

Texas Game and Fish

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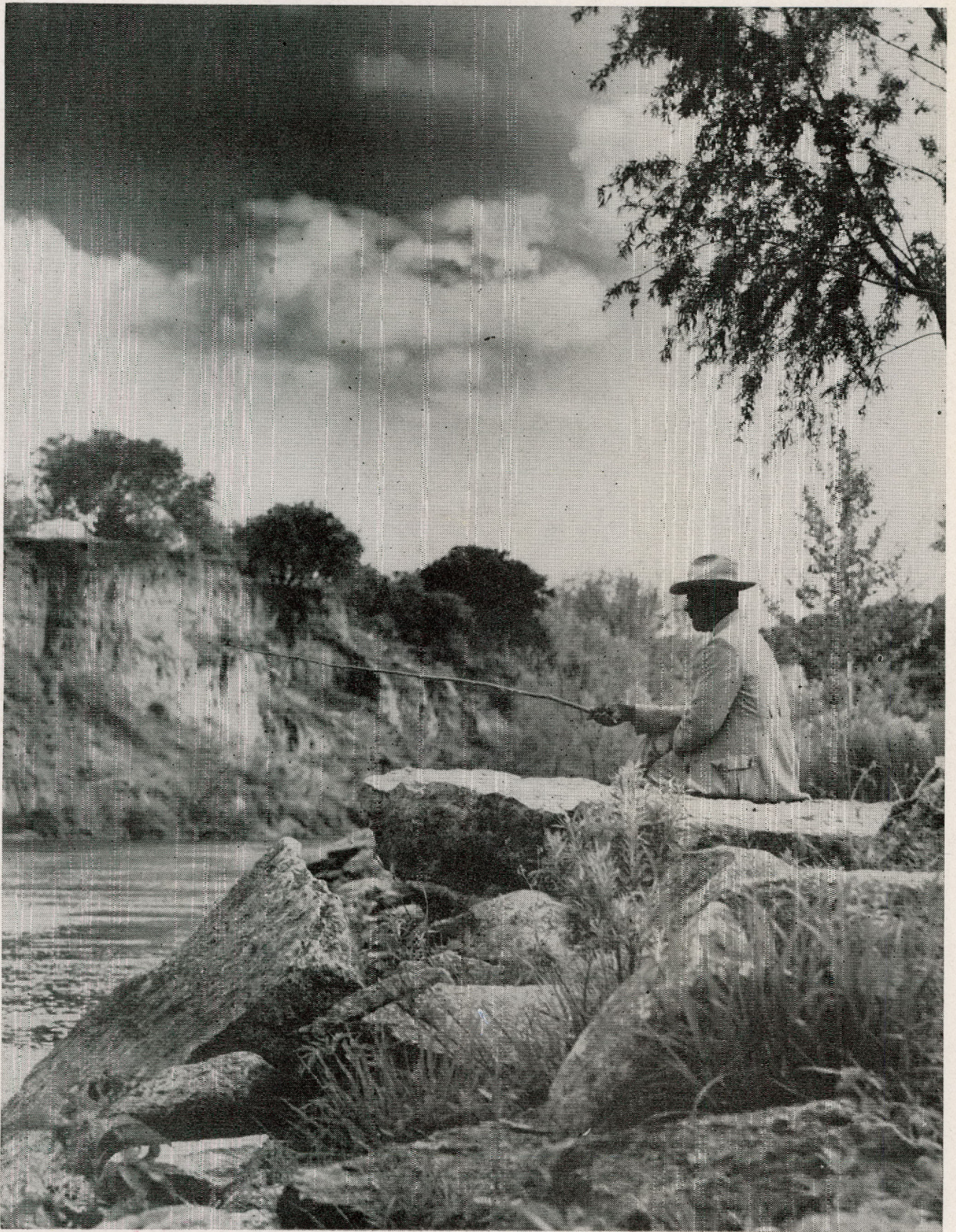
1950

TEN CENTS



ORICE

PICTURE OF THE MONTH



Texas Game and Fish

A MONTHLY MAGAZINE DEVOTED TO THE PROTECTION AND CONSERVATION OF OUR NATIVE GAME AND FISH; AND TO THE IMPROVEMENT OF HUNTING AND FISHING IN TEXAS.

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COVER—By Orville O. Rice

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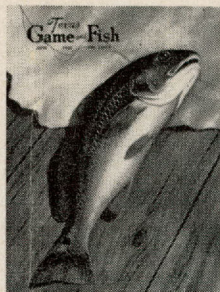
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ROBERT G. MAUERMANN
Editor



The Cover

The subject of this month's cover by Orville Rice will need no explanation to the salt water fisherman of the Texas coast. The redfish, channel bass, or red drum is considered by many to be the finest game and food fish of the Texas coast. By any name you choose to call them, and whether they are caught in the open surf or in the reeds at the bay shore, reds will always provide an angler with thrills long to be remembered.



East Texas Bushy Tails

A nervous bark disturbing the quietness of a cool autumn morning is music to the ears of the East Texas squirrel hunter for he knows that the game he seeks is nearby. Such a moment is dear to almost all East Texas sportsmen because squirrel hunting ranks as the most popular sport in the forested parts of the region.

In earlier days bear, deer and turkey were more popular game species. However, in those days, emphasis was on obtaining food and not so much on sport. And one squirrel was relatively unimportant as compared to a deer or turkey as a food item.

As the larger and more conspicuous game began to decline about the turn of the century, the gray and fox squirrels became more popular. Squirrels were also gradually decreasing though not as fast as the larger game, since they were able to reproduce faster and were more adaptable to many of the changes made by man in his exploitation of the frontier. Following this period squirrels were more eagerly sought and were among the first game animals to respond to regulated hunting and other widespread conservation methods which have been inaugurated in the past ten or more

years. Today, we have an increasing supply of deer and turkey in the forests of eastern Texas but squirrel hunting has remained the most popular sport.

Of the two species, the gray or cat squirrel is preferred by most hunters. This agile merrymaker has many cunning and sporting ways, but perhaps its habits of attempting to escape when disturbed rather than hiding as the fox squirrel usually does, attributes to its sporting qualities. The fox or red squirrel is lazy in comparison. Hunters also prefer the flavor of the gray squirrel. Its flesh is often fried while

the flesh of the fox squirrel is generally stewed by exacting camp cooks.

The favored gray squirrel has a more restricted range in Texas than the fox squirrel, being found only in eastern Texas from the river bottom forests of the northeast, west to the Trinity and Navasota Rivers. They are also found in the flat hardwood timber of the southeast, as far west as the Guadalupe river near Seguin. The fox squirrel enjoys a larger territory, being found throughout the State in the wooded sections, particularly along the streams, except in the trans-Pecos region and lower south Texas.

These ranges indicate former as well as present distributions. Gray squirrels, however, have been especially reduced and populations are spotted over a considerable part of the area. Originally the two species had distinct ranges; the gray squirrel was an inhabitant of the hardwood timber of river bottoms and flat woods, and the fox squirrel preferred upland pine and hardwood forests in eastern Texas and the thinner streamline timber of central and western Texas. Today these ranges are not as distinct. The more adaptable fox squirrel has invaded much of the former gray squirrel territory where overshooting and exces-

(Editor's Note: From a previous article by Rollin H. Baker which appeared in an early issue of TEXAS GAME AND FISH, this article is as significant today as it was when first published in 1943. Dr. Baker was a member of the restoration division of the Game, Fish and Oyster Commission before the war and is now a member of the staff of the Museum of Natural History at the University of Kansas, Lawrence.)

sive lumbering have depleted the gray squirrel population and habitat. The gray squirrel is less adaptable to man, his livestock and his land uses than the fox squirrel

Squirrels are prolific in their breeding habits. Two crops of young are produced annually and average two or three young in each litter. Though squirrels may be found breeding the year around in Texas, there are two peaks in the cycle with rutting periods in December and January and again in May and June followed by the birth of young in February and March and in July and August. The young squirrels remain in the nest for about six weeks before venturing out on their own. With such a high reproductive potential, squirrel populations can be increased through protection in a relatively short time as compared with deer and other game animals.

Unlike the fox squirrel, the gray squirrel prefers to live in groups and usually if one squirrel is seen, others are nearby. In territory inhabited by both gray and fox squirrels, the species are well segregated, the gray squirrels apparently drive away the fox squirrels.

Squirrels are most active during periods of food abundance as in late spring and early summer. During late winter and early spring when acorns and other fall mast crops have been exhausted, squirrels tend to hibernate. Likewise in midsummer when foods are not concentrated, squirrels are found to become somewhat inactive. Hollows are utilized more in winter while leaf and twig nests provide dens during the summer months.

Texas laws governing open shooting season have often been made with little regard to the breeding habits of squirrels. Numerous laws regarding the open season for squirrel shooting are in effect in East Texas. Many of these laws provide an open season during one or both of the rutting periods and during at least one period when a large percent of the females have young in the nest. Studies made by biologists of the Game, Fish and Oyster Commission and the Texas Wildlife Research Unit indicate that a uniform season should be in force and hunting should be limited to a two months season from October 15 through December 15. If a spring season is desired, a fifteen day season from May 1 through May 15 might be advisable. The bag and possession of 10 and 20 could be reduced to 6 and 12 as a further conservation move.

Regulating the kill of squirrels on a particular area can be the answer to most poor squirrel shooting conditions in East Texas. Studies indicate that two-thirds of the population on a given area should be left as breeding

stock, that is, only one-third should be harvested. This simple means has been practiced for as long as ten years or more in hunting clubs along the Neches and other rivers and has provided continued good hunting for club members. One club has harvested an average of about 500 squirrels for the past several years, indicating a kill of one squirrel to ten acres. Most of the hunting was done in October and early November, prior to the opening of the deer season. Squirrel populations in this and similar club areas are often as high as one or two squirrels to the acre.

Habitat for squirrels in East Texas ranges from poor to good; the most favorable territory is found in the central and southern parts of the region. Only with a correlated program of habitat improvement, repro-

duction management, and finally, controlled and sane hunting laws can an overall optimum of good hunting of squirrels be assured for Texas hunters.

The American black bear has disappeared from most of the plains states.

Porcupines are protected by their barbed quills which are easily detached from their owners' skins, but they cannot throw them at an enemy.

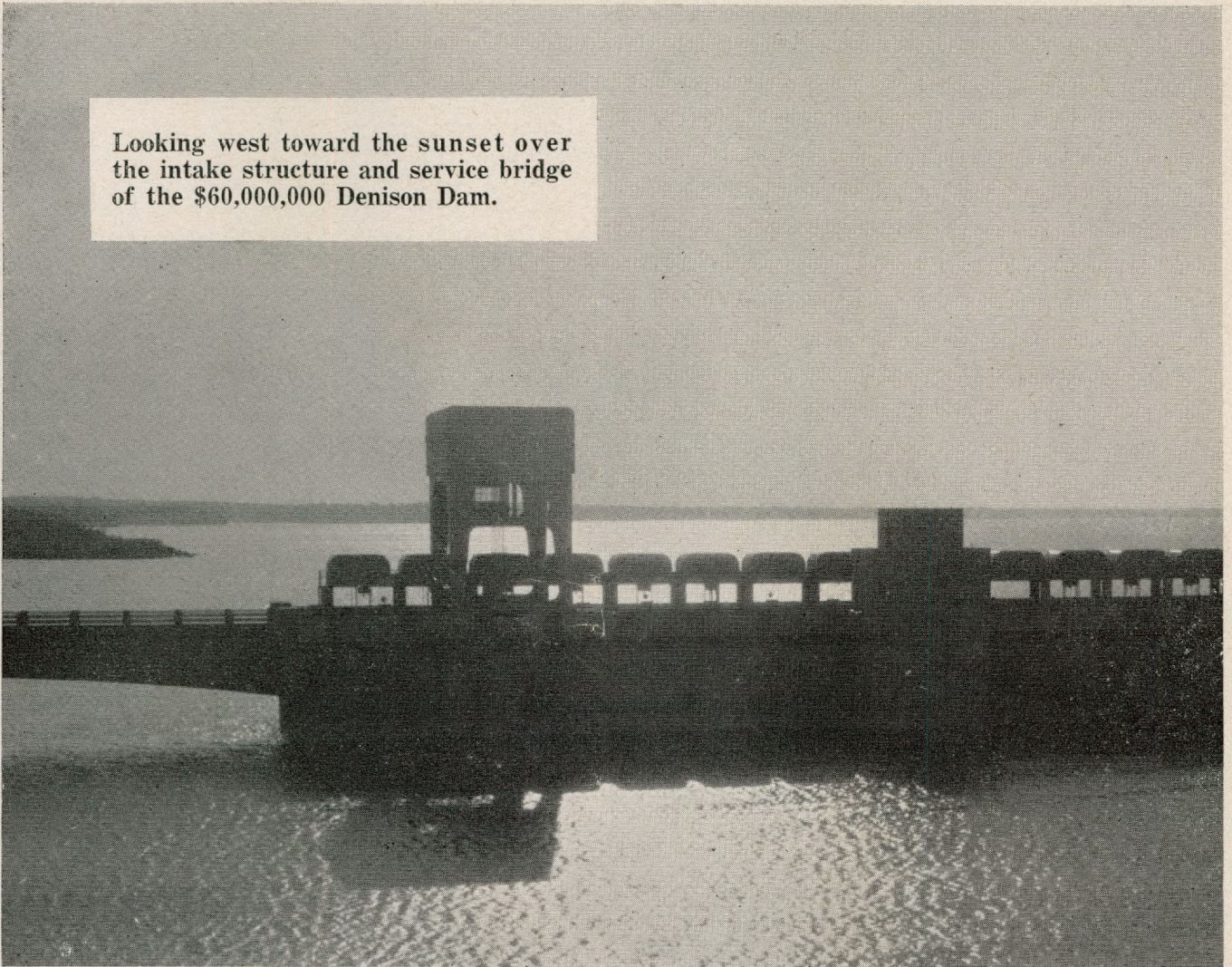
Beavers were the foundation on which the Empire State was built. Their numbers were reduced to fifteen in 1900 in New York. Conservation has restored this species and in 1949, \$900,000 worth of pelts were marketed in New York state alone.



