessarily create an actual hazard to the public health. In many ways the pesticides reaching our public waters fit this description. Let's

*Pesticides should be used with great caution. It is easier to spray again, if needed, than to restock a stream after fish have died from an overdose.*





# Catamount Curiosity

by David Sturdivant as told to Richard Sturdivant

Art by Nancy McGowan

**M**OUNTAIN lions are afraid of people—so my daddy had always said. But that's something I'll never believe again, and I told him so as the doctor stepped out of his car in front of the house and came up the walk.

Tim and I had been going to the arrowhead place nearly every week to look for Indian relics. Most of the time we had gone on our bikes, but this time mine had a flat, so I had talked Daddy into taking us.

"Hey, Tim, Daddy's coming by for you in a minute. Get the sifter and your shovel ready while I get Blacky in the car. He's going with us to hunt some rabbits while we dig." Putting the phone on the hook, I bounded out the back door to get my pup.

As we neared the arrowhead place, Daddy reminded us, "You knotheads keep an eye on that dog. It's his first time in the woods and he might run off. After all, he isn't nine years old like you two are. And be sure to be waiting here in the road for me at 4:30. I don't want to wait on you all day like I did last time I brought you here."

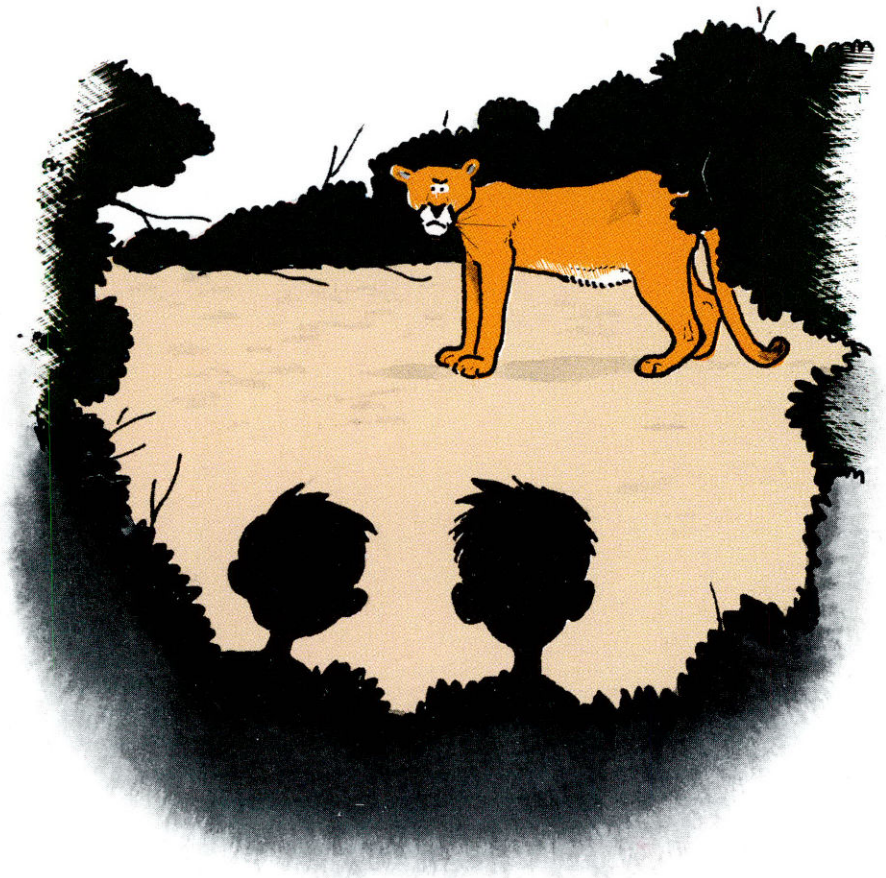
"Rodger Dodger, you old codger," we chimed over our shoulders as we tumbled from the car and headed up the trail by the creek. "Come on, Tim, last one to

the diggings is a Rat Fink. Old Blacky is way ahead of us."

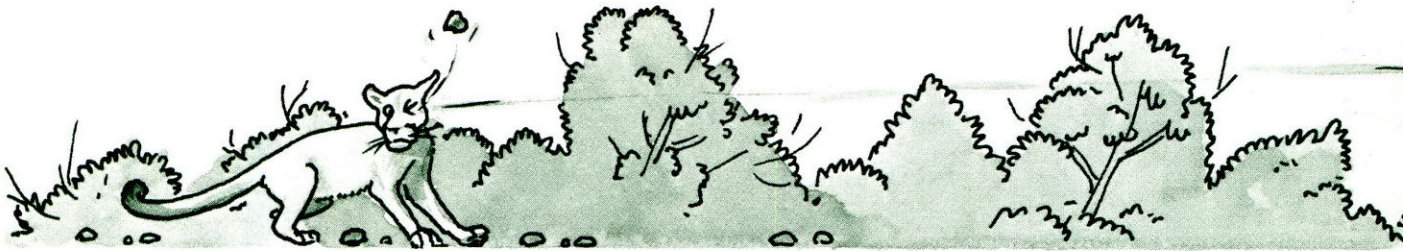
"Boy, David, this is neat today. There's not another kid in 100 miles of here. We're alone in the woods just like the Indians used to be. Let's go exploring before we dig; we may find some

more mounds," Tim puffed between breaths as he raced to keep up with me.

"Naw, let's dig a while first and then go exploring. I've never been up past the end of that next big clearing and I want to see what's up there, but let's stop







here at the mounds a while first," I suggested as we plopped on the rocky ground in the shade of a deformed cedar.

Blacky circled the clearing several times, stopped to sniff and scratch in our old diggings, and then lay down between us to have his head scratched. Tim played with him while I started digging but soon stopped and came over to sift for me. We forgot all about Blacky as we sifted the bones and flint chips from the black dirt. The first time we even missed him was when we heard him holler.

"Blacky's hurt!" I yelled as I dropped the shovel.

"This way," Tim called as he headed up the trail toward the big clearing.

The trail was crooked and the cedars were so close and underbrush so thick we couldn't see more than a few yards in front of us. Tim was running crouched over to avoid the low branches, while I trailed as close behind as was safe to avoid the whipping limbs he knocked aside as he sped along. Tim broke into the clearing at full throttle, but then when he should have been going on, he froze in his tracks. I nearly ran him down as I erupted from the bushes prepared for a clear run.

"Crazy idiot, I dang near stomped you! What's the idea of stopping so quick?" I blurted out as I tried to regain my balance. But I didn't need an answer for, as I was still talking, I saw what stopped Tim.

We both were petrified as we stared at the far end of the clearing. There, about 50 yards away, stood a mountain lion. He was looking at us as if to say, "Hold it, Bub, this is mine." At his feet lay the lifeless form of Blacky. After what seemed hours to us, he learned over, picked up Blacky, and then raised up to inspect us again. With this, he backed into the dense scrub and disappeared.