Ear-tagging an East Texas fox squirrel (above) facilitates later study of habits, movements, reproduction, and other related factors. To the right, Rollin H. Baker releases the squirrel on a pecan tree.

Lake Texoma

Looking west toward the sunset over the intake structure and service bridge of the \$60,000,000 Denison Dam.



LAKE TEXOMA, the fourth largest artificial lake in the world, just north of Denison on the Red River, is expecting more visitors in 1950 than any similar park area in the United States. There's a good reason for these great expectations. This lake, the biggest body of water between the Great Lakes and the Gulf of Mexico, led the nation in 1948 and 1949 in the number of visitors.

Out of 178 national parks, recreation areas, national monuments, and national historical and military areas in the forty-eight states, Texoma proved to be the biggest tourist mecca during the travel year of 1948, which ended September 30, when more than 2,397,000 persons visited Texoma in the year ending that date. More than 800,000 cars visited the lake. The 1949 total attendance went over the

3,000,000 mark with more than 300,000 on July 4 alone.

In other words the Lake Texoma area is drawing more people than Yellowstone, Grand Canyon, and Yosemite National Parks, more visitors than historic sites like George Washington's home at Mount Vernon and the Roosevelt home at Hyde Park.

Here is how Texoma compared with other leaders in the National Park System in 1948: Texoma, 2,397,508 visitors; Lake Mead, 1,607,422; Lincoln Memorial, 1,504,677; Great Smoky Mountains, 1,468,636; Yellowstone National Park, 1,013,531; Washington Monument, 804,980; Yosemite, 749,861; Grand Canyon, 618,210. These are official National Park Service figures issued in Washington for the travel year ending September 30, 1948.

The number of visitors is determined by traffic counters on roads leading into the area. Watchers make spot checks of the number of people in cars. They find that the average number of people per car in the summer is 4.2 this number dropping as low as 3.1 at other seasons. Most of the visitors represent the six million inhabitants within a 200-mile radius.

Despite the fact that so many people are visiting Texoma, few realize the vastness of the waters impounded at the confluence of the Red and Washita Rivers by the \$60,000,000 Denison Dam and Reservoir.

Lake Texoma has a shoreline of 1,250 miles at spillway level, a shoreline which mostly is irregular, wooded, and fairly rugged. There are also some meadowed shores and natural beaches. The north shoreline of the

lake, 700 miles long, winds along the two rivers and their tributaries for a distance greater than the Western Front in Europe in World War II. The shoreline of the lake at the spillway elevation is equal to the distance from New York to Palm Beach, Seattle to Los Angeles, or Chicago to San Antonio.

Texoma has more than twice as much shoreline as all the Texas Colorado lakes put together. There are approximately 185,000 acres in the lake and recreation area. The number of islands in the lake have never been counted by the U. S. Corps of Engineers who control the Lake.

Fishing, hunting, and boating are the chief recreational magnets that are attracting people to Lake Texoma's shores and waters. The best hunting story about the Lake Texoma region is told about a big duck hunt in the fall of 1947 which involved thousands of hunters. What was estimated as "mallards by the tens of thousands" invaded the Oklahoma shore. A young Oklahoma farmer sent out a plea through the Associated Press calling for hunters to come and shoot the ducks that were eating peanut crops in the vicinity.

Hunters began arriving and shooting mallards by the hundreds. As a result, some of the ducks began flying across the lake to the Texas side. At the end of four days more than 10,000 hunters from a dozen states were after the goober-eaters with the result that the nimrods tramped more

peanuts than the waterfowls ate. There are two national wildlife refuges on the lake, one a 13,449-acre

tract near Tishomingo, Oklahoma, and the other a 11,300-acre tract near Hagerman, Texas.

The past summer there were 4,000 registered boats on the lake, with the number increasing each week. Two hundred applications for boat registrations were made during one weekend in June. In addition, the Engineers estimate that there are at least 1,500 unregistered boats under the sixteen-foot length on the lake. Among these craft is an ocean-going yacht once owned by William Randolph Hearst which has sailed around the world five times.

The Coast Guard recommends that boats used on Lake Texoma be at least sixteen feet in length, as it is considered dangerous for smaller boats to navigate the lake beyond sheltered bays and coves at any time. With this and other safety factors in mind, the Coast Guard constantly maintains a boat inspection program.

These safety precautions can be readily understood after seeing breakers roll ashore during storms and northers. Patrolmen have reported waves as high as fifteen feet during sudden spring storms and north winter winds.

One aquatic biologist has estimated that there are 155,000,000 fish in this fisherman's paradise. Homer Buck, Texas scientist, has indicated that something in the millions is as close as he can come to an exact estimate.



The setting sun flashes a silver path across a narrow arm of the lake on the Texas side.

One of the many quiet coves with steep wooded shores.





A visitor to Lake Texoma gazes out over one of the harbors supplied by streams running into the lake.



An air view showing some of the many islands.

(Photos Courtesy TEXAS PARADE)

There are more than thirty species of fish in the lake, the principal varieties caught being black bass, white bass, crappie, and channel catfish. The largest recorded black bass ever taken from Texoma was a nine-pounder. Blue catfish sometimes weigh up to 100 pounds.

One of the strangest fish stories told around Texoma is about the experience of Sam Crittenden of Denison. Sam went fishing just west of the Denison Dam, baited his hook with a piece of liver, then tossed it over his shoulder. Immediately he felt a tugging at the line. Looking behind him, he found a baby fox on the hook. The result was that Sam, instead of feeding on fish, fed the fox.

Six towns in the Lake Texoma areas in 1948 staged a \$200,000 fish rodeo over a five-month period. During the season 1,000 or more fish were tagged, worth various amounts in goods and cash. One of the fish, "The Ghost of Woodville," would have brought his captor \$1,500 in cash if he had been caught in 1948.

"The Ghost" was named for the town of Woodville, Oklahoma, which was moved out of its old locale, now on the bed of the lake. The fish was dropped in the water over the site of the old town. Inspiration for the naming of the fish came from the Lake Texoma legend that some of the Woodville citizens refused to move—that they still live in a watery home beneath the surface of beautiful blue Lake Texoma.

Swimming is also a popular sport at Lake Texoma. Last year more than 500,000 people visited Burns Run where a great fan-shaped beach is kept crowded throughout the summer. Circling the beach each evening are dozens of picnics, with the smell of roasting weiners, thick coffee, and charcoal broiled steaks keeping everyone hungry.

Lake Texoma is not listed as one of the nation's great scenic wonders, but it provides plenty of beauty. It has a number of matchless views across the open water to thrill the lover of natural beauty, and it is a continually changing spectacle. The sunsets of the Southwest are famous, and one across Lake Texoma's wide blue water is something to write home about.

Lake Texoma is sort of a crossroads of culture. In Texoma-Land, the area surrounding the Lake, there is a coming together of many cultures. Sherman, and the country east, is Southern in its background. And the old homes and the tall magnolia trees in Durant (there are more than 1,000 magnolias on the Southeastern Campus there) make one feel that he is in the Deep South.

On the other hand, the towns at

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DRY WHISKEY

BY J. L. BAUGHMAN

A common Texas cactus is the "teonanactl," the sacred mushroom of the ancient Aztec rulers of Mexico, who used it in their religious ceremonies.

Peyote, from the earlier "peyotl," or "dry whiskey" as the white man called it, is a common plant in that part of Texas which lies along the border. It is a spineless, succulent cactus, usually shaped like a turnip or carrot, which bears pinkish flowers in its season. The peyote of commerce, also known as "mescal buttons" is the dried flowering tops of this plant, a brown, bitter substance, nauseating to the taste, brittle and hard when dry, but which becomes soft when moistened. It has a very bitter and unpleasant taste, and an odor when moist that is peculiarly offensive, yet because of the effects produced by the drug anholonium, which it contains it was eagerly sought by the ancient Indians, and at one time in recent years its use had spread to the reservation

Indians in Iowa, Kansas, Montana, Nebraska, Oklahoma, and South Dakota.

The buttons are generally chewed and swallowed, but occasionally they are ground to powder, or tea is made from them.

The first effect of the drug is a pleasant excitement, a feeling of well being and friendliness to all the world. This is followed by a delightful flow of sensations, particularly when the eyes are closed, scenes of infinite beauty and grandeur passing before the mind and displaying a magnificent variety of color and form. Moments are as minutes, minutes are as hours and hours are as days. A man who has experimented with it says: "These sensations arise gradually, and are at first seen only with closed eyes, and in the early stages they show a wavelike motion in zigzagged lines, and on closing the eyes a kaleidoscopic play of colors can be seen. They assume all kinds

of fantastic shapes and they are never still. The effect of the sound of a piano at this time was most curious and delightful, the whole air being filled with music, each note of which seemed to arrange around itself a medley of other notes which appeared to be surrounded by a halo of color vibrating to the music."

The other side of the picture is that peyote lessens the bodily efficiency, impairing the steadiness and precision of movement and the accuracy and concentration of attention, as well as lessening the memory of ideas. It also produces certain diseases and leads to early decay and death.

According to the earliest explorers this plant was the subject of much reverence among the Indians of the southwest. The ancient Mexicans, like the Huicholes and Tarahumaris today, obtained their supply of this drug through messengers who, before being sent to the source of supply, were consecrated for the purpose, and who observed certain religious rites in collecting it, and who were received with ceremonial honors on their return. Lumholtz states that the Tarahumari worship various cacti as gods, to be approached only in the most reverential manner, with uncovered heads. When they wish to obtain these cacti they perfume themselves with copal incense, and with profound respect and watchful tenderness, dig them up, exercising great care that they do not hurt the gods, while women and children are warned from the spot. It is said that even the Christian Indians regard Hikori (peyote), the cactus god, as coequal with their own divinity and make the sign of the cross in the presence of the cactus god. At all festivals Hikori is made into a drink and consumed by the medicine man, or certain selected Indians who sing as they partake of it, invoking Hikori to grant "beautiful intoxication," making at the same time a rasping noise with sticks, while men and women perform a fantastic and picturesque dance, the women themselves in white petticoats and tunics, before those who are under the influence of the god.

Among the Kiowas and other Indians of Oklahoma developed another form of ritual. "Here," says Professor Safford, "the ceremony occupied about fourteen hours, beginning at 9 or 10 o'clock in the evening and lasting till well into the next day, for



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Look Before You Leap!

By Marian M. Goodrum

To most unsuspecting brides the great outdoorsman is an object of pride and is subject to romantic illusions. His obvious masculinity evokes confidence along with a sense of security. No one would ever mistake him for a sissy and he would surely bring home the bacon. His broad shoulders do not come off with his coat. His ruddy complexion is not a result of a sun lamp at the YMCA nor is it thin enough to come off in a few unexposed weeks.

Although the pride is not likely to fade, the romantic illusion is a little dimmed with closer contact. He does indeed bring home the bacon—and interesting hunks, at that—but the time consumed in doing so is at first amazing and then bewildering. Who would think that a quail hunt would require days and then one hunt lapse into another?

But the first thing you note about this type of husband is his peculiar habit of bringing the outdoors indoors. There is the matter of muddy boots, cuffs filled with grass and dirt; there are feathers, fish scales, dogs, dog hair and dog tracks along with a

good many other things not too compatible with a neat house. When inside, the outdoorsman is always hot. The windows must be up to cool him off and provide plenty of fresh air. This he thinks toughens and makes stronger the poor, unhealthy female. And no doubt it does!

With the hunter husband there is the matter of preparing the kill for the pot. This traditionally is a job for the woman. I am sure that girls brought up in the country are well aware of the fact that even chickens in their natural state come equipped with feathers and insides and have had enough experience with such things to be able to cope with them. On the other hand, to less fortunate girls, whose poultry comes from the market, craws and gizzards come more or less as a shock. Coping with them adequately is far outside their sphere of skills. Do not be discouraged! If you do a thoroughly bad job of it from the very beginning, your outdoorsman will soon learn the necessity of doing it himself. Of course, you will be reminded occasionally that women "ain't" what they used to be. Do not

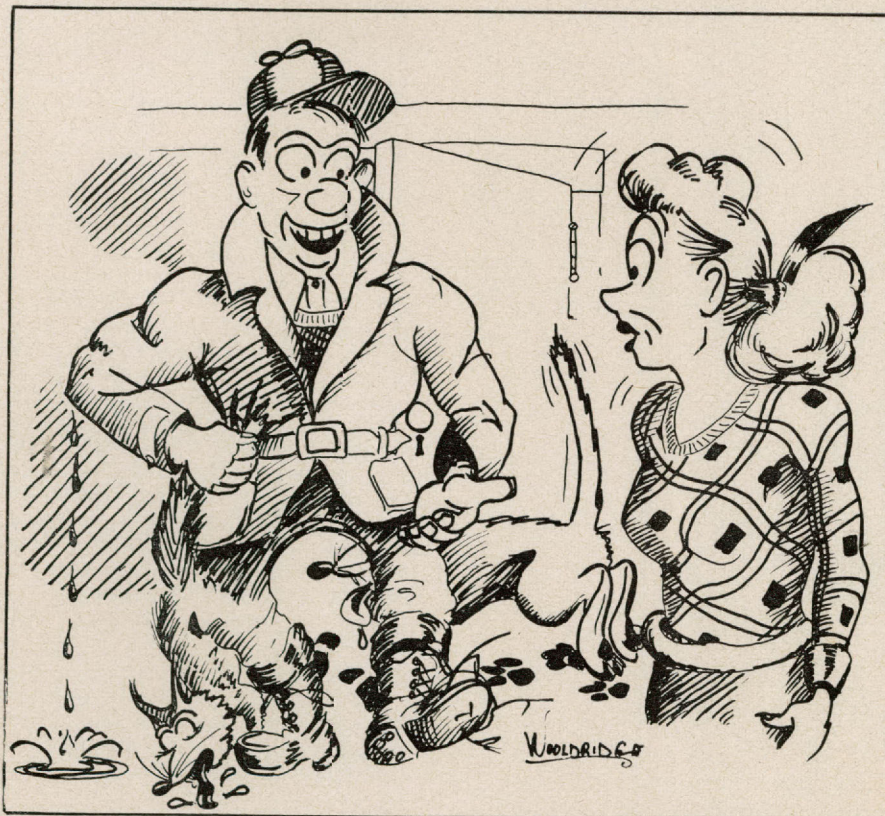
get your feelings hurt because you know that in many ways men aren't either. Just keep it to yourself.