"Let's get out of here," Tim called over his shoulder as he scorched the trail back toward the diggings. He didn't have to holler, though, for I was so close to him the branches didn't have time to whip closed between us.

"Wait, Tim, I just remembered my daddy told me mountain lions won't hurt people. Since we're here and can't go home anyway, let's dig some more."

I wasn't too hot on the idea myself, but I didn't want Tim to know how scared I was. Tim didn't really want to stay either, but he was more afraid of my teasing

than he was of the mountain lion, I think. Anyway, he didn't agree to stay, but he didn't run off. After a while we settled down enough to do a little digging and sifting, but conversation was strained as we tried to convince each other we weren't afraid of any old lion. Neither of us mentioned Blacky, but we both thought it could have been one of us just as easily.

"You know, Tim, if the lion came here now, I'd take my shovel and kill him. Boy, wouldn't it be neat-o to have a lion rug?"

"Yeah, David, wouldn't your dad be proud of us when he comes if we had a big lion skin? I'll bet we could skin him out with this hunting knife of mine." Gradually our hearts regained a normal beat, and our conversation drifted to other subjects as we sifted pile after pile of dirt. No luck on points today, just flint chips and bone.

I turned another shovel of dirt for Tim to sift, but the screen hung limp in his hands. His eyes were riveted past my back and up. His lips were moving but no sound came out. When I turned to look where he was looking, my eyes were met by another pair of eyeballs staring right back at me.





There on a low limb not 30 feet away was the cat, his long tail hanging down like a pendulum. Tim, me, and the cat. We just stood there for a while and looked at one another.

Then, very slowly, we started backing away from the cat and toward the trail to the road. I thought if we moved slowly enough, the cat might not get excited and might stay where he was. Also, by backing up, we could keep watching him. But we hadn't gone far when he silently dropped from the tree and trotted to where we had been, sniffed the ground a few times, and came toward us.

"Hey, cat," I thought, "you like those tracks? Just hold still a minute and I'll make you a bunch more." Tim and I turned tail and made like two dragsters after the world record. The cat didn't seem to mind our being in a hurry at all as he just ambled along the trail behind us. That is, he did, until he saw we were out-distancing him. Then he put on a little more speed and caught up to within 20 feet of us before he slowed down again. I'm not sure whether he slowed down or we just naturally picked up more speed, but anyway, there he

stayed, right behind us.

"Hey, Tim," I puffed, "When we cross the creek next time, stop and let's throw some rocks at him. Maybe if we're fast enough we can rock him before he gets us."

Tim didn't waste the energy to answer; he just kept picking 'em up and laying 'em down as fast as he could. But when we reached the creek, he stopped with me to fire a barrage of stones. The cat didn't care for the hard rain too much and turned tail to disappear around the last bend in the trail.

"We've got him, David. While he's back there, let's head for the road," Tim stammered between breaths. We stayed by the rock pile till we got our breath again, but didn't see our friend any more, so we started for the road. Each bend in the trail brought its anxious moments as we kept looking behind us.

"Gosh O Mighty, Tim, there he is again! Let's go!" I yelled as I dug out. "If that lion bites me anywhere, it's going to be in the tail, and he's going to have to be mighty fast to do that. Make for the next crossing!" Two more crossings, two more rockings, and finally we made the road. "I don't

know about you, Tim, but I'm going on," I vowed as I headed down the center stripe of the pavement.

We had just gotten started when mother showed up. Daddy had had to go somewhere so mother came early instead, and boy, were we glad.

That night I told Daddy all about it, but I don't think he believed me. At least he didn't at first, but when I came home from school the next day and talked to him again, I just had to call Tim.

"Hey Tim, guess what? Daddy went to the arrowhead place today and took a bunch of plaster casts of the tracks where the lion killed Blacky and chased us. Daddy took them in for identification, and they were a couple of young lions. Boy, I sure would hate to see a full grown one! If any grownups'd had those lions breathing in their hip pockets instead of ours, I'll bet they wouldn't be so sure the lions were just curious and not thinking of boyburger. Hey, I gotta hang up. Dr. Pollard is coming up the walk, and he and Daddy are going to take me out and show me some more mounds a little farther up the creek. I'll show them to you Saturday." \*\*





# LA BAHIA BETRAYED

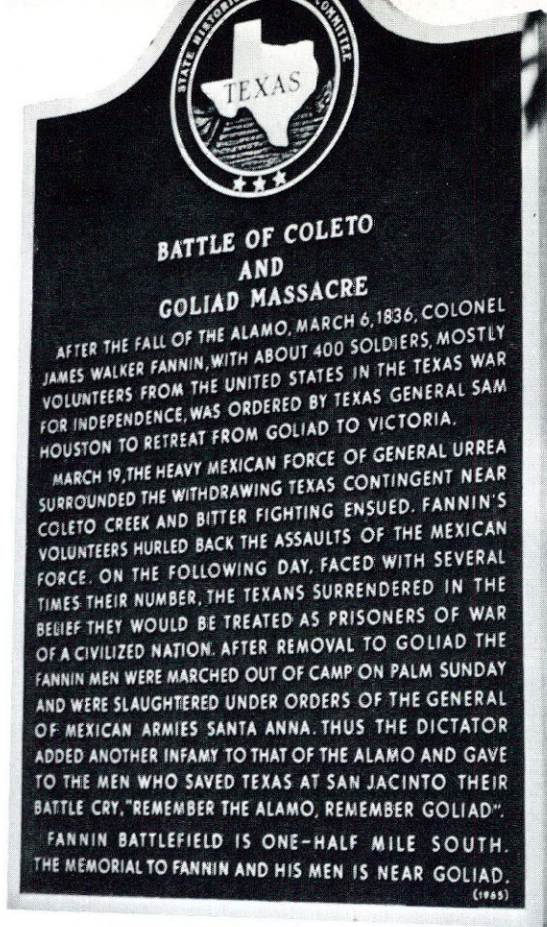
**E**XHAUSTED after a long, gloomy night, the Texans faced a morning encounter with the Mexicans. Their ammunition was exhausted, they were without water, and 60 of their number were wounded. The cannons stood useless without water necessary to cool them. To complicate their plight, a scouting party sent out the day before was cut off and was unable to reinforce the stranded Texans.

This was the dilemma that faced Col. James W. Fannin, Jr., after the Battle of the Perdido or Coletto Creek, fought 131 years ago during the Texas War of Independence. At this site now designated as the Fannin Battleground State Historic Site, Fannin and his men surrendered to Mexican forces under Gen. Jose Urrea. To honor these Texans and to commemorate the battle, the State Legislature in 1914 named the area a State Historical Site under the supervision of the State Board of Control. On September 1, 1965, jurisdiction was transferred to the Parks and Wildlife Department.

How and why the battle came to be fought has tended to mythicize the memory of Fannin and the Texans under his command. In March 1836, the Texas troops were encamped at La Bahia when they received orders from Gen. Sam Houston to retreat. Fannin delayed the retreat until the 19th, when Texans at Goliad were attacked by Mexicans, and then he began moving his men toward Victoria. Stopping to rest their oxen before reaching Coletto Creek, Fannin's men were suddenly confronted by the battle-ready Mexicans.

Although the Texans were surrounded, the battle continued to rage until nightfall. At daylight, fresh Mexican troops arrived, bringing cannons and ammunition. The Mexicans then numbered 1,900, compared with less than 400 Texans. The odds pointed to the necessity of a Texan surrender. In addition to their other problems, the oxen had been slaughtered, and escape was impossible since the wounded would have to be left behind. A truce with the Mexicans was therefore agreed upon.





# ROYAL

by Mary Ann Bennett  
Editorial Assistant

This happened 15 days after the fall of the Alamo. When they surrendered to Urrea, the Texans were promised fair treatment as prisoners of war. Unfortunately, they underestimated Gen. Santa Anna's deviousness. Later, at Goliad on March 27, they were shot as pirates by order of Santa Anna. Today, the park possesses an aura of peacefulness. Its 13 acres include areas for picnicking, camping, and historical study. The main feature of the park is a 28-foot monument of granite. It stands, "In memory of Col. James W. Fannin, Jr. and fellow-patriots whose surrender here on March 20, 1836, involved the sacrifice of their lives at La Bahia." Located nine miles east of Goliad on U.S. 59, Fannin Battleground is near Goliad State Park and Gen. Zaragoza's Birthplace. The battleground forms a historical triangle with Goliad and Zaragoza's Birthplace, a convenient arrangement for vacationers interested in touring historical sites in Texas. \*\*





# Your Texas State Parks

Recreation Parks		Located Near The Town Of	Camping Permitted	Screened Shelters	Group Camp	Trailer Sewer Facilities	Trailer, Water and Electricity	Restrooms	Showers	Cabins	Picnicking	Groceries	Food	Fishing	Swimming	Boats for Rent	Water Skiing Permitted	Boat Ramp	Golf	Museum and/or Exhibit	
Abilene	Buffalo Gap		■	■				■	■		■		■		■						
Atlanta (Undeveloped)	Queen City		■					■			■				■						
*Balmorhea	Toyahvale		■			■	■	■	■	■	■		■		■		■				
Big Spring	Big Spring		■					■			■				■						
Blanco	Blanco		■	■				■	■		■		■		■						
Bonham	Bonham		■		■			■	■		■		■		■						
Buescher	Smithville		■	■	■			■	■		■		■		■				■		
Cleburne	Cleburne		■			■		■	■		■	■		■		■					
Daingerfield	Daingerfield		■		■			■	■		■		■		■						
Eisenhower	Denison		■	■		■		■	■		■		■		■						
Falcon	Falcon		■	■		■		■	■		■		■		■						
Ft. Parker	Mexia		■		■			■	■		■		■		■						
Garner	Concan		■	■	■			■	■		■		■		■						
Goose Island	Rockport		■					■			■		■		■						
Huntsville	Huntsville		■	■		■		■	■		■		■		■						
Inks Lake	Burnet		■	■		■		■	■		■		■		■						
Kerrville	Kerrville		■		■			■	■		■		■		■					■	
Lake Brownwood	Brownwood		■		■			■	■		■		■		■						
Lake Corpus Christi	Mathis		■					■	■		■		■		■						
Lake Whitney	Whitney		■	■	■			■	■		■		■		■						
Lockhart	Lockhart		■					■	■		■		■		■						
*Mackenzie	Lubbock		■					■	■		■		■		■					■	
Martin Dies, Jr.	Woodville		■	■		■		■	■		■		■		■						
Meridian	Meridian		■	■		■		■	■		■		■		■						
Mother Neff	Moody		■					■	■		■		■		■						
Port Lavaca Causeway	Port Lavaca		■					■	■		■		■		■						
Possum Kingdom	Caddo		■					■	■		■		■		■						
Tyler	Tyler		■	■				■	■		■		■		■						
Velasco (Undeveloped Gulf Beach)	Freeport		■					■	■		■		■		■						
<b>Scenic Parks</b>																					
Bastrop	Bastrop		■		■	■	■	■	■	■	■		■		■					■	
Bentsen-Rio Grande Valley	Mission		■					■	■		■		■		■						
Brazos Island (Undeveloped Gulf Beach)	Brownsville		■					■	■		■		■		■						
Caddo Lake	Karnack		■		■			■	■		■		■		■						
Davis Mountains	Ft. Davis		■			■		■	■	■	■		■		■					■	
Longhorn Cavern (Daily Cavern Tours)	Burnet		■					■	■		■		■		■					■	
Monahans Sandhills	Monahans		■					■	■		■		■		■					■	
Palmetto	Luling		■					■	■		■		■		■						
Palo Duro Canyon (Summer Drama)	Canyon		■					■	■		■		■		■						
<b>Historic Parks</b>																					
Ft. Griffin (Texas Longhorn Herd)	Albany		■					■	■		■		■		■						
Goliad	Goliad		■					■	■		■		■		■					■	
Indianola	Port Lavaca		■					■	■		■		■		■						
Jim Hogg	Rusk		■					■	■		■		■		■						
Lyndon B. Johnson	Stonewall		■					■	■		■		■		■						
Mission Tejas	Weches		■					■	■		■		■		■						
San Jacinto Battleground	Deer Park		■					■	■		■		■		■					■	
Stephen F. Austin	San Felipe		■	■	■	■	■	■	■		■		■		■				■	■	
Varner-Hogg Plantation (Guided Tours)	West Columbia		■					■	■		■		■		■					■	
Washington-On-The-Brazos	Washington		■					■	■		■		■		■					■	
<b>Historic Sites</b>																					
Acton	Granbury																				
*Alamo	San Antonio																			■	
*Battleship Texas	Deer Park																			■	
Eisenhower Birthplace	Denison																			■	
Fannin Battleground	Fannin																			■	
Gen. Zaragoza Birthplace	Goliad																			■	
Gov. Hogg Shrine	Quitman																			■	
Monument Hill	La Grange																			■	
Old Ft. Parker (Fort Replication)	Groesbeck																			■	
Port Isabel Lighthouse	Port Isabel																			■	
San Jose Mission	San Antonio																			■	

\* Facilities Not Operated by Texas Parks and Wildlife Department



## Quality Rods and Reasons

Horse traders can't judge a horse by its color—and expert anglers will agree you can't judge fishing rods by their looks. Now-a-days, \$10 can buy a fairly good rod, and about four times that will get you a jewel of long-distance accuracy and peak performance. But, if you're not in the know, you can spend a lot of money and still end up with a "pole" you'll never enjoy.

The hidden ingredient in a good fiberglass rod is quality. A tubular glass rod basically is a bonding of clothlike longitudinal and crosswise glass fibers with a resin base fabricated in such a way as to form a tube. It is wide in diameter at the butt and gradually tapers to a much smaller tip.

When mass-produced in its simplest manner, and when ferrules, grip and reel-seat, line guides, and tip-top are added, the end result can be a rod so poor that it should more properly be termed a "pole." And don't fool yourself; some "poles" cost as much as quality rods.