You learn early that a man who lets his wife tag along on sorties of the kill is not only weak and subject to ridicule, but is spoiling the fun for the rest of his fraternity. However, gentle hints, such as threats of a suit for alienation of affection or divorce, often crumble his pride and he succumbs to introducing you to the wonders of harvesting the wild. Of course, the day just happens to be the coldest, rawest day in history; the location, old fields whose innumerable fences are either too low to crawl under or not steady enough to crawl over; the grass, high enough to hide old rows made during cultivation, the furrows of which are well concealed traps for you to fall in.

The quail is a smart bird. When it is cold he has sense enough to stay home in a tight little bundle with the rest of his brothers. Therefore, to discover him and rout him out of his warm place you have to walk and walk and then walk some more. Most of the day is spent just walking or climbing over a fence or trying to keep your fingers from dropping off.

After becoming numb from cold and fatigue, a field lark startles you by flying up at your feet. You, of course, blast away, seeing only the bird and not your outdoorsman who falls flat on his face to avoid the shot. This does not improve his disposition. Finally, toward the end of the day one poor creature is felled and the dog brings you a poor, limp thing, still warm with life, whose feathers are rumpled somewhat by the shot but whose beauty is still apparent to your tired eyes. You think of its mother and father and brothers. Maybe it had some little ones or even a wife. You think of the joy it must have known in the freedom of the wild. Then and there you decide that harvesting such a thing is definitely in the world of the outdoorsman and not in yours.

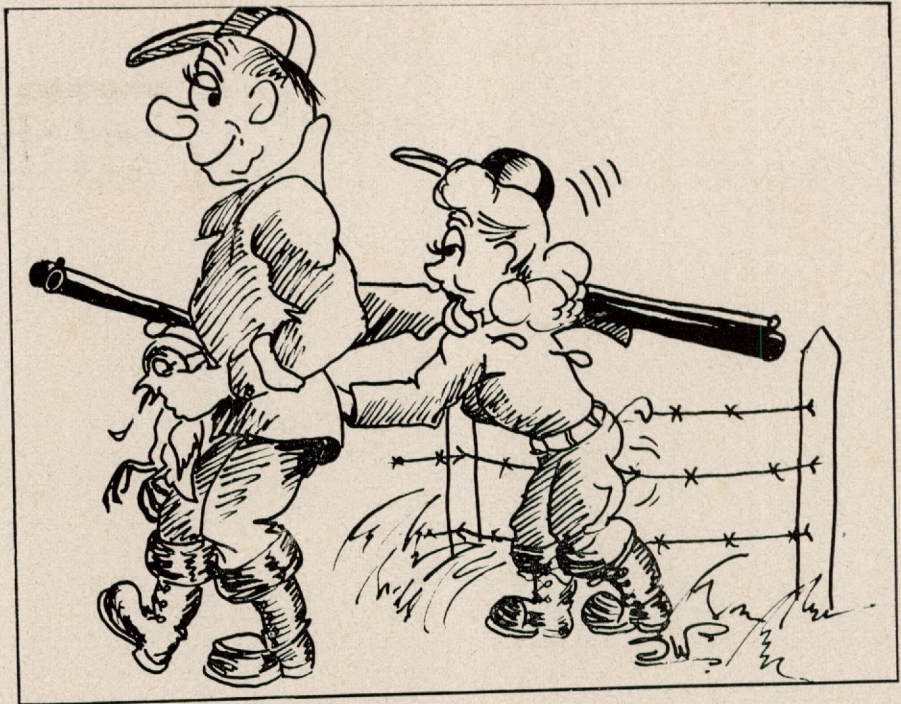
But finally hunting season closes—and you heave a sigh of relief. You look forward to days of contentment when your outdoorsman will be around for a while. Do not allow yourself such foolish day dreams. No sooner has hunting season closed than it is spring and there is the call of the bass. Now, there, you think is



a sport a woman can really enjoy. Again you are mistaken. Only a few hardy and persevering souls ever overcome their handicaps. Of course, after you learn how to get in and out of a boat without upsetting it, you can always learn to handle the oars! But the back lash of the casting rod and the wily ways of the bass are matters too confounding for the ordinary gal.

However, summertime at last settles into such hot days that even the fish seek the cool refuge of the lower regions of the lake. You think surely the outdoorsman will make his world more at home and find some recreation in such things as mowing the lawn. Again! Do not be mistaken! There is always golf.

The common toad eats 10,000 garden pests a year. His work is worth \$20.00.



Ways to Prevent Forest Fires

Farmers and landowners may keep their own woodland acreage from being added to the total of 30 million acres that probably will be burned this year by following ten precautionary measures recommended by the U. S. Forest Service. The rules are simple and the methods recommended are neither costly nor time consuming. If followed, they may save the landowner from heavy financial loss.

Recommended protective measures are:

1. Plow fire lanes from 4 to 6 feet wide between your woodlands and adjoining woodlots and keep them clean. If the timber holding is large, break it into 20- or 30-acre blocks separated by fire lanes.

2. Cut or plow under dry weeds and grass on open strips around forest edges and along roads and railroads adjoining or crossing the property.

3. Build firebreaks by hoeing lanes down to bare soil around any sawmills, cottages, frame buildings or other structures in the woods to prevent spread of fires. Picnic spots, in particular, should be given this treatment.

4. Be certain that tree tops and limbs left by loggers are cut and broken into small pieces and scattered over the ground to hasten decay.

5. Clean up debris and trash that might constitute fire hazards about buildings.

6. Keep fire-fighting tools available and in good condition. Hoes, rakes, axes, shovels, water buckets, and "fire swatters" made of 10- by 18-inch strips of belting fastened to hoe handles should be kept at a convenient central location or in strategic caches through the woods.

7. Keep wells clean and in good repair. Provide dipping places in streams or arrange for a water supply in barrels in or near the forest. Barrels of sand kept near buildings are useful for combatting small fires.

8. Know the telephone number of your local fire warden or fire department and keep it posted within easy reach of the telephone.

9. Work out a mutual fire prevention program with your neighbors.

10. Obtain and use posters from your nearest state, federal, or local forest officer or from the U. S. Forest Service, Washington 25, D. C., to warn visitors and workers against carelessness with fire.

Seventy-five percent of the timber holdings in the United States are in small blocks averaging only 62 acres in size and owned by some 4,200,000 individuals. If even one in ten of the owners take these precautions, the cumulatively staggering loss of timber, pulpwood, wildlife, soil fertility, and stream productivity which the nation suffers each year could be reduced materially.

LAKE TEXOMA

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the western end of the Lake—Gainesville, Marietta, Ardmore—are definitely Western. Theirs is the cowboy culture, and their speech and dress are thoroughly Western. Oklahoma, of course, has a rich cultural heritage from the Indians, and the story of the Five Civilized Tribes who were driven west by brutal white people is a saga to rank with that of the Vikings and the ancient Greeks of whom Homer wrote. Not far away is the Spanish culture, and all menus in towns around the Lake abound in Mexican dishes.

Texoma-Land is a wonderland in many respects. Within easy driving distance are great ranches, hundreds of oil fields, fast-running streams, waterfalls, fantastic geological formations like Devil's Den and the Arbuckle Mountains, mineral water-wells, and tall forests.

Using Texoma-Land as a base of operations, the tourist can find any type of scenery or sport he may desire, all within easy driving distance. Lake Texoma is the center of a great land—a land filled with the robust traditions of the Southwest, yet brim-full of the vigor and confidence that has made the Southwesterner a striking, if somewhat too boastful, figure wherever he goes.

FISH WORMS

Mature Red Wrigglers

Carefully Selected

100 — \$1.00 500 — \$4.00

1,000 — \$7.50 Postpaid

GILL'S WORM GARDENS

Box 385

Meridian, Texas

BIRD HUNTING WITH

WE HAVE JUST returned from an exhilarating bird hunt. Dr. Robert Lockwood accompanied my wife, Doris, and me to a point on Aransas Bay near Rockport called "The Cove." The shooting could have been excellent. But we did no shooting. We hunted with binoculars.

The "tag" as a result was heavy with a kind of meat seldom brought home by the average sportsman. For the first time in my life I had seen a Least Tern, a Baird's Sandpiper, a Reddish Egret and a Loggerhead Shrike.

I have no quarrel with the sportsman, for I like to eat birds as well as he. I would have enjoyed dining on the fine specimen of Redhead Duck we saw on the bay. But when we left our tourist cottage shortly after dawn we all went somewhere in a sense other than the physical. Most sportsmen, poor fellows, often travel a couple of hundred miles to kill quail or ducks without spiritually ever getting beyond their garage doors.

But from long experience with them I know the killers don't like the idea of binocular bird hunters' feeling sorry for them. They are happy in their viewpoint, and can defend it well. They shout louder than naturalists, and are more numerous.

The two kinds of hunters most likely will always sniff condescendingly at each other. If sportsmen persist in thinking the bird watcher a sentimental highbrow, the naturalist can take refuge in W. H. Hudson's admirable verdict that people with no knowledge of birds are "negligible persons." There is ample room for both attitudes.

For reasons partly obscure and in part glaringly obvious, the number of bird watchers in the United States has increased steadily in the last fifteen years. A deep inner force seeking reasons for the harshness and complexities of living is at work. The search for a sense of unity in Nature was never more intense. It is not an idle coincidence that a pocket-sized

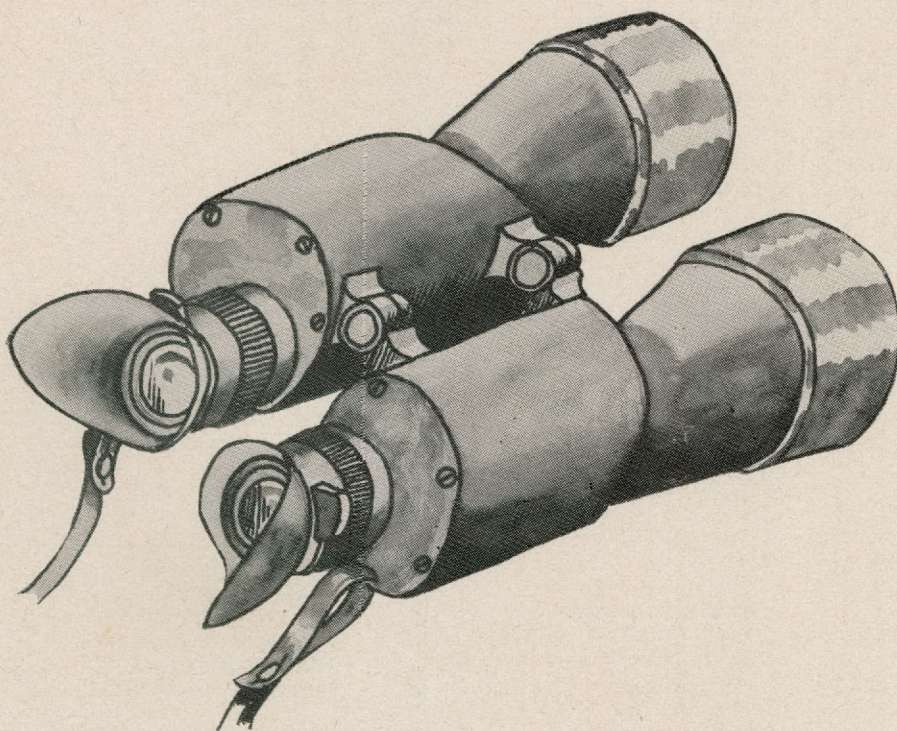
handbook for field identification of birds is one of the best sellers in America. It is "A Field Guide to the Birds," by Roger Tory Peterson. The publishers warily brought out an edition of 2,000 copies in 1934. All were sold in a week. Another 5,000 were printed and just as quickly disappeared. To date, nearly 200,000 copies have been sold and Peterson has written other books with equal success.

Among bird watchers I am a newcomer of only two years' standing. I know very few birds. But I am an expert on the problems of the beginner. I would like to be of help to those just starting out, and I believe I can best do this while I am still a beginner. We all admire the bird authorities, but too often they scare people stiff. They drive perfectly good prospects to golf by rattling off Latin names of birds too early in the game. So this and succeeding articles will be written from the only point of view I have—that of a greenhorn.

If you want to know something about bird life, the first step is to seek out a person who is well versed in the subject but who would be the last one on earth to claim he is an expert. Avoid professional wildlife biologists like the plague. They might fit into the picture later, and again they might not. Finding an expert who lays no claim to being one will be as difficult as finding any other honest man. But they do turn up, and in the most unlikely places. I found mine on a creek bank.

His name is Roy Bedichek. His friends call him "Beddi." For more than twenty years as a newspaperman I had known him by reputation for his great work among Texas school children. He is practically the daddy of the Texas Interscholastic League. I had never met him personally. The opportunity came in the summer of 1948 at Barton Springs, a swimming hole west of Austin.