Quality results in the correct combination of a great many factors. Among them is the diameter of the tube, the thickness of its wall, the density of the lamination, the amount and type of taper built into the tube, and the variance in wall thickness from the butt to the tip of the rod. Other factors affecting feel and action include the quality and type of grip, the weight and distribution of the guides, and the position, type, and number of ferrules.

The glass cloth and the method

of converting it to a tube are equally important. The cloth first is woven to exacting specifications of the diameter of the thread, count of threads per inch running in each direction, width of the bolts of material, and so on.

Added to all this is the type of material into which the finished cloth is dip-treated, and the method by which this is done. Since this is a plastic based liquid resin, correct colors, stiffnesses, final curing temperatures, and other factors must be controlled. Extreme care is therefore taken throughout the processing to keep dirt and other contaminations out of the cloth, because these would show in the rod tubes.

A stainless steel pattern, carefully engineered for each type of rod tube, is used to cut pieces of the glass cloth with various tapers and designs. When the pieces are rolled upon a tempered steel mandrel (or core), the number of cloth layers will determine the wall thickness.

The mandrels are designed with straight or stepped tapers which, together with the pattern of the glass cloth, provide the action required in the finished rod blank. When applying the glass cloth to the mandrel, extreme pressure helps to determine the density of the finished rod blank.

After careful curing, the mandrel is pulled from the glass, thus leaving a hollow tube. Final sanding, polishing, and trimming to desired length complete the blank making. Ferrules then are applied and bonded with epoxy

glue, pre-assembled rod-grips are fastened to the butt sections, a catalytic finish is applied to the glass blanks, and line guides are wound in place and lacquered.

Since these processes vary with different manufacturers, it should be stated that the method discussed is the one used by the Wright & McGill Company of Denver, Colorado, in the manufacture of its famous "Eagle Claw" fiberglass rods.

Perhaps one of the greatest thrills of a fisherman is to have a fishing rod specifically built to his desires and wishes. But as in other custom work, the customer has to know exactly what he wants and why he wants it that way. Across Texas there are several well-known custom rod builders, but perhaps one of the most unusual is located in El Paso.

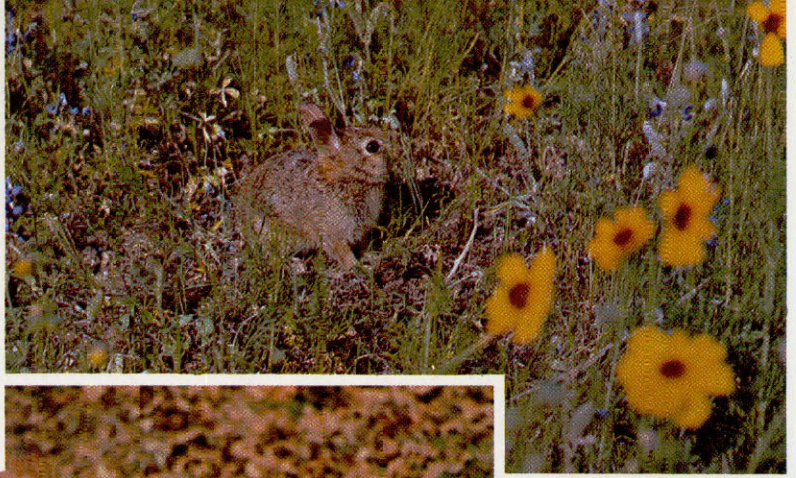
Living in a country of sand, sun, rock, and cactus, Raymond P. Avery must feel at times a little like Noah before it clouded over.

He specializes in heavy salt-water rods, and includes everything down to the light fly rods in his repertoire, since he is actually in the heart of the fishing territory—500 miles in any direction.

Avery stresses quality in his raw materials of rod blanks, guides, tips, reel seats, and wrappings, as strongly as he is critical of his own craftsmanship. He is an expert wood craftsman and builds the handles from cork and various woods, both laminated and solid. Woods such as mahogany, black walnut, maple, and others have gone into Avery-built rods. If a customer wants cork, it is shaped and sized carefully by hand according to exact specifications.

Since the best materials go into his rods, including such expensive extras as gold-plated reel seats, the price range is quite variable. Some of the heavy salt-water rods with complete, specially built harness have run into the \$300 bracket. However, light spinning and spin-cast rods range down into the \$20 bracket if special frills and extras are kept to a minimum. \*\*





# NUISANCE BARRIERS

by Joan Pearsall

**A**NIMALS are prized and sought after by outdoorsmen for hunting, picture taking, studying, or just for the enjoyment of watching. But there are times when they are a nuisance to even the staunchest nature lover, and the problem then becomes how to make them keep their distance.

The same people who enjoy the recreational and aesthetic values of wildlife often are gardeners and farmers. Few of them have not felt frustration turn into rage at the sight of a carefully tended flower bed or vegetable plot turned overnight into a blitzed area by some wild visitor. Not only do the uninvited dinner guests often devour the choicest sprouts; they can accomplish

a great deal of mayhem by their trampling, tunneling, gnawing, and scratching.

Estimates of commercial crop losses caused by birds and mammals run into tens of thousands of dollars per year. Considerable damage to aircraft and sometimes loss of life are the results of collisions with birds. Predatory mammals often cause substantial loss of livestock, and rodents damage stored products and spread disease. Even fish sometimes are classed as a nuisance when "rough" populations start to dominate the game species.

In many instances, extermination is the only answer. But in just as many, or more, cases—





recorded distress calls, played one minute out of every ten, to be especially successful with starlings. Weatherproof loudspeakers must be mounted high enough and in such a way as to take advantage of prevailing winds. Power of the amplifier would vary according to the needs of the area to be covered. Battery powered portable units may also be used. A timer unit or photocell control can be used to turn the system on and off, morning and evening.

Use of physical barriers to exclude the birds can involve a large initial expense, as in the case of city buildings "birdproofed" with sharp wires placed to prevent roosting, or by the installation of hardware cloth. The latter is also used on telegraph poles to prevent damage from woodpeckers.

Gaining in popular favor for gardens is a thin, weightless, acrylic webbing, the fibers of which tend to stick to whatever they touch. It can be erected over a framework of stakes, will not interfere with growth, spraying, or picking, and lasts about a year. It is important that netting be installed tightly enough to keep off birds and some small animals, otherwise it could entrap them instead.

Manipulation of habitat has brought relief

*Help against wild gatecrashers is available in a variety of harmless chemicals. One of many practical, mechanical measures is to give a tree a girdle of tin.*

whether it be for conservation or sentimental reasons—that drastic a step is not desirable. Man has been cudgeling his wits for centuries on how to reduce the competition of animals and coexist with them. Many of the old fashioned remedies still have a great deal of merit and are worth dusting off and giving a good try. Nowadays we have the advantage also of scientific research, which has resulted in a number of products on the market.

In the battle of the birds, the principle of the traditional scarecrow, carried out in a variety of forms, still is moderately effective, if the figures are realistic and have sufficient movement. Don't underestimate the birds' astuteness, for they often catch on as to whether or not there is a real threat. All frightening objects should be put up before the birds have a chance to discover what is being protected, for they usually will not be so simply deterred from a place if they already know there is food there.

Scaring them off can sometimes be done by mechanical means. Noise has been found to be one of the most useful such tools. Farmers have found





from some community bird problems. Trees have sometimes had to be sacrificed because of over-abundant roosting sites in certain areas. At one airport, a stand of giant reed grass was the roosting place of about 8,000 starlings. When a flock caused an aircraft to crash, with the loss of 62 lives, the reed grass was removed and other steps taken to make the airport less attractive to the birds.

The ideas already mentioned may not be practical or successful for the gardener or landowner. He might want instead to try the assistance offered by modern chemistry.

Most of the repellents in this category come in the form of an extremely sticky concoction, disagreeable underfoot for birds. An application, squeezed or sprayed along surfaces where birds perch or roost, makes them shun the place for evermore. The substance is colorless, odorless, and harmless to the birds. It lasts many months and is not affected by weather.

Another type of chemical bird control is in the form of a seed protectant, which is sprinkled over the tops of seeds and mixed thoroughly until they are coated. It is designed to repel birds from eating the seeds, but care should be taken that such treated seeds are not used for food or feed purposes.

For wild mammals, such as rabbits, deer, and field mice, there are a number of commercial repellents available. Many of them are based on substances that have been in use for generations—moth crystals, mustard, lemon oil, dried blood, nicotine, and so on. Others are new scientific discoveries. One was developed as a fungicide and seed protectant, and found to repel chewing animals. It is now the base of several rabbit and deer repellents shown in the chart. These compounds adhere when sprayed or painted on branches, twigs, or leaves, and will last three to six months. Frequent applications may be necessary to protect new growth, but vegetables should not be treated after the edible parts have started to form.

Other discouragements for nibblers are ropes treated with juniper tar oil, dry powders that can be shaken along vegetable garden rows, or a concentrated form of zinc to be diluted with water and painted or sprayed in the same fashion as other liquid repellents. Its long lasting, bitter taste is not harmful to animals.

Dried blood, or blood meal, is a time-honored remedy against rabbits, armadillos, and even deer. It should be scattered on the ground or dug in lightly, and a side benefit is that the nitrogen in it is stimulating to plant growth. To be effective, it should be renewed every two or three weeks. The only drawback is that this substance may attract neighborhood dogs, unless they are fenced out.

Some farmers have resorted to rock-and-roll

to outwit raccoons. A small radio, placed in a plastic bag and tuned to an all-night broadcast, is said to keep these unwanted visitors from a cornfield.

Beavers have been known to be "cleaned out" by soap. One rancher hung half a dozen bars of old-fashioned laundry soap in a burlap sack just upstream from the site of a torn-out dam that had caused flooding. The beavers deserted the area.

One of the simplest but effective weapons in the war against rabbits is the use of two tablespoons of Epsom salts dissolved in water. Sprinkled on vegetables, it will not harm the plants or the human consumer, but rabbits detest it. This should be reapplied after a heavy rain.

Some people recommend keeping geese, ducks, or peacocks to guard gardens. These birds do not scratch the earth, they eat a lot of insects, and they either drive off or give warning of intruders.

Cats and dogs, the two pet favorites, also are valuable allies against some pests. But they, in turn, can be a problem where the garden is concerned and have to be persuaded, chemically or otherwise, to stay within limits. Many substances repel these animals with an irritating or offensive odor.

They come in dry and liquid form. The dry ones are to be spread on the soil around plants, and need to be renewed every two or three weeks. The liquids, usually in aerosol cans, are sprayed lightly on plants, and renewed when needed. Some repellents come in solid form, in cones, ropes, and wicks, to be stuck in the ground or hung on shrubs.

Most of these are recommended for cats as well as dogs, and several of the manufacturers make a similar product for indoor use. With pets, a disciplinary scolding accompanying use of a repellent adds to the effectiveness.

Garden or pet stores should have these products and others in stock or should be able to help you obtain them. If commercial repellents are used according to directions, they are humane and harmless to plants and animals. They have to be registered with the U.S. Department of Agriculture, which checks the claims and statements on each label.

No one product or method should be expected to do the job completely or permanently, however. Sometimes it is necessary to try out several to see which ones are best suited for your particular purpose. Often a varied strategy is the best, rotating and combining different methods.

Outwitting the animals is a constant challenge, but, although the creatures are occasionally exasperating, most of them are not begrudged a reasonable living by true outdoorsmen. With alertness and all the help that is available, we ought to be able to keep at least a jump ahead of them.

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## ANIMAL REPELLENTS

ANIMAL	CHEMICAL	MECHANICAL
Armadillos	Dried blood	—
Bats	—	Screens
Beavers	Old-fashioned laundry soap, placed upstream of dam.	—
Birds	Sticky roost deterrents: <i>Bird Stop</i> ; <i>Hub States Bird Repellent</i> ; <i>Roost No More</i> ; <i>Tree Tanglefoot</i> . Seed protectants: <i>No-Crow Bird Repellent</i> ; <i>Avitrol 100</i> , <i>Avitrol 200</i> .	Scarecrows: human figures; blown-up paper bags; dangling white rags; tin can tops; foil discs; raccoon tails. <b>RECOMMENDED FOR URBAN USE ONLY</b> are stuffed or plastic owls (they attract crows). Electrical: lights; shocking devices. Noises: exploding shotgun shells; fireworks; carbide cannons and other automatic exploders; recorded distress calls (may attract predators). Physical barriers: sharp wires to prevent roosting; hardware cloth; <i>Crylde</i> webbing; <i>Vinet</i> webbing.
Cats and Dogs	Dry: <i>F. &amp; B. Rabbit &amp; Dog Chaser</i> ; <i>Yip</i> ; <i>Pi-Co Repellents</i> ; <i>K-Pells</i> ; <i>National Dog Wick</i> ; <i>Dog Bobbies</i> ; <i>Repel-O-Rope</i> , <i>Repel-O-Sticks</i> . Liquid: <i>No</i> ; <i>Holiday</i> ; <i>Pulvex-Shun</i> ; <i>Chaperone</i> ; <i>Ridz</i> ; <i>Dog-Check</i> ; <i>Dogzoff</i> ; <i>Dogonex</i> ; <i>Henry Field's Dog Repellent</i> ; <i>Git</i> ; <i>Scram</i> ; <i>Magic Circle Animal Repellent Concentrate</i> .	—
Deer	<i>Magic Circle Deer Repellent</i> ; <i>Chaperone Rabbit &amp; Deer Repellent</i> spray; <i>Science Products Rabbit &amp; Deer Repellent</i> ; <i>Nibble-Not</i> ; <i>Tat-Go</i> ; <i>Pratt's Animal Repellent</i> ; <i>Vaughan's Rabbit &amp; Deer Repellent</i> ; lemon oil, human urine. Dry: moth crystals; dry mustard; dried blood; nicotine.	String garden with wire too high for deer to jump over, with white rags dangling from wire.
Foxes	—	Low, five-strand, electric fence, with bottom strand three inches from ground.
Field Mice	<i>Chaperone Rabbit Repellent</i> ; <i>Science Products Rabbit &amp; Deer Repellent</i> ; <i>Nibble-Not</i> ; <i>Tat-Go</i> ; <i>Pratt's Animal Repellent</i> ; <i>Vaughan's Rabbit &amp; Deer Repellent</i> ; juniper tar oil; lemon oil; moth crystals; dry mustard; dried blood; nicotine; sassafras bark; scattered nut tree leaves; camphor gum.	—
Moles	—	Whirling windmill, which makes vibrations in the ground.
Rabbits	<i>Chaperone Rabbit &amp; Deer Repellent</i> ; <i>Nibonex Rabbit Repellent</i> ; <i>Science Products Rabbit &amp; Deer Repellent</i> ; <i>Nibble-Not</i> ; <i>Tat-Go</i> ; <i>Pratt's Animal Repellent</i> ; <i>Vaughan's Rabbit &amp; Deer Repellent</i> ; <i>Magic Circle Rabbit Repellent</i> ; <i>Z.I.P.</i> (concentrated zinc); <i>No-Nibl</i> ; <i>G &amp; O's Rabbit Repellent</i> ; <i>F&amp;B Dog &amp; Rabbit Chaser</i> ; Epsom salt solution; juniper tar oil; lemon oil; kerosene; oil of creosote; bone oil; tar; cow or rabbit manure softened with water; moth crystals; dry mustard; dried blood; nicotine; onion plants.	—
Raccoons	—	Small radio placed in plastic bag, tuned to all-night station.
Porcupines	<i>Tree Tanglefoot</i> .	One to two-foot piece of tin girdling tree at least four feet from ground.
Squirrels	<i>Tree Tanglefoot</i> .	One to two-foot piece of tin girdling tree at least four feet from ground.
Wild mammals in general	Chemicals used for deer, rabbits, and field mice may be helpful.	Use of ducks, geese and peacocks in garden, to serve as watchdogs.