At that time his first book, "Adventures With a Texas Naturalist," was going great guns both in this country and in England. Now the English edition has been sold out and the American edition, with revisions, is in its third printing. Peterson's guide



BINOCULARS

says, "This is what the bird looks like." Bedichek goes further and says "Let's see what we mean to each other." Whoever owns one book should read the other.

This remarkable man, alert and physically fit at 70, talked of trees, wild flowers, literature, birds and more birds as if each leaf, petal, book page, and feather had confided in him some special wisdom on condition that he reveal it, in plain terms, to others. I knew game birds fairly well, but I had never heard of a Canyon Wren, a Painted Bunting or a Cedar Waxwing. In no time I was in the market for binoculars. And I had the warm feeling inside that if those glasses tried to tell me a Sea Gull was an English Sparrow, "Beddi"

BY FRED D. THOMPSON

would be on the creek bank the next afternoon to straighten things out.

By good fortune there were others at the swimming hole almost daily who talked the same language. Dr. Thomas P. Harrison of the University of Texas English faculty studied ornithology in his student days at Cornell. In class he talked of Spenser and Shakespeare. At Barton's he talked birds. Mrs. Frank Dobie is a sharp observer, and her husband "Pancho" knows more about the subject than he will admit. When such birders hear that an outsider would like to join them they seem to form a gentle conspiracy to smooth the way. One day that summer a bird, colored red, lighted in a poplar tree behind the diving board. My wife announced it was a Cardinal. I agreed. Dr. Harrison patiently explained that all birds colored red are not Cardinals, and certainly not "Redbirds." What we were looking at was a male

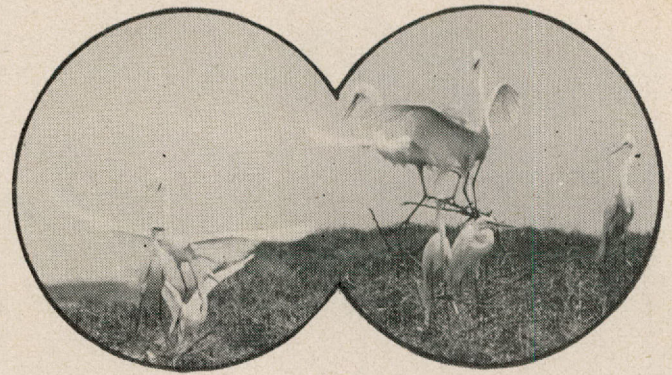
Summer Tanager. That was our first bird off the beaten track of Mockingbirds and Bluejays. A few moments later a creature with a gawky neck flew into a tree behind the poplar. It's a strange time to be seeing ducks, I thought (aloud.) A premature duck season was avoided by Dr. Harrison's identification of the bird as a Green Heron. We now had two "firsts." The Dobies had given us a Peterson guide as a wedding present. While Mrs. Dobie was nearby one day the book chanced to be open at a color chart showing Flamingoes and Roseate Spoonbills. Doris pointed to the Flamingo, saying she had seen hundreds of them on the Texas coast. Mrs. Dobie immediately asked if she were sure. Certainly. Then where? And when? She didn't want to dispute anybody's word, Mrs. Dobie said, for it could be possible that numbers of Flamingoes had at some time appeared there without having been seen or reported by any other person. But so far as she knew, she added, only one Flamingo had ever been seen on the coast. Doris was on the ropes. What she had seen were the brilliantly-colored Roseate Spoonbills.

Any beginner will make similar busts. You also will ask a lot of questions that later may seem foolish. But your friends will forget the mistakes, and the more questions you ask the more they will appreciate your enthusiasm.

The next step for the amateur birder is to get good binoculars. You

should buy nothing but the best. They will cost money. There are a lot of war surplus glasses on the market now, some of them fairly useful and others practically worthless to the birder. What you need is a pair with power and a field of view that lets in plenty of light. A bird of intricate plumage seen through a half-fog might as well not be seen at all. Pre-war German glasses such as the Zeiss or Hensoldt are among the best ever made, but they are rare. The Zeiss glass I use was produced shortly after the war. It is an eight-powered set with a thirty-millimeter field of view, and for me it is satisfactory. It cost \$180 two years ago, but the price is now lower. Try out your friends' glasses and then determine what suits you best.

When you have talked with the naturalists and bought your binoculars, you will look forward to going on a bird walk with a person who really knows birds. We had been on field trips in our fashion for a year before the chance came to go out with a real birder. At Barton's on a Saturday afternoon in June, 1949, Dr. Harrison asked us to go out with him early the next morning. We accepted and then on the way home got the shivers. Vast opportunities for revealing our stupidity spread out before us. We began to doubt whether we could even operate the binoculars. But we were ready to go at dawn next day, shivers and all—and we'll tell you about it in the next issue of this magazine.



A Thrilling New Experience for Outdoorsmen

Marine Seminar



A "field" trip at sea marked the summer marine seminar at the Game, Fish and Oyster Commission Marine Laboratory at Rockport. These two trawlers, shown rendezvousing over the shrimp beds, carried a portion of the 282 persons who spent three days studying on both land and water. Aquatic specimens were the objective of these seaborne students and wildlife specialists.

THE MARINE LABORATORY of the Texas Game, Fish and Oyster Commission has begun, with the establishment of its Semi-Annual Marine Seminar, an experiment in education.

Primarily these seminars were designed to present to Texas colleges and universities a carefully planned and thoroughly integrated series of lectures on the marine sciences and their complete interrelationships with the economic life of the state, and to give a broad background against which our present knowledge can be more easily correlated. It was felt that such

a background could not be acquired by sporadic field trips which many of them had been making to the laboratory.

Speakers of outstanding authority in their fields were asked to present lectures on various phases of the subject. Such men as Dr. A. C. Chandler at Rice, Dr. Brian Eby, Geological Consultant; Mr. Paul Weaver of the Gulf Oil Company; Mr. Monroe Shigley, Chief of Research, Dow Chemical Company, and Dr. Karl P. Schmidt of the Chicago Museum of Natural History (to mention only a few of

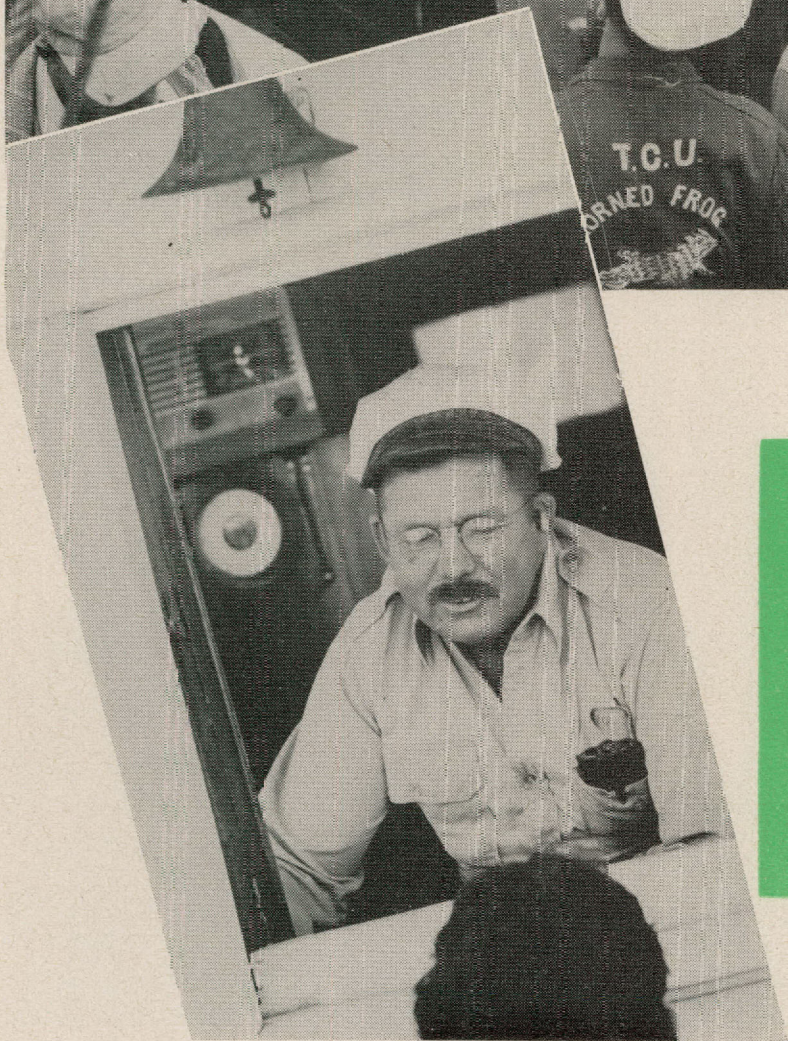
many) have already appeared on the programs.

Response to the seminars has been most gratifying. Attendance at the first session (October 23-29, 1949) was 159 persons, from 32 organizations. At the second session, held from April 6-9, 1950, 282 people, representing 43 organizations, were present. One of the interesting things about the second session was the increased attendance of personnel from non-educational institutions and industrial laboratories, along with a number of the commercial fishermen, dealers and sportsmen along the coast.

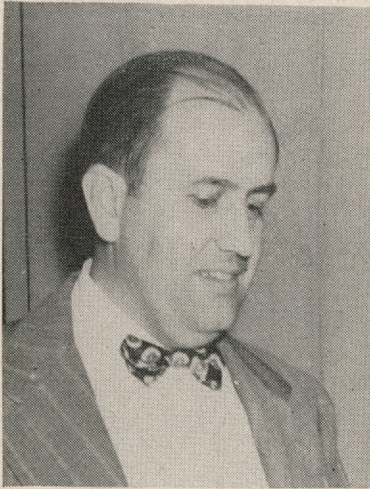


The Command Post for the summer seminar at Rockport was the Game Fish and Oyster Commission Marine Laboratory at upper left. One of the college students who attended the four-day session to study oceanography and other subjects is shown registering. He is Vohnnie Pearson, Laredo, student at Texas A & M. Handling the desk routine is Mary Lou Truitt of the Marine Laboratory staff. Entire families joined the seminar show. Typical were Dr. Willis G. Hewatt, professor of biology at TCU, and Mrs. Hewatt, and their daughters, Joan, left, and Beth, right.





No time was lost even while enroute to shrimp beds at the Rockport seminar. A TCU biology instructor, with whistle string around his neck, is shown above briefing some of his students on the day's objective. There's certainly no doubt about the favorite school of the young chap with the sailor hat, standing with his back to the camera in the center. Captain Jones of the trawler Corinne B, was being pleasant under difficult circumstances when this photo was snapped as he sat in the pilot house window. He's explaining to the youth, the back of whose head is shown at the bottom of the photo, that a crank has just snapped on a winch, delaying seining temporarily



Some of the key figures in the summer marine seminar at Rockport are shown above. Top row, left to right, are: Dr. Karl P. Schmidt, Natural History Museum, Chicago; Jack Baughman, Chief Marine Biologist, Texas Game, Fish & Oyster Commission; R. J. Cummins, Consulting Engineer, Houston. To the sides, left and right, are R. A. Geyer, Humble Oil and Refining Co., Houston, and Dr. Dale F. Leipper, head of the Department of Oceanography at Texas A & M. Below is the durable Corinne B. taking aboard a full quota of life preservers for one of its several "field" trips at sea.



Wildlife Transplanting For 1948-49

By W. C. Glazener

Distribution of transplanted game and fur species* in Texas for 1948-49 is indicated on the accompanying map. Each circle on the map represents a separate restoration area, with a letter symbol to designate the species involved.

In the first few years of game transplanting, most of the consignments went to areas in the western half of Texas. Subsequently, landowners and other residents in eastern Texas developed an increasing interest in the work. As a result, transplanting emphasis has shifted more and more to East Texas. This tendency shows clearly on the distribution map.

For the year in question, nearly all of the deer and turkey releases were in the eastern half of the state. Because of antelope requirements for wide expanses of open country, certain species of vegetation for food and rather definite climatic conditions, it has not been feasible to introduce them farther east. Transplants in Clay, Bosque, and Kleberg Counties are purely experimental. These localities are on the eastern margin of original antelope distribution. In each of these instances, special local range conditions gave particular promise for antelope survival and increase.

As has been explained in previous articles, restoration areas are selected on the basis of established standards and qualifications. Such areas must include the type of habitat suited to the species under consideration. They must also contain sufficient acreage to allow normal daily and seasonal movement of transplanted species. Landowners are required to waive hunting rights on restocked big game for five years and to extend other reasonable protection through the period.

Game department technicians inspect proposed areas, discuss all phases of restoration and management problems with interested landowners, and make recommendations relative to action on requests. Stocking of approved areas ordinarily occurs between October 1, and February 28, the period in which trapping and transplanting is most feasible.

In the 1948-49 season, all transplanted deer came from the Aransas National Wildlife Refuge, Aransas County. Some turkeys came from the same place, while others were taken from the Lambshead Ranch, Shackle-

ford County. Antelope were trapped from ranches in Brewster, Crockett, Reagan and Upton Counties. Only nuisance beaver were moved, some from Limestone County and others from Wheeler County. By special arrangements, Texas game trappers collected one load of nuisance muskrats from rice irrigation canals in Louisiana.

At this time only deer stocking shows consistently satisfactory results. There are indications that a number

of earlier turkey restoration efforts failed because of roost shooting and other human disturbances. While most beaver transplants establish themselves, they frequently do so at some distance from the release site. Small pastures, illegal shooting, extremely low winter temperatures, and possibly natural predation apparently govern success of restocked antelope. As yet, muskrat reactions have not been determined.