Young angler learns there is always...

# A New Day

by Bob Gallagher, Jr.  
Houston

**O**NE EVENING some twenty-odd years ago when I was a young lad, I decided to go bass fishing. I didn't hold too much hope of great things happening. In those days television was only an infant and, if nothing else, fishing offered something to do.

After supper, I gathered my meager gear, slipped out the cabin door and walked down the still warm path which led to the sloping, half-crumpled levee. As I reached the levee's pinnacle, a warm breath of summer air touched my moist face with cooling fingers and sweet aroma. Night had arrived.

Quietly I walked along the top of the levee toward a small empty dock hanging suspended over the black water as if supported by invisible wires. The dock squeaked, dipped, rose, and then squeaked again as I reached its edge. A frog croaked its lament across the lake and the night hawks swooped to and fro like dark arrows from a hidden archer.

The air was heavy but smelled good as I began to throw the old borrowed surface popper into the blackness. Again and again the plug sang across the water and died with a loud "ker-plush." The casts had little professional skill and the equipment was old and feeble. The rod was rusty with bent guides, and held close to its bosom was an old Shakespeare Marhof reel spooled with ancient silk line.

Everything I knew about bass

fishing was from hearsay, gossip, or advertisements. Regardless of these uncertainties, however, every summer night I trudged my way up the old levee wall onto the dock and cast my offering.

After three years of this fruitless procedure, I had become increasingly dubious about the emotions my elders expressed over this pastime called bass fishing. Maybe I was just plain down and out—unlucky.

Suddenly a mosquito hummed an itchy call which awoke me from my mental abyss. It was time to go as the evening had run its course and 11:00 p.m. had arrived. Hurriedly I turned the reel handle, simultaneously giving the old rod an unnatural sweep for reasons unknown. The hidden surface lure made a deep, heavy gurgling noise.

It was oddly funny because it sounded like a man who might belch and hiccup in the same breath. Momentarily I stopped reeling. It had been an amazingly funny noise. Again I pulled the rod into an exaggerated arch trying to duplicate the sound. All I heard was a tremendous clap. The rod swung back with a powerful jolt toward the black water. My fingers numbed as I tried frantically to control a reel gone berserk. Then I did it. I stopped the reel.

I had a fish! A big bass! The ensuing struggle was short-lived and as I dragged the bass closer to the dock I took a small flashlight from my pocket. Once next



Shattering the mirror-smooth water, my dream lunger leaped in a spray of liquid glass.



to the dock, the light's beam showed the biggest bass I had ever seen. But, I didn't have a net. Tied to the end of the dock was an old wooden boat. I slowly began to work the now tired fish towards the boat. Suddenly there was rejuvenated movement from the bass. The line tightened and then went limp as a cascade of water arched its way upward. He was gone. My big bass was gone. Oh no! It couldn't be true.

Stunned, I turned and headed back to the cabin. I can't say I cried or wept as I walked back to the small cabin, but I didn't feel right and my cheeks were damp. Inside the cabin, it became impossible to keep my sorrow to myself. I'd failed. I was the world's worst fisherman. Never, never again would I catch another bass that big. My folks listened as I stumbled slowly through my story. They sat silent at its con-

clusion. The small insects could be heard beating their tattoos against the cabin screens.

"Son," said my dad, "it's time for bed now. Tomorrow's a new day and maybe another bass. The bass you lost tonight could have just as well been a little one and you'd never have thought much about it. But regardless, go back tomorrow because tomorrow's a new day, a different day. As long as a man can get up, he's got a chance. A chance is all you need if you keep trying."

Sleep came rapidly to my tired body that night bringing with it dreams of loud strikes and gigantic bass. I awoke the next morning before sun-up with no assistance from man or mechanized beasts.





Fumbling together my gear, I crossed the road and headed toward the dock.

At journey's end, I looked down at the sight of last night's disaster and a thought struck me. Today I'd get into the boat itself and should I catch a fish I'd be in a position to grab it at the water's surface. I took a frog-colored jittery-type lure from my shirt pocket and tied it to the old line. I really didn't feel like fishing, but here I was.

I looked across the mirror-smooth water and wondered why I couldn't catch fish. I slung the rod overhead causing the plug to shoot out far too swiftly for the thumb pressure on the reel spool. A back lash resulted.

Last night's disappointment again surged through my mind. I wasn't a fisherman. I never would be. I just wasn't lucky enough. Finally, I got the bird nest straightened out and began to retrieve the bait. In it came. Jiggling, wobbling, and then it disappeared. It was gone! I looked in disbelief. Where was it?

The line tugged at my rod gently. I rared back with all my might and the rod went solid. Out of the mirror-smooth water leaped a gigantic mass spraying liquid glass high into the air. I jerked again as the monster tumbled into the water. I reeled and pulled and the line held. Then the fish tired as suddenly and mysteriously as it had appeared.

As the fish reached the side of the old boat I grabbed it, thrusting my fingers deeply into its red gills.

At last, a lunker—a real lunker. I climbed, then fell upon the dock, my captive held high. I half-ran, half-stumbled back to the cabin. The sun was up. The day was new and at last I had caught a big bass.

My parents met me outside the cabin. I was breathless. My dad congratulated me on my prize trophy. My mother gave me a loving hug. I held the fish up higher toward the smiling sun.

"Dad, I think the fish I lost last night was a lot bigger."

Yes, I was now a fisherman. I had gotten up and started my new day.\*\*



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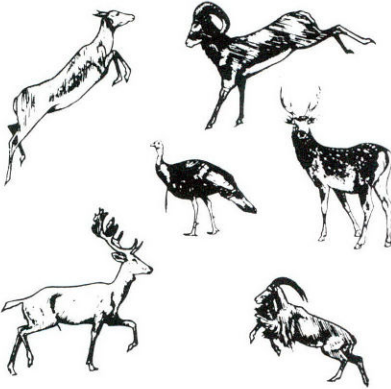
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### GUNS & SHOOTING —L. A. Wilke

## Rifle Seminar

Boys can shoot straight with a gun when given the opportunity. And most of them can outshoot Dad.

This was demonstrated late in November when 44 dads with their sons went to the Y. O. Ranch near Mountain Home to participate in a big game shooting seminar. Perhaps it should be called a gun handling seminar.

The event is a part of the program of the Winchester Arms Co. to initiate young shooters in the practical handling of firearms and the technique of hunting.

Under the instruction of Jim Dee, manager of shooting development for Winchester-Western, the boys first qualified on the targets, using Winchester Model 70's, in .243 caliber. The youngest son participating was eight. The eldest was 34. They came from New York to California, from the Great Lakes to the Gulf.

It was a package deal. The boys with their dads flew to San Antonio. There they were picked up on a chartered bus and taken to the ranch. Their package deal included the training, all ammunition, guns for their use, lodging, and the right to shoot one wild turkey. Or, they could apply the turkey fee to a larger species if desired. Most of them did.

Perhaps one of the most remarkable shooters of the party was Alan Lipsey, 8, of Durand, Michigan. He scored high in the qualifying, shooting a gun that was longer than he was tall. He then went into the field with a

guide and took a big gobbler. Next, he shot himself a mouflon ram. And no one held the gun for him.

Chief instructor for the seminar was Ernie Lind, exhibition shooter. He required the fathers to qualify as well as the sons. Some of the fathers had never shot a big bore rifle and some not since they got out of the service. Some of them were less accurate than the boys.

In addition to the range and game shooting, the boys also heard lectures on gun handling, conservation, and sportsmanship.

Probably more practical indoctrination went into this two-day seminar than in any previous event, because it was for rifle shooting. Most such events are for shotguns, where there are numerous upland game preserves.

In the lectures the boys were told repeatedly that safety was the most important factor in gun handling.

"A gun sitting in the corner is harmless," Dee told the boys. "It is when someone does something wrong that it becomes dangerous."

He told the boys they should always consider a gun loaded when handling it. The gun always should be pointed in a safe direction. When not in the field it should be carried in a breech-open position; never accept a gun from the hands of another person without checking for yourself whether it is loaded. Never pick up and play with a gun belonging to someone else. Be sure of your



target when you shoot.

It was Ernie Lind, the exhibition shooter, however, who really set the boys on fire. He tossed wooden blocks into the air, split them with a .22, and then shot the pieces before they hit the ground. He demonstrated how he could shoot through the hole in a 2-inch steel washer, or hit it on the rim for either a hook or a slice. And after all that, he warned the boys about practice in the open with a .22 rifle. "One of those little bullets will carry a mile," he told them.

Practically all the shooting by the boys and their dads was done with scope-equipped rifles. Roger Livingston of the Weaver Co. was there to explain to the boys the best method of shooting with scopes.

And, in addition to the rifle shooting, each boy had a chance to shoot a round of "crazy quail" with a shotgun. Indeed, it was a great day for youthful shooters and their dads. \*\*

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# Long Shots Short Casts

Compiled by Joan Pearsall

**AROMA FOR ROAMERS:** If you lose your dog in the woods, and are unable to wait for him any longer, leave a piece of your clothing, or anything that retains human scent. A return trip later will likely find the dog guarding the item you left behind, instead of roaming far and wide over the countryside in a vain search for his boss.

**FIDO RIDING, NOT RIDDING:** Hunters who tuck their dogs into luggage compartments of their cars when heading for a field trip are flirting with disaster. Even if the dog survives an unventilated ride in the trunk, his scenting ability will be seriously affected so his performance in spotting game is bound to suffer. He's also likely to be sluggish and indifferent after breathing the engine fumes.

**LITTER STATISTICS:** In a recent, nationwide survey of litter prevention leaders, conducted by the Keep America Beautiful agency, 50% of the leaders indicated adults as the most frequent litterers; 42% named teenagers as the worst offenders, and 8% leveled the charge at children. Most of the litter defacing rural areas is tossed from moving cars, said 70%; picnickers followed with 25% of the vote. Outdoor sportsmen were blamed by less than 5%! Most prone to litter were said to be city dwellers, by 68%, and 20% thought suburbanites the champion litterers. Country people were blamed by only 12% of the litter prevention leaders.

**POACHERS FEEL THE PINCH:** The Michigan State Legislature, revising and stiffening penalties for illegal hunting, has added the cost of the illegal game; violators may pay \$200-300 for an elk, \$100-200 for deer or bear, lesser amounts for small game—plus the fine. The monies so collected will go into the Game and Fish Protection Fund.

**FIRE FEAR:** Smokey Bear and his helpers do not yet have the forest fire situation under complete control. The danger of forest fires may get even worse, in fact. About 50 years ago, much of the nation's forested land burned each year, but by the mid-forties most states had developed effective fire fighting organizations. New stands of timber became established, and millions of other acres were planted to trees. Today, many of these forests are nearing maturity. Mature forests produce leaves, needles, and dry twigs on the forest floor, plus overhead branches which form an unbroken and highly flammable canopy. Thus, forest fire danger is generally higher today than it was 20 years ago. So, be sure all fires are out, break matches, and crush smokes when you are outdoors.



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## Junior Sportsmen

by Joan Pearsall

# Animal Transformations

Here is an interesting, five-syllable word to start the New Year with—metamorphosis. This means a marked change in form and appearance, a transformation.

Although the appearance of young mammals and birds in some ways changes before they become adults, due to differences in coloring, and covering of hair, fur, or feathers, these changes are not described as metamorphosis. As these animals grow, their shape and form remain much the same, except for being bigger. For them, the major transformations of the young take place before birth.

With some insects and amphibians, it's a different story, for the larger part of development of the young occurs after birth. Butterflies and moths are examples of those who have a complete metamorphosis. Anyone who has watched a crawling caterpillar change into a magnificent butterfly knows what a dramatic and wonderful procedure this is.