ANTELOPE TRANSPLANTED IN 1948-49

Restoration Area	County	Numbers		Total
		Male	Female	
Ellison Tom	Andrews	9	26	35
W. F. Long	Bosque	4	5	9
King Ranch	Kleberg	12	38	50
C. H. Dowden	Crane	6	15	21
Waggoner Ranch	Wilbarger	4	4	8
Hapgood Ranch	Clay	4	10	14
Allen Bird	Garza	3	6	9
P. K. McIntosh	Schleicher	3	5	8
P. G. Northrup	Bandera	4	4	8
Cornell Ranch	Jeff Davis	7	28	35
Big Bend National Park	Brewster	23	59	82
TOTAL		79	200	279

DEER TRANSPLANTED IN 1948-49

Restoration Area	County	Numbers		Total
		Male	Female	
Catfish Creek	Anderson-Henderson	20	53	73
Woodstock	Bowie	29	55	84
Caney Creek	Freestone	50	41	91
Chapel Hill	Freestone	72	48	120
Tehuacana Creek	Freestone	76	61	137
Three Rivers	Live Oak	33	14	47
Taylor County	Taylor	48	46	94
Heep*	Hays	9	—	9
Wood*	Williamson	5	6	11
TOTAL		342	324	666

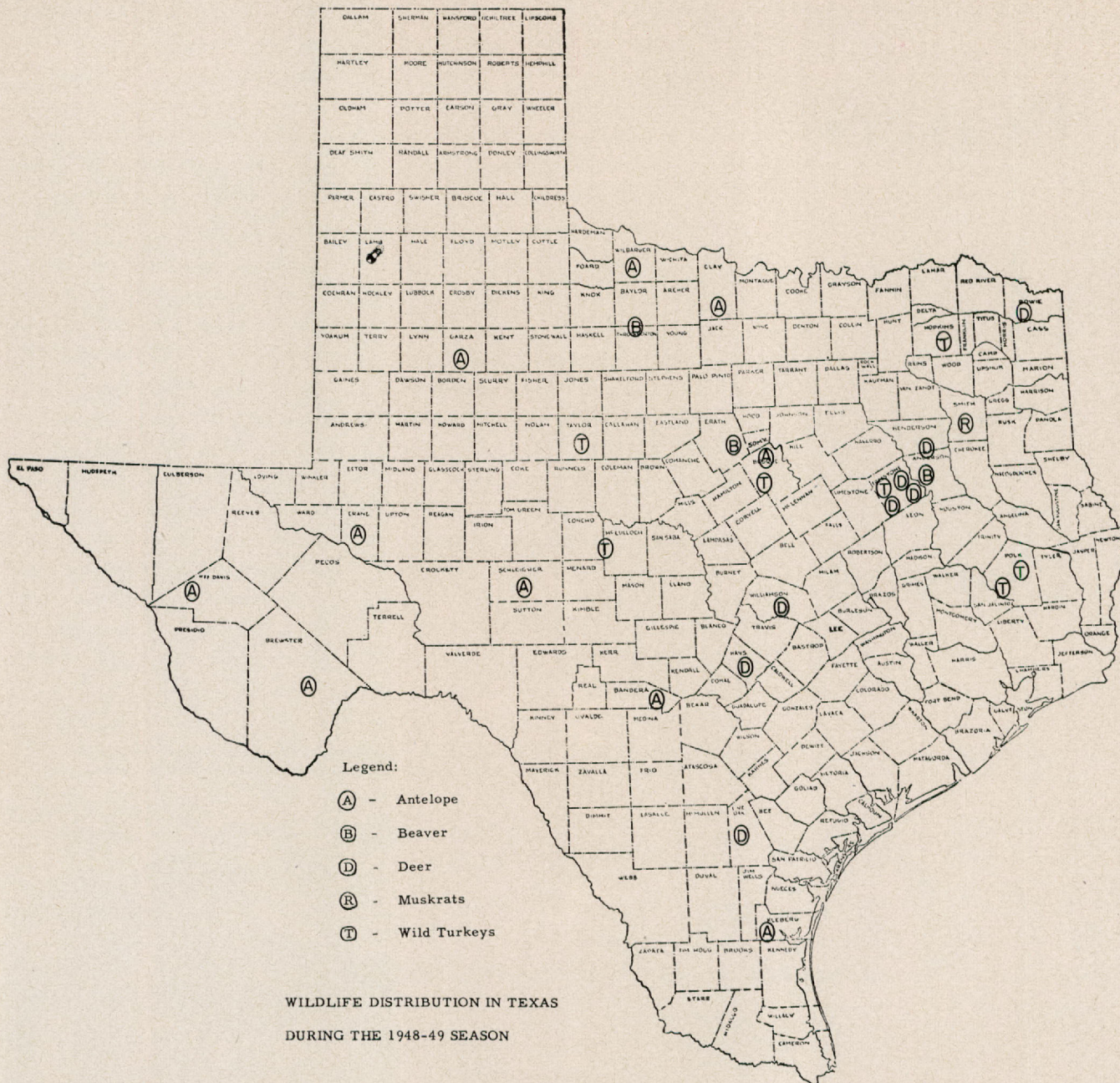
*Non-Federal Aid releases.

WILD TURKEYS TRANSPLANTED IN 1948-49

Restoration Area	County	Numbers		Total
		Male	Female	
Flattop Ranch	Bosque	13	30	43
Tehuacana Creek	Freestone	*	23	23
White Oak	Hopkins	5	55	60
Camp Creek	McCulloch	5	22	27
Mill Creek	Polk	17	3	20
Piney Creek	Polk	10	10	20
Taylor County	Taylor	10	9	19
TOTAL		60	152	212

*Work conducted under Federal Aid Projects 24-D, 26-D, and 28-D.

*This area received an excess of young gobblers the preceding year.



Conservation Awards Offered Boy Scouts

Conservation-conscious since their organization 40 years ago, the Boy Scouts of America now may compete individually for a special conservation award given through the courtesy of the New York Zoological Society in memory of the late Dr. William T. Hornaday.

In order to apply for the award, scouts must show outstanding achievements in two major activities; by bringing about, through their own initiative, a change in policy or practice on the part of three or four farmers, property owners, or sportsmen toward the wiser use of natural resources;

and by helping start a "going" conservation program in one or more organizations in their community. To qualify, all participating scouts must work under the guidance of a recognized conservation agency or technician, and they must back up their claims of achievement with news articles, letters of recommendation, and endorsements. Individual projects in the first category include the encouragement of crop rotation, strip cropping, contour plowing, terracing, and other soil conservation practices; construction of farm ponds; discouragement of needless burning and grazing of woodlots; the elimination of

sources of pollution; by the planting of wildlife areas; and the encouragement of farmers to seek advice from qualified technicians on the use and management of land. Under the second category a scout may qualify by arranging meetings, which include adults, to consider local conservation needs and methods to be addressed by the representative of a recognized conservation agency; by helping start a community forest for the education and recreation of residents of the community, and in similar ways.

This is a program which organized sportsmen will do well to support if local youths ask their assistance.

Beavers

Fight

Soil

Erosion

FRANK CARGILE of Arden has employed new means to fight soil erosion. He now has eleven beavers on a section of Rocky Creek that runs through his place. The dam-builders were furnished by the Texas Game, Fish and Oyster Commission.

Cargile, who received the last five animals only recently, says that the original six had already begun a diminutive dam. Even though it is a trashy-looking affair, apparently made of sticks that had been floating on the creek, it is a start at water control. Jimmy Miller, game commission employee who brought in the mammals, says it will be at least six months before they build "much of a dam." However, they will clean a lot of material out of the stream before then.

When Miller took the animals from the canvas-covered cages at Rocky Creek they were blinded by the sun. They were then taken to the edge of the water and liberated. After a few seconds, each beaver slapped his tail on the water and dived.

Unless a pond becomes overcrowded, a beaver will not go far from his home; however, he will go a long way to find a new one.

Jim White, district game warden stationed at San Angelo, is working with the Division of Wildlife Restoration in placing the animals. Ranchers who want beavers may obtain them free from the state by filling out the proper forms. P. D. Moseley and his aides trapped the beavers shown in the accompanying article at Canadian.

Jimmy Miller, left, is releasing a beaver into Rocky Creek on the ranch of Frank Cargile of Arden, who is shown at the right. Miller is holding the animal by the tail, since the beaver is unable to bite when handled in this manner.





In the above photo, the beaver scurries into the water to join ten others which were brought in to stabilize water flow. The animals were furnished by the Texas Game, Fish and Oyster Commission.

WASTED WILDLIFE

TURN BACK THE HISTORY of wildlife in America to the period of 1850 to 1900 and you will find many examples of wasted wildlife, for it was within these years that man slaughtered, wasted and misused the populations of wild mammals, fish and birds and brought about the lowest ebb in the numbers of wildlife this country has ever known. During these years the market hunter and pot-hunter plied their trade. The feather business for the millinery trade was in full swing and the vogue for collecting bird eggs was at its peak. This was the period before adequate game laws and restrictions. The idea of conservation had not yet been born!

Why was our wildlife wasted so thoughtlessly during this time in our history? Several things contribute to the picture. The fowling piece of the early pioneer had been replaced by the more efficient rifles and improved ammunition of the day. This was also the time in our history when vast areas of wilderness were being opened up by land and timber grants. Railroads pushing westward brought the evils as well as the benefits of civilization to the frontier. America appeared to be a land of plenty and things were to be had for the taking. Who in 1850 thought about conserving timber or rangeland? Who living in those times thought that the buffalo, antelope and elk roaming the western ranges would ever be reduced to the danger of extinction? No one living in those times foresaw the need for conservation of anything, or that the spread of civilization could drive wild game from an area by axe, fire and plow.

The American buffalo or bison that once roamed the vast grasslands from Virginia to the Rockies represent our first shameful deed to wildlife during this period. Once estimated at seventy-five millions, the buffalo drifted north and south with the seasons. In 1869 the main buffalo herd was divided into separate herds by the completion of the Union Pacific Railroad. In May 1871, Colonel R. I. Dodge of the Army saw an unbroken herd of buffalo stretching along the Arkansas River for twenty-five miles. This was the southern herd, estimated at 500,000 animals. The northern herd contained about 1,500,000 buffalo. With the building of the railroads came the need to feed the crew members. Therefore each railroad hired professional buffalo hunters to kill a certain number of animals each day. Buffalo Bill Cody, hired as a buffalo hunter for the Kansas Pacific Railroad, killed 4,280 buffalo in the early 1870's. As the railroads progressed westward the hide hunters attacked the herds of buffalo. Hundreds of animals were killed for their tongues, which were considered a delicacy. An idea of the work of these hide hunters is evident when in 1872-73 the Atcheson, Topeka and Santa Fe and the Union Pacific Railroads shipped 1,250,000 buffalo hides to eastern markets. In Wichita, Kansas, at that time buffalo steaks sold for two cents a pound. The southern herd was attacked by hide hunters in the fall of 1871, and by 1875 that herd was all but wiped out. With the completion of the Northern Pacific Railroad in 1880 the grand attack on the northern herd of buffalo began. By 1883 all but 900 of this herd had been exterminated. Today the total of American buffalo living in the world, in parks, reservations and zoos, number about 5,000.

Gone are the days when the passenger pigeon clouded the sky by the millions. This bird, resembling our mourning dove, was wiped off the face of the earth in about fifty years. Hunted by guns, dynamite, fire, nets and clubs this bird could not live with civilization. These birds were

once so plentiful in the middle western states that factories were set up for the canning of them; at these factories the pigeons were smoked, salted and pickled for eastern markets. For example, in 1869 the town of Hartford, Michigan, shipped three carloads of dead pigeons each day for forty days to eastern cities making a total of 11,880,000 birds. Another town shipped over 15,840,000 passenger pigeons to market in one year. These birds were so numerous that their numbers were never known. One flock was observed in flight that measured one mile in width and 240 miles in length—the total estimated at 240 million pigeons. In 1914, the last passenger pigeon known to exist died in a zoo cage.

The wasteful chapter continues, as historical records show that some market hunters killed over 500 bucks in a single day. Hunters killed as high as 160 squirrels per day. Antelope were so common that the early westerner shot them as carelessly as a modern hunter shoots a rabbit. Ruffed grouse were shipped to eastern markets by the thousands, where they were sold as low as twelve and one-half cents each. Ducks, rabbits, wild turkey and venison and even songbirds were placed on the market.

It was very common in the late 1880's for cheap whiskey to be shipped in to the logging camps of the northern states and traded for venison. Hired hunters killed and sold deer at \$3 a head to large hotels and restaurants. In most large cities venison sold as low as ten cents a pound.

Nor was the market hunter the only waster of game. We cannot forget the plume or feather hunters that killed not for meat, but for the feathers of the birds. It is hard to believe that songbirds as well as flamingoes, egrets, scarlet ibis, bird of paradise, and many other birds were sought out and killed for their colorful plumes. Records show that in the early 1900s at the regular London feather auction, 1,600 hummingbird skins sold at two cents each, and 22,810 kingfisher skins were offered to the highest bidder.

The most startling of all historical records of this shameful period is a court record of 1903. The State of New York tried two men to enforce payment of fines amounting to \$1,168,315 for illegally having in their possession in a cold-storage warehouse the following game and non-game birds: 7,560 grouse; 4,385 quail; 1,756 ducks; 288 bobolinks; 96 woodcock; 8,058 snow buntings; 7,607 sandpipers; 5,218 plovers; 7,003 snipe; 788 yellow legs. By way of explanation, at the turn of the century in New York City a half dozen species of songbirds were served in hotels and restaurants under the menu name of "reed-bird."

Also in this period are the records of terrible slaughter of waterfowl. Market hunters operated in the big marshes along the Atlantic coast, the Gulf coast and in the big marshes in Utah. The methods of slaughter used in obtaining the birds varied with the hunter. Punt guns, guns of large caliber loaded with scatter-shot, when discharged would kill entire flocks of rafting ducks. Powerboats, sailboats, baited blinds, nets and long barreled rifles requiring two men for operation were also employed. Records for a day's kill made by a market hunter were seldom published; however, one record occurring in 1906 reported two men armed with automatic shotguns killing 450 geese in a single day.

Reports of shooting contests are to be found in old records. One account of a "squirrel hunt in Bartholemew County, Indiana," in 1834 reveals a rivalry between Sand

Creek and Wayne Townships as to which had the best squirrel hunters. "Finally it was agreed that each township would select 50 men to compete in a three-day squirrel hunt to be terminated by a great barbecue for which the losing side was to pay. The total number of squirrels killed by the winning team is not known, but the individual championship went to a man for killing 900 squirrels in three days. The runner-up killed 783."

Virginia had her share of mighty hunters. It just takes time to uncover the records of their deeds, for such things are hidden in old newspapers, books and diaries. In the Rockingham (county) Register of November 29, 1877, is the following article about the late James Todd of Rockingham County: "He was the most remarkable hunter in the valley of Virginia, having killed over 2,700 deer up to 1860 with one muzzle loading rifle . . . he had killed bear without number." Records show that a Mr. Rexrode of Highland County killed 207 turkeys, 111 deer in his lifetime, mostly for the market, and sold hundreds of grouse at fifty cents each. Abner H. Smith of Ogles Creek, Allegheny County was another Virginia hunter of great ability. Mr. Smith kept records of his hunting trips from 1885 until his death. He had killed 220 deer and over 60 bear in thirty-six years, which still remains as somewhat of a record in the mountains of Virginia.

Slowly, restrictions were put into effect that ended this period of man's wasteful war on wild game. Market hunting was first tabooed by the State of Arkansas in 1875 and later became nationwide. The first bag limit appeared in Iowa in 1878. The first warden system started in Massachusetts and New Hampshire in 1850. Punt guns and other illegal weapons used for shooting in rafts of waterfowl were outlawed in 1865. Shooting waterfowl from power-boats, sailboats, was outlawed in 1897. Federal supervision of interstate shipments of game began in 1900 with the Lacey Act.

As the twentieth century began the conservation movement was gaining momentum. The administration of Theodore Roosevelt brought conservation to the public in his idea of "conservation of natural resources through wise use." Thus the shameful, wasteful years in the history of wildlife in this country came to an end.—Virginia Wildlife.



Albino Skunk Is Taken Alive

An actual ghost wouldn't have been much rarer than what two Shaw Bend stock farmers saw one night this spring while they were hunting foxes. An albino broad stripe skunk crossed their trail and was captured alive.

This unusual incident was accomplished without damage to the men's olfactory organs. Thus it required no Sherlock Holmes to trace the reason for this pleasantly strange development. The perfumeless seizure was effected simply because the cat qualified as a double rarity, it being unequipped with the fragrance peculiar to polecats.

The men, Aubrey Spears and Henry Dickison, were sitting down, enjoying

the musical concert of their baying fox hounds when the white creature appeared. Since skunks are near-sighted, the bleached beauty slithered very close to the hunters before it stopped. Unhampered by the usual smelling screen, the hunters tapped the skunk over the head with a stick and captured it alive.

Spears and Dickison took the prize to the San Saba News and posed with it for a portrait as unusual as a tintype. The article accompanying the bizarre picture was rather frank and very careful to observe the libel laws. Great pains were taken to point out that the faint polecat odor doubtlessly came from association with plain every day skunks.

Dry Whiskey —

• Continued from Page 9

one of the peculiar effects of the drug is that it enables the user to go without sleep for long periods of time. The worshipers sit in a circle inside the sacred teepee with a fire blazing in the center and the exercises open with a prayer by the leader, who then hands each man four buttons, which he takes and eats in quick succession. In eating, the dry mescal is first chewed in the mouth and then rolled into a large pellet between the hands and swallowed, the man rubbing his breast and the back of his

neck at the same time to aid the descent. After the first round the leader takes the rattle, while his assistant takes the drum, and together they sing the first four times, with full voices, at the same time beating the drum and shaking the rattle with all the strength of their arms. The drum and rattle are then handed to the next couple, and so the song goes on around and around the circle with only a break for the baptismal ceremony at midnight and another for the daylight ceremony until about 9 o'clock the next morning. Then the instruments are passed out of the sacred teepee, the sacred foods are eaten, and the ceremony is at an end."

Cue For Quail



Jerome levels his gun for the big kill. Will it be duck or quail? Only the bird knows.

By Leighton B. Dawson

"Quack, quack, quack, quack," was what we heard right outside our blind early one morning last December. Our Pullman blind, that is. The pseudo quacks were coming from my esteemed brother, Joe, who had come down to meet us at Corpus Christi.

This little outburst of mimicry was Joe's idea of arousing a couple of would-be hunters, me and my son, Jerome, 12. Joe had called us the day before. "Please come quick," he said. "The ducks are eating us up down here." Naturally we had to come to his rescue as soon as possible. We got there overnight on the train.

Joe took us right over to Port Aransas. We were across the ferry and well on our way down the island before it began to get good light.

As we whipped in and out among the dunes, we came up on a fresh water slough that was black with

ducks. They flew up in a big cloud, and when they did, it was about all I could do to restrain my youngster, not to mention myself. But as we rode on, we saw something else that gave us pause. A big covey of quail flushed right in front of our car.

Joe slammed on his brakes, and we grabbed our guns and broke out of there like a riot squad, followed by Jerome.

"Get on back, son," I said. "This is for men only."

But Jerome didn't brush off that easy. He was right behind us. We fanned out and eased up on the quail, with me fighting a rear guard action against Jerome every step of the way.

"Go on, Jerome, and get back," I said.

"But I wanna shoot one, too," he yelped.

"No, no. Get on back," I hollered,

raising my voice a little, "you don't know how to shoot quail."

"Aw, please let me go," he begged.

"No, no," I roared.

That flushed the quail again, but Joe and I had a perfect shot at them—and both of us missed. In fact, we emptied our guns at them, and not one single bird fell.

We followed them all the way up to the high dunes overlooking the Gulf itself, but no birds.

We didn't feel much like talking when we got back to the car. Jerome had something to say, though.

"Gol-ly," he moaned. "Whyn't you let me shoot, too?" And then he added, "I could have done that good."

All I could say was, "That just goes to show you Jerome, you can't expect to get quail on a duck hunt." Joe also put in his two cents' worth. "Yeah, it's practically impossible without dogs. It's two different kinds of hunting."

We dropped that subject and started giving Jerome some pointers about hunting ducks.

When we got to our duck-hunting place, the first thing we had to do was fix up our blinds. There were two of these, and each consisted of a shallow hole scooped out of the sand, with palmetto leaves strung around it. When we got the blinds fixed, we put out the decoys, and then we were all set.

The shooting was pretty lively for awhile, but when things slowed up, Jerome began to get restless. It is pretty hard to keep a youngster crouched up in a blind very long. His eyes began to wander.

"Say, how about letting me go out there and scout around a little. Maybe I could kill something walking around."

"Oh, no son," I said. "You can't kill anything out there. This is the only place we have a chance to get any game."

But that did not hold him for long. In a minute or two, he said, "I thought I saw some birds flying around over there a little piece. How about letting me go over there and take a shot at 'em?"

"No, you don't see any birds over there," I replied. "And if you don't be still, we won't see anything here."

"Aw please lemme go," he pleaded. "There's not any ducks coming in now."

"Well just what is it you think you



could shoot out there, anyhow?" I asked him.

"Well, I might get a quail," he countered.

"Oh, so that's it," I replied. And then I launched into detailed discussion of how hard it is to get a quail; how it takes a dog to hunt them. And a good dog, too.

I also explained to him that different kinds of hunts take different kinds of equipment. And that while decoys, and duck calls, and hip boots and blinds are useful on a duck hunt, that these could not very well be used in hunting quail.

He still was not entirely satisfied. But by the time he had knocked over our shot-gun shells in the sand for the third time; spilled our drinking water, and loosened some of the palmetto leaves around our blind, I was about ready to let him go anywhere.

It did not take us too long, though, to get our limit. By ten o'clock that morning we had filled our bag.

Then came the hard part: cleaning the ducks. Jerome picked one duck, and then he was ready to do something else. It wasn't long before he began to talk about walking around a little

bit, and shooting something.

"Whaddya think you're going to shoot, Jerome? A snipe? Or maybe a quail?" we kidded.

"Oh, I dunno," he countered. "But I bet I can get something."

He wandered off with his gun and we could hear him shoot every now and then.

After a while, he came back, with a bird in his hand. When he got near enough, we hollered at him, "What you got there, boy?"

"Oh, I got a quail," he called to us.

We knew good and well that he did not have a quail. But we hated to spoil his illusion.

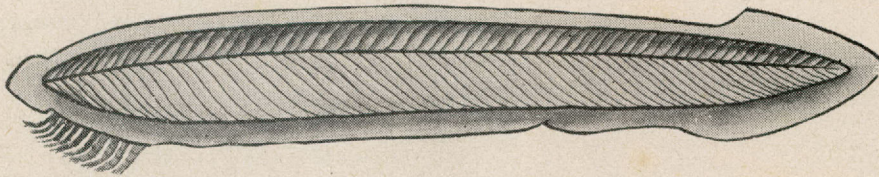
When he got a little bit closer, we could see what it was. We realized then that it wouldn't do to kid the youngster about it. He was too elated, for one thing. But that wasn't the main reason.

The main reason was, he really had a quail.

The cougar is called a mountain lion in the Northwest, a catamount and a "painter" by early settlers in the East, puma by the Latin Americans and panther in the Gulf Coast states.

The Marine Fishes of Texas

By J. L. Baughman



LANCELETS ARE the most primitive of fish or fish-like vertebrates; backboned animals reduced to their lowest form. They have no skull, and a simple cord of cartilage serves the purpose of both backbone and skeleton. They have no limbs and their heart hardly resembles a heart at all. Their blood is colorless. Their bodies are slender, translucent, and pointed at both ends, with slightly developed folds of skin serving as fins.

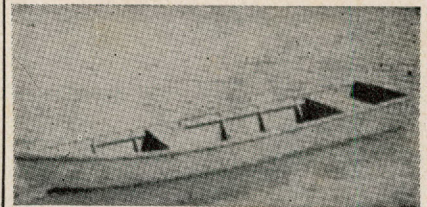
Lancelets are found in most of the tropical and semi-tropical seas of the world. They live buried in the sand in shallow waters along the coast. The Mediterranean species ranges northward to England. Others are found as

far north as Chesapeake Bay, San Diego, and Misaki in Japan. The largest (about 4 inches long) is a species found near the mouth of San Diego Bay. The smallest species rarely reaches a length of over one-half inch.

Until recently it was not known whether any of these animals occurred in Texas. However, on August 25, 1948, Mr. T. E. Pulley, of the University of Houston, took a number of them while dredging in Lydia Ann Channel near Port Aransas.

These animals are of great interest to anatomists because in them lie a clue to the evolution of the structure of all the vertebrates, including man.

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FISHES OF TEXAS

THE GAR

By MARION TOOLE

GARS ARE probably hated by fishermen more than any other species of fishes. If fishing is poor in a lake and some gars happen to be part of the lake's fish population, the anglers are sure that you needn't look further for the answer as to why fishing is poor. Gar are also vicious and evil looking and that doesn't help their reputation any. The author has heard some people say they look sneaky. Yet gars are interesting fish.

Like the paddle-fish and sturgeon, gars can trace their ancestry to the Eocene Period, probably 50,000,000 years back, and they are consequently important to students of ichthyology.

Possibly the appearance of gars and the peculiar use of their air bladder is a carry-over from prehistoric days, when it was necessary for them to have adequate protection and a good weapon for attack. The protection is amply provided by the ganoid scales that cover these fish. When dressed down the scales look like ivory and are as hard. A scale the author removed from a large gar measured three-sixteenths of an inch thick. It is easy to see why it would be hard for another fish to bite into a gar.

Gars are also armed with a vicious set of sharp teeth that constitute a good weapon of attack. Another interesting characteristic is their air bladder. Probably when gars first appeared on this earth the waters in which they lived were swampy or boggy, and occasionally the water lost all of its dissolved oxygen. As a result, most of the fish present died of suffocation. Because of these conditions, most of the prehistoric fishes had auxiliary breathing organs. This is true of the gar. Their air bladder is so constructed that it can be used as a lung, permitting the gar to survive in water in which bass, catfish, etc. would die.

All anglers familiar with gars have seen them break the water surface, give off a bubble of exhausted air, take a gulp of fresh air, and dive. When they are so engaged you may be sure that they are using their air bladder for breathing. When the staffs of aquariums bring these fish in for display specimens, they capitalize on the fact that gars have air bladders. Gars can be hauled out of water and merely wrapped in wet burlap sacks for short journeys. When the gars are

replaced in water they are held at the water surface with only their snouts sticking out of water until they take a gulp of air. As soon as the air is taken the gars are released.

Four species constitute the gar family. These are the alligator gar, *Lepisosteus spatula* (Lacepede); the spotted gar, *Lepisosteus productus*, (Cope), the short-nosed gar, *Lepisosteus platostomus*, (Rafinesque) and the long-nosed gar, *Lepisosteus osseus*, (Linnaeus). One of the above species has never been observed in Texas. All the others occur in sufficient numbers to cause anguish to the anglers. Every fisherman knows what a gar looks like, but not all of them know how to tell one species from the others.

The alligator gar has a wide short snout with large teeth in the upper jaw in two rows on each side. The other three species have large teeth in the upper jaw in a single row on each side. The long-nosed or fish gar has a long, slender beak, while the short-nosed and spotted gars have shorter and broader beaks. In fact, the head structures of the last two species are very similar with one exception. The spotted gar has spots on top of its head while the short-nosed gar has no such spots.