The stages in a complete metamorphosis are: the egg, the larva, the pupa, and the adult. During these stages several molts take place, also; often there are clear changes to be seen after each of these molts, especially in the larval stage. The larva of a butterfly is commonly called a caterpillar, and the pupa is called a chrysalis. The larva of a fly is known as a maggot, but that of a bee or beetle is a grub.

Frogs, toads, and salamanders are examples of amphibians that undergo metamorphosis. The procedure is different from that of the insects, and there are variations with the different species, but generally they proceed from egg, to tadpole, to adult. Changes that can be seen along the way are the gills and tail being absorbed, and the appearance of legs.

We sometimes think growing up is difficult! But isn't it something to marvel about, when you see a lovely butterfly or sprightly frog, and think of the changes



they had to go through to become grown-up?

\*\*\*\*\*

Now, just for fun, here are some very strange "transformations!" Guess the animals, add one letter of the alphabet, and change them into something quite different.

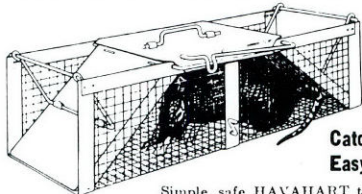
Example: A flying mammal. Add I, and it will become temptation for a fish. Answer: BAT—BAIT.

1. A large hugging animal. Add D, and it becomes a face decoration.
2. A good pet. Add O, and it will keep you warm.
3. The female of an animal very popular with hunters. Add V, and it becomes a bird.
4. Said to be a wise bird. Add B, and it will hold food or flowers.
5. A rough fish. Add E, to make it part of a car.
6. An insect that can bite. Add P, and it becomes a gasp for air.
7. A black, intelligent bird. Add N, and it's something for a king to wear.
8. Important bait fish. Add E, and it's very welcome for sitting in, in summer.
9. A fish that looks like a snake. Add P, and it's the skin of an orange.
10. Very busy insect. Add T, and it becomes a vegetable.

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11. Long-eared animal. Add S, and it's a portion.

12. Playful river animal. Add P, and it turns into a man who makes bowls and dishes.

13. Beautifully colored polyp. Add H, and it describes a singing group.

14. A tasty shellfish. Add I, and it's a title to something, or stake-out.

15. Insect that loves light. Add U, and it turns into something to smile with.

ANSWERS:

1. BEAR-BEARD. 2. CAT-COAT. 3. DOE-DOVE. 4. OWL-BOWL. 5. GAR-GEAR. 6. ANT-PANT. 7. CROW-CROWN. 8. SHAD-SHADE. 9. EEL-PEEL. 10. BEE-BEET. 11. HARE-SHARE. 12. OTTER-POTTER. 13. CORAL-CHORAL. 14. CLAM-CLAIM. 15. MOTH-MOUTH.

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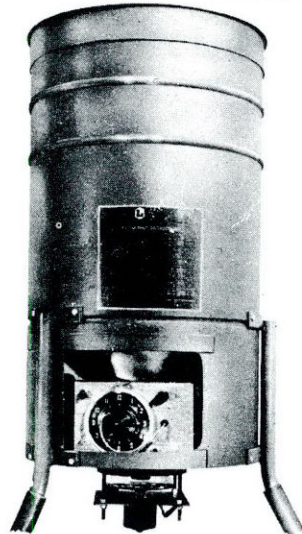
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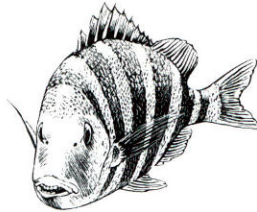
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# Letters



# to the Editor

## Gus Cothran

Since my father, Gus Cothran, worked so long for the Game Department, we wanted to be sure his old friends knew of his death. A notice in your magazine was the only way we knew of to contact his many friends across the State.

Mrs. H. C. Noelke, Jr.  
Sheffield

## Aloe Gel

I have been a faithful user of the aloe vera plant for five years now. I know what it has done for me. I have one three-foot plant and have tried to get another, but each time have been sent a "lizard cactus" plant. The literature on aloe tells of some poisonous kinds of similar plants.

My plant is a beauty, but has never bloomed in the five years I have had it. I use the plant gel and liquid for many things, and have given much of it to others.

Nine years ago I had several operations. Then I began to be allergic to "everything." I was working in the operating room of a well-known hospital. I began to break out in spots six inches in diameter, all over my body. Cortisone, ointments, lights, etc. helped some. I had to leave my job as I was ashamed to be seen. Finally, after about \$1,000 in doctors' treatments, the condition was down to both hands and one large

patch on my stomach. My hands seemed to reject any treatments given. Household gloves made them bleed. I got to where I was unable to comb my own hair.

A lady in Vanderbilt sent me some leaves by mail. My hands began to smooth over. My sister sent me a plant. I am a faithful user and my family calls for it now. The psoriasis condition of my hands is almost clear. If it acts up I sleep with my gloves full of fresh gel. It clears up overnight.

The acne condition of my grandson's face is really helped by it. We take it in our fruit juice each morning for regularity and a colon condition.

Mrs. M. B. Reneau  
Marlin

## Uvalde Test Cars

I was burned up at one of the letters in your November issue, about the deer slaughter near Uvalde. I don't blame the writer for not signing his or her name, as I think it was a SLAM to the game wardens of the State of Texas for anyone to think they would permit anything like that to go on.

I have not known very many wardens, but the ones I have known are pretty nice fellows and do a good job keeping outlaw hunting at a minimum. I do not think "Anonymous" has ever seen a deer that was hit by an auto, as there is not much left but hamburger.

I know of the test cars and know that that is the reason for the grill guards. It is hard for me to believe anyone with such a wild imagination to be such a saint, so I don't think Uvalde has missed very much.

J. C. Collins  
Cotulla

## Booked Up

I realize that you and your staff have other things to do than reading mail from such as I. However, I can no longer contain the urge to tell you how I have appreciated these many years the book reviews appearing in the *Texas Parks & Wildlife* magazine.

Though I do not claim to buy every book reviewed in your pages, I know that I do buy more than from any other source of reviews, and I subscribe to several reviews. I've yet to be disappointed in a book bought on the strength of seeing it reviewed in your pages.

So, "Keep on keeping on." I just wish space permitted more reviews.

Lenville Rogers  
Galveston

## Mate Wanted

We have a young female southern flying squirrel (all white belly fur), captured last July in northeast Texas, and presumably ready for mating. Here's hoping that another reader will have an available male. Stud fee is half the litter.

This animal, by the way, is a good pet, easily tamed, highly active, sociable, and a born show-off.

Robert G. Twombly  
708 Landon Lane  
Austin, Texas 78705

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## Back Covers

**Inside:** Mysterious beauty of Caddo Lake could be etched in the thoughts of many young anglers (see page 24). Photo by Leroy Williamson.

**Outside:** North Texas quail hunters don't have the thorny problems of those in South Texas (see page 2). Photo by Leroy Williamson.