All gars spawn in a similar manner. Their eggs are deposited in May or June. Some probably spawn in April and others as late as August. They spawn in shallow water either on weeds or on rocks. The eggs hatch in about eight days. Anglers have found that even though gar eggs are poisonous to chickens, they apparently are not poisonous to catfish which can be usually caught by fishing under the spawning gars. The catfish's stomach will be full of gar eggs.

The young gars lie on the water surface drifting around like small pieces of straw, catching any small animal life that should happen along. The author captured about seventy-five young gars and placed them in an aquarium for observation. These young were fed water fleas. Soon some of the gars began disappearing. Observation revealed that some of the young gars were eating their brothers and sisters. All the young were finally consumed except two large, hardy individuals. In the Dallas public aquarium a large display tank of gar was maintained. The three species of gars

found in Texas were displayed in this tank. Alligator gars in that tank caught and ate all the long-nosed gars that were shorter than themselves.

The gars' diet is mainly fish. Stomachs of some have been opened and found to contain mice and rats. Crayfish and insects are also eaten. Many food studies have been made by fishery workers throughout the United States. Their work deals mainly with all species of gars except the alligator gar. The various fishes that were found in gar stomachs were catfish (bullhead), bluegill, crappie, other small sunfishes, pike, yellow perch, minnows, carp, and shad. Of the hundreds of stomachs opened, only a very few contained black bass. Apparently one of the favorite diets of specimens up to two inches long is mosquito wigglers. After gars pass a length of two inches, they eat fish.

Recently fishery workers have been finding that poor fishing can be partially attributed to the fact that crappie, bluegill, bullhead catfish, and sunfishes are so prolific that they soon overpopulate the waters they happen to be in, and a stunted fish population is the result. Workers have also found that bass are unable to prevent overpopulation. Perhaps, we can, therefore, consider gars as desirable members of a fish community, because gars eat and help the bass to keep down the number of fish in a body of water, thus helping the anglers to catch larger fish.

There is much yet to be learned about gars before we condemn them or leave them unmolested.

Several means of catching them may be employed. Pound nets, gill nets, hoop nets, and trammel nets can be used. On warm nights gars sleep on the water surface. By placing a bright, shielded light on the prow of a boat and drifting along, a sportsman can gig many gars. They provide excellent sport to an angler if the fisherman will follow the directions given in "Gar Fishing is a Thrilling Sport," which is included with this article.

Regarding sizes of gars, the various species vary. The alligator gars are the largest, some of them reaching a size of twenty feet. Long-nosed gars are large at about four and one-half feet and the other two species grow to be about six feet long.

Gars are mainly inhabitants of fresh water, but they also enter salt water and are found in the Gulf of Mexico and its bays.

Economically, gars are unimportant, except that some beautiful jewelry is being manufactured from their scales in Louisiana.

Gar meat is most tasteful when smoked; otherwise, it should be baked or boiled. When gar meat is fried it is seldom thoroughly cooked; and any fish not thoroughly cooked is undesirable. Quite a large amount of gar meat is now being sold in some fish markets. The eggs or roe of the gar are toxic and should never be eaten or fed to chickens.

* * *

Bending rods, long runs with lines swishing, the fish repeatedly leaping tarpon-like out of the water, all making a test of skill, sums up sporting pleasure that makes you give a bow of admiration to the previously lowly-regarded gar.

Requirements for entering this new realm of angling pleasure being rapidly discovered by Texans are simple. Needed equipment is a spool of No. 30 hair wire (cost 10 cents), a few No. 7 long-shank hooks, several buck-shot weights and a cork float. Your line can be placed on a casting rod, fly rod or long bamboo pole. The lighter and more limber the pole or rod the more fun for the angler.

The loop, or noose shown below in detail was perfected by Jack Sparks of Waco. It takes only one minute to make a loop by following the above instructions. After the noose is made be sure the hook hangs straight in the middle of the noose. Tie the loop to your line and place a shot weight above the loop. Set your cork at from one to four feet, the depth being arbitrary and depending upon how the gars are running. On a warm, sunny day they will be close to the surface. Gars apparently are not afraid of boats and will strike the bait even a few feet from one.

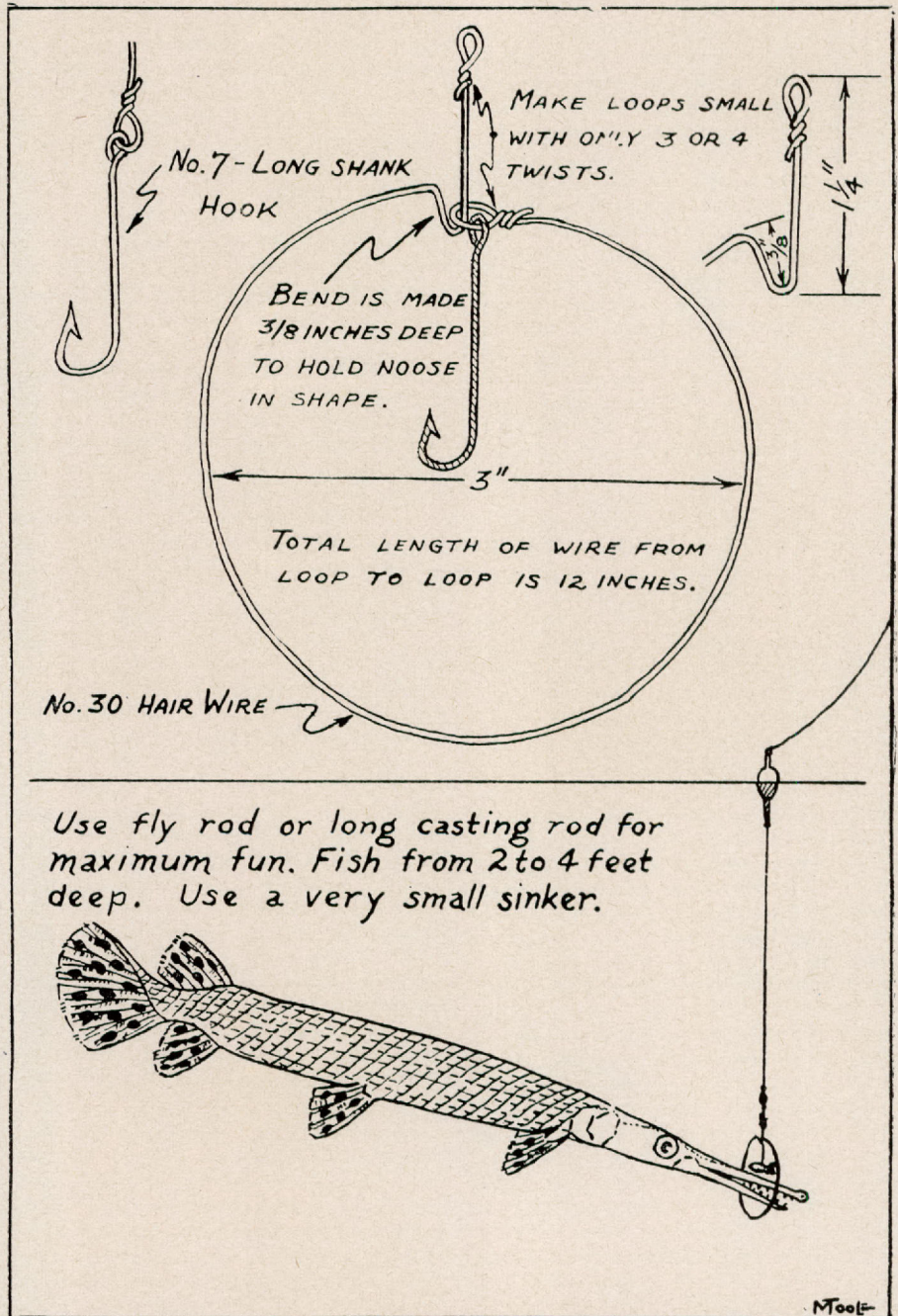
Minnows are used for bait and it has been found that live bait is best, although gar will take dead minnows readily, especially in waters not abundantly supplied with minnows. The gar sticks his snout into the noose and strikes sideways at the minnow. At times it is almost impossible to be certain whether you have a strike, so at the slightest strange behavior of your cork, give a hard, rapid jerk to your line in order to draw the noose tightly around the snout of the gar. If you struck true, the fight is on. Many fish will be lost at first, but with practice you will capitalize on more and more strikes until you

are catching a high percentage of fish.

Gar usually travel in schools and are most considerate about letting their presence be known because of the necessity of their breaking water as a part of their process of breathing. Concentration of gar will usually be found below dams on rivers and in coves and inlets of lakes. When you locate a school of these fish and swing your baited noose into the water the fun begins.

Many anglers do not care about catching fish to eat, but merely fish for fun. Many bass fishermen release

their catches. Tarpon fishermen expend much energy bringing a silver king to gaff, yet the tarpon is not edible. You might think it below your dignity to fish for gar, but many ardent bass fishermen of the old school who have recently tried out gar fishing now openly admit it is the greatest fishing they have ever indulged in. Too, by killing the gar you catch, you are helping to restore the balance between game and rough fish and thereby doing your part in fish management work. The main idea to remember, however, is that gar angling is a thrilling sport. Try it once and you'll be an addict for life.



FRESH WATER FISHERIES

Chapter XII

By J. G. Burr

The size and tug of the fish and the frequency of bites chiefly concern fishermen and few are interested beyond that point until size and frequency become unsatisfactory. So, with a decline of the supply came the demand to look into the causes and discover means of replenishment. This meant, in the first place, regulation in the taking of fish, and second, a study of species, their relation to each other, their enemies, and the conditions governing production.

The general break-down of American fisheries was given official recognition in 1874 when the federal government created the U. S. Fish Commission with authority to command the resources of science in an effort to restore the supply. It was a cautious adventure with no outlay of money at first, but merely a simple provision for the appointment of a civilian to carry on investigations.

Spencer F. Baird, Assistant Secretary of the Smithsonian Institution, had already begun such studies. He was appointed and soon the federal government was full panoplied and equipped in the fight for better fisheries. The annual reports of the commission were replete with the results of study, and under such high sanction the spread of fish culture became rapid. Within a few years dozens of states were propagating fish and, as heretofore mentioned, Texas made its initial effort in 1879 when J. H. Dinkins, also without pay, was assigned the post of State Fish Commissioner. The record of that commission has been given in an earlier chapter along with its warning that aquatic life was making its last stand.

How it happened that fish were disappearing from the virgin waters of Texas when its other resources had hardly been touched can be explained only by those whose memories reach back to that period. The poisoning and dynamiting of fish was common, and we are told of great fish fries when hundreds of people would gather on a stream for a big time. A seine would be stretched across from side to side, each end being attached to a saddle horn, with frequently two horses on each side, and the river was dragged. Hundreds of pounds of fish were thus drawn from the stream, enough to supply the white folks, and to make liberal distribution to the Negro camp followers who returned home with their plunder. With little or no law to hinder, and with the limited means of entertainment of those days, it was natural for the

population to turn to such diversions, and it is easy to understand the wholesale destruction of fish that resulted.

Back in 1891 when the state was making no move in the direction of fish culture, the Barton Springs hatchery having been abandoned in 1885, the U. S. Fish Commissioner sent Barton W. Evermann and William C. Kendall to Texas to study its fishes with a view to establishing a fish cultural station. While they were carrying on investigations, large collections of fishes were made at various places, particularly at Galveston and Corpus Christi and in the vicinity of Houston, Palestine, San Antonio, New Braunfels, and San Marcos. Scattered collections were also made in every portion of the state. The information thus gathered became available for the practical uses of the fish hatchery which was subsequently established at San Marcos.

In these various surveys of Texas river basins the total number of fresh water species was found to be 120, to which, since then, other species have been added. As a rule, the streams which have conditions most favorable to fish life will contain the largest number of species. The number of species, therefore, to be found in the various river basins of Texas will be an indication of their relative fitness for fish life in general. The number of species in these streams, as a whole, is cut down by the factors of variable rainfall, floods, drouths and in some sections, excessive soil erosion. A large proportion of the various species are found in the streams of the narrow strip known as the coastal plain region. The streams crossing this strip teem with many valued species such as the large-mouthed black bass, various kinds of sunfish, fresh water drum, channel catfish and buffalo. The lowland fauna closely resembles that of the lower Mississippi basin, though for the most part, with the exception of a few tropical immigrants, the rivers of Texas have the same general fauna as those farther north.

In the artificial production and distribution of fishes it is essential to know much, not only of species but of the various waters where they were scarce or plentiful in their native state if we are to enter minutely into the details of successful propagation. To assume that the department is interested only in the species of game

and food fishes is not a correct view, for it is essential that a considerable chain of the original species of any locality be maintained, minnows and smaller fishes in particular, if nature's program of a food supply for the better fishes is not to be disrupted.

The number of species found in the various river basins by Evermann and Kendall is as follows:

Red River basin.....	32 species
Sabine River basin.....	17 species
Neches River basin.....	25 species
Trinity River basin.....	39 species
San Jacinto River and Bayous	52 species
Brazos River basin.....	24 species
Colorado River basin.....	25 species
San Antonio River basin	
The San Antonio, San Marcos and Guadalupe Rivers converge in the coastal plain and are grouped together.....	44 species
Nueces River basin.....	20 species
Rio Grande River basin.....	80 species

Among the species found important in themselves or for their bearing on the problems of fish culture, we have the following:

- 12 species of sunfish including the large mouthed black bass and the crappie. (The spotted bass was not identified until about 1930).
- 9 species of catfish,
- 9 species of suckers,
- 1 specie of fresh water drum,
- 1 specie of buffalo,
- 1 specie of pike,
- 38 species of minnows (Cyprinidae),
- 11 species of darters,
- 7 species of Cyprinidonts (fresh water),
- 7 species of Cyprinidonts (brackish water),
- 1 specie of the Cichlidae (tropical),
- 3 species of gars.

In all sections covered by the survey the large-mouthed black bass was invariably found in all suitable waters, placing it easily at the head of the list of fishes suitable for propagation. The smaller types of sunfish, and the various forms of catfishes, channel cat in particular, were found almost everywhere showing the wide adaption of these types to Texas waters. Thus, with nature's production of these forms and the sportsmen's preference for them, the mandate is clear that the supply should be multiplied by artificial production until the growing demand of fishermen can, in a measure, be satisfied.

Letters

Dear Editor :

I have been a subscriber to your magazine for several years and have enjoyed every issue of it. I think you have a great magazine, and I am sure that it is reaching a greater number of people in this state each month.

I have framed several of your duck pictures which you published a few months ago, and I think your April cover of the female belted kingfisher is one of the best you have published to date. I regret that you did not use a plain cover and insert the picture of the kingfisher on a page suitable for framing.

As your magazine is getting better and better and reaching a greater number of people each month, it would be greatly appreciated by many if you would publish a greater number of articles on our song birds and other beneficial birds. It is a shame that some of these birds have been mistreated and some of this may be due to a lack of knowledge and understanding on the part of the people of this state. An article from time to time on the conservation of the non-game birds would be well worth while, and I am sure you could enlighten a large number of people, as these birds are not only beautiful and pleasant to listen to but are of great economic value as destroyers of all types of insects.

O. C. Sheffield,
817 West Houston,
Tyler, Texas.

The matter of publishing articles in TEXAS GAME AND FISH on our song birds has been under consideration for some time. A series of articles dealing with the subject of bird hunting with binoculars is now being prepared for this magazine. The first of these articles, by Fred D. Thompson, appears in this issue.

We shall also be very interested in publishing articles dealing with specific species of non-game birds. Since you are particularly interested in this

subject, it has occurred to us that you might be interested in preparing an occasional article for our magazine on non-game birds. Let us hear from you again.—The Editor.

Dear Sir:

I have been reading TEXAS GAME AND FISH for several years. I enjoy reading it very much.

I am only 13 years old, but I am very interested in preserving wild game for when I am 50 years old I want to go deer and quail hunting, too. This last season I killed my first buck. It was a nice 10-pointer. I took him with a 30-30 caliber rifle.

I wanted to know if you had anything on preserving game such as deer or on opening a game preserve for several years.

I also want some information on getting baby quail or quail eggs and other information on restocking quail. I have already planted bicolor lespedeza and multiflora rose.

Howard Dietz,
Star Route,
New Braunfels, Texas.

Congratulations on your first buck. We wish you continued good hunting.

Your interest in conservation and the fact that you recognize the need for action now will go a long way towards making it possible for you to go quail and deer hunting many years from now.

Protection from illegal hunting and over-hunting as well as insuring adequate food for deer by not over grazing pastures has been found more effective than establishing game preserves and closing hunting seasons for long periods of time.

The game department has found that in most cases, quail stocking has not been successful in increasing these game birds. Quail can best be increased by improving food and cover conditions as you have done by planting bicolor lespedeza and multiflora rose.—The Editor.

Dear Sir:

Is there a record of black crows ever having attacked and killed a human being in the state of Texas?

A friend of mine claims to have either heard or read that in a western state a flock of crows attacked a man who had wounded one or more of the crows, and killed a man, presumably by scratching or pecking him to death. Knowing the shyness and wariness of the common black crow, I have disputed this claim.

If this is not the proper department that would keep this record, will you please refer my letter to such department, which probably would be the State Bureau of Vital Statistics.

L. L. Doss,
% Freight Traffic Department, Atlantic Coast Line Railroad, Wilmington, N. C.

Our state records reveal some strange activity on the part of our Texas species (the two-legged variety included) but we can find no record of human mortality as a result of attacks by crows.

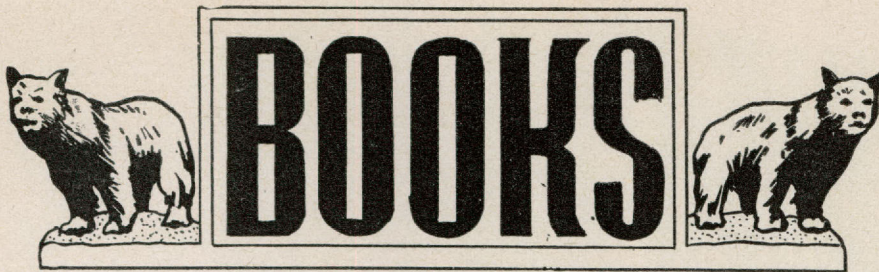
Traveling Texans frequently exaggerate not only the activity of Texans but its wildlife as well, and it is highly possible that this is the source of the information to which you refer.—The Editor.

Dear Sir:

I want to congratulate you on the magazine you have been putting out lately. It is very interesting with local Texas material and not canned news about "upland" game.

Horace Soule,
1627 Watchill,
Austin, Texas.

Thanks for the kind words. We are doing our utmost to make TEXAS GAME AND FISH truly representative of our great out-of-doors and are trying to keep the material published in the magazine applicable to Texas and its wide variety of wildlife.—The Editor.



THE GREAT OUTDOORS by Joe Godfrey, Jr. and Frank Dufresne. 376 pages. Illustrated with 16 color plates of game and fish by Herb Chidley and with 48 half-tones of hunting and fishing action. A Whitley House Book published by McGraw-Hill Book Company, 330 West 42nd Street, New York 18, N. Y.; 1949. Price \$6.50.

This book covers the entire field of North American hunting and fishing, from jumping cottontails to stalking moose and from fly fishing for panfish to deep-sea trolling for swordfish. Fully 20 of America's foremost outdoor writers have contributed articles on their special fields of interest to make it as authoritative as possible. Its buckram covers are crammed with interesting stories of the out-of-doors and with thousands of valuable facts on the selection, use, and care of hunting and fishing equipment, on camping, and on outdoor cooking.

The appendix should prove valuable as a sportman's reference. It contains a complete dictionary of hunting and fishing terms, records of North American big game mammals, world record game fish for both fresh and salt water, and a flyway map of North America. Brief life histories of all game species are included. While, because of space limitations, these are not complete enough to furnish the amateur naturalist with full details, they contain enough information to give the hunter and angler a good idea of the habits and habitat of his quarry.

The color plates and photographs are beautifully executed and well selected to enhance the text. This book will make an excellent gift for any outdoorsman.

FIELD, SKEET, AND TRAP-SHOOTING by Charles Chapel. 288 xi pages. Illustrated with more than 100 cartoons and diagrams. Published by Coward-McCann, Incorporated, 2 West 45th Street, New York City; 1949. Price \$5.00.

Written primarily for the beginning shotgunner, the man who knows very little or nothing about form, stance, or ballistics, this book begins, commendably, with a complete and thorough chapter on gun safety. It takes the reader through the story of the construction of shotguns and the manufacture of shells, and only after the reader

is thoroughly indoctrinated with an understanding of his equipment does the author carry him into actual shooting situations. The beginner will find the step-by-step instructions particularly valuable and written clearly without technical language to confuse him. Skeet and trap shooting have been given some priority over field shooting, and since the man who wishes to become a competent shot on small game today must use artificial targets for practice, emphasis on this popular phase of shotgunning is excellent in a book of this kind.

Chapel is an authority on gunsmithing and has written a number of volumes on this subject and on gun collecting. For this reason his chapters on the care of shot guns are excellent and many expert gunners will be interested particularly in his formulas for mixing high-grade powder solvents and gun oils at home. There are many other chapters which the expert wing shot will find of interest and only one or two which he will pass over lightly. Reading this book may help him improve his shooting still more.

THE FLY TYER'S HANDBOOK by H. G. Tapply. 73 iii pages.

Illustrated with numerous line drawings by Lu Henderson. Published by Oliver Durrell, Inc., 257 Fourth Avenue, New York 10, New York; 1949. Price \$2.00.

For most northern sportsmen who both hunt and fish, there comes, about this time of year, a "dead" period when carefully greased guns are laid away in cabinets. It is too cold for skeet shooting and even hardy devotees of winter crow shooting find the pickings slim.

On the other hand, the red-circled date on the calendar marking the opening day of the trout season can be located only by turning several pages. The man who likes to suffer can punish himself by polishing his shotgun and looking back or by putting another coat of varnish on his pet rod and looking ahead. Or if he wants to make the time pass rapidly, he can get this new book by Tapply, a few dollars worth of feathers, silk hooks, and thread and start creating flies to use next Spring.

Fly tyers have been known to become so absorbed in their hobby that they forget to go fishing. If he hunts deer, and saved a tail, the tyer already has the basic ingredient for a hundred or more bucktail flies. At current prices, a dozen good bucktails or six good dry flies will repay the purchase price of this new book. Complete information on equipment, selection of supplies, and step-by-step instructions for tying all popular patterns of dry, wet, and streamer flies, bass bugs, and nymphs are included. Illustrations are exceptionally clear.

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 for _____ years, starting with your next issue.

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Street and Number _____

City and State _____

New _____, Renewal _____

A Sportsman's Responsibility

Conservation is a simple word of easy understanding; it means to hold, have and to enjoy. But how many people who enjoy hunting and fishing lend a hand to perpetuate their pleasure? A continued toll taken of game and fish without an effort to replace the loss will inevitably bring about the entire destruction of such outdoor recreational pleasures as enjoyed by tens of thousands.

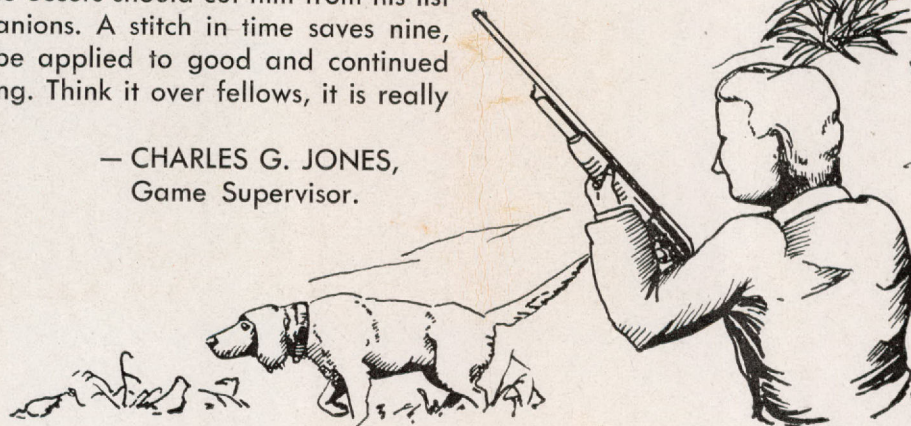
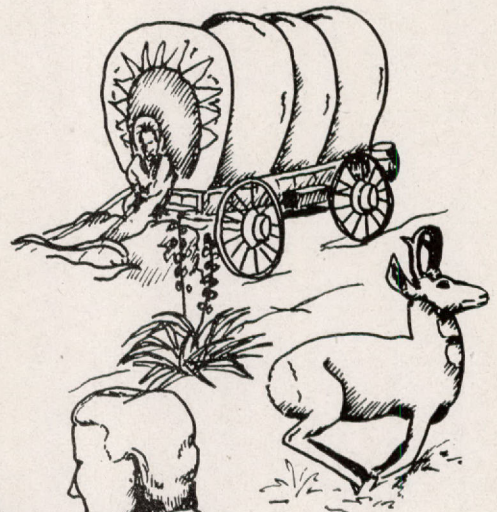
Strange as it may seem, no money is required to better conditions and conserve game and fish! Nothing more is asked than your word and determination to help correct the inequalities as now practiced by those who hunt and fish. How many men and women who now share in the pleasures of hunting and fishing will extend the slightest effort to correct or show the least concern as to violations occurring directly under their eyes? Very few I can assure you; their opinion is, "Let the game warden find out. It's no concern of ours."

Did it ever occur to you, (if you are a real sportsman), that the fellow who takes over his bag limit, hunts out of season, kills a doe or fawn deer, or wastes game by not making an effort to recover his kill, is not a real friend of a sportsman? That kind of hunter is taking away from you the game to which you are justly entitled.

The owner of a good bird dog will often have the animal stray off, or in some instances, stolen. The owner will likely get in touch with the game warden, give him a description or picture of the prized animal and ask that the warden watch for the dog. This will probably be followed by an ad in the local paper offering a reward for the return of the dog. At the same time that very man who thinks so much of his dog will condone game violations practiced by his hunting companions. The inconsistency of such actions; for of what value will the dog be if the game is gone?

Yes, the hunter himself is the best game warden of all. He hears about and sees many violations. To a hunting companion who errs, the real sportsman should admonish him for his intentional violation and if a second offense occurs should cut him from his list of hunting companions. A stitch in time saves nine, and this should be applied to good and continued hunting and fishing. Think it over fellows, it is really worth your while.

— CHARLES G. JONES,
Game Supervisor.



WOOLDRIDGE

CONSERVATION



HALF-CUTTING MESQUITE AND
HUISACHE HELPS SUPPLY
COVER FOR QUAIL



THE PLANTING OF SHELTER
BELTS ON THE PLAINS,
AND MULTIFLORA ROSE
AND LESPEDEGA BICOLOR
HAS INCREASED QUAIL
NUMBERS.



STRIP PLOWING BRINGS
IN IMPORTANT QUAIL
FOOD - GOAT WEED
AND PANIC GRASS

QUAIL WON'T LEAVE
THEIR HOME AREA
IF ENOUGH FOOD
AND COVER EXISTS.

WOOLDRIDGE

