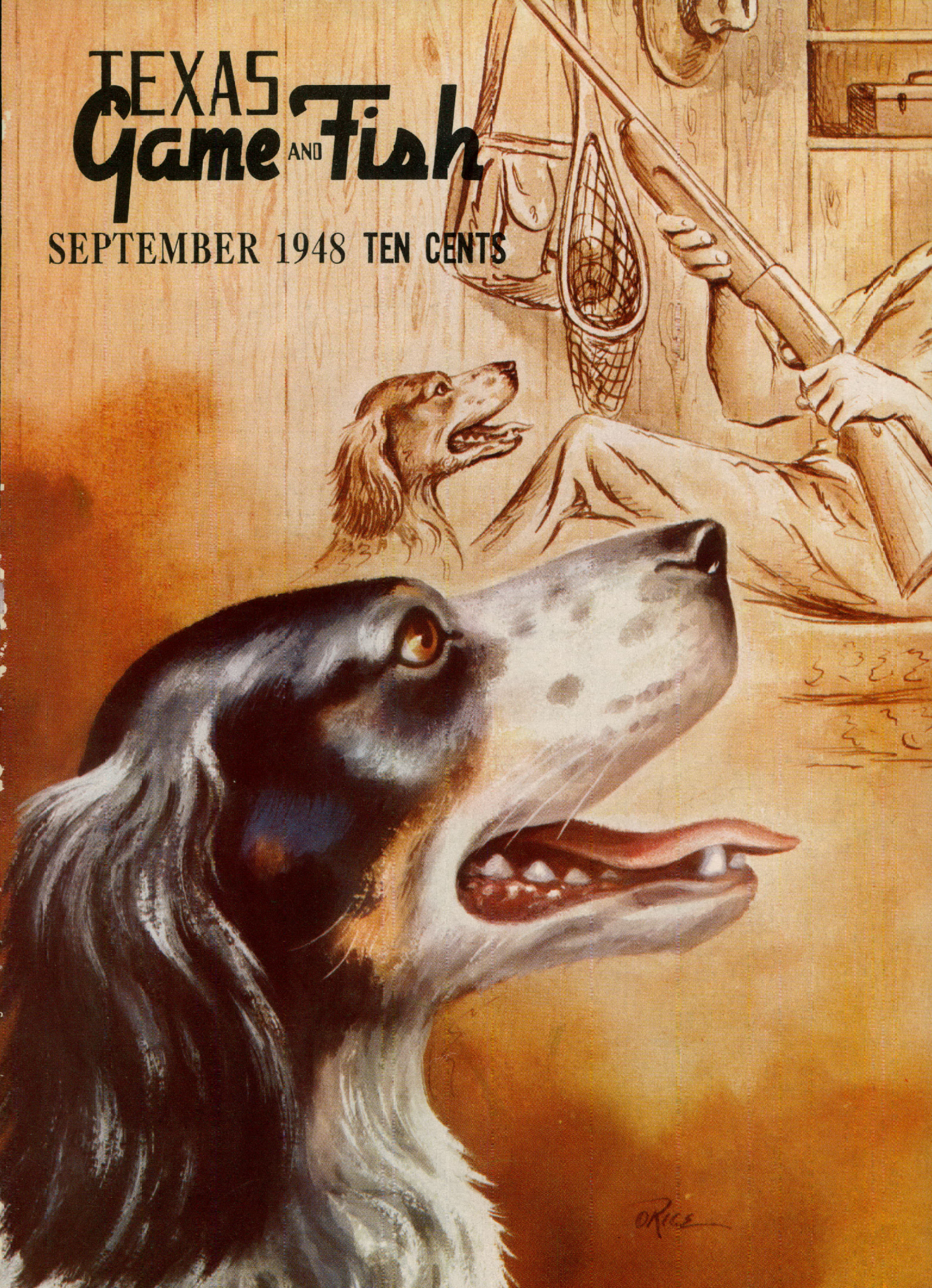


TEXAS Game AND Fish

SEPTEMBER 1948 TEN CENTS



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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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ROGER M. BUSFIELD
Editor

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Controlled Hunting

WHEN the Wisconsin Conservation Department embarked upon its first controlled hunt on antlerless deer in the Necedah National Wildlife Refuge in 1946, a survey was made of all states and Canadian provinces to determine their experiences with such projects. Replies indicated that control by limitation of the number of hunters was the most prevalent method used.

Controlled hunting is defined here as the orderly harvesting of wildlife through an equitable and pre-determined distribution of hunter pressure on lands open to the public. It implies the imposition of additional restrictions upon the hunter, but it is not simply a matter of regulating his harvest or checking his success; it requires also the pre-season selection of a limited number of hunters who will participate in the harvest. Upon the degree of fairness with which this selection is made may well rest the success of any controlled hunting program.

Historically, wildlife in America is held in trust for all the people by the state. As early as 1629 persons settling in the New Netherlands were given charter privileges to hunt and fish by the Dutch West India Company. The Constitution of Pennsylvania in 1776 formally declared for the public the "liberty to fowl and hunt." However, as early as 1710, some methods used in hunting were condemned in Massachusetts, and restrictions on the use of bloodhounds in hunting appeared in 1788, while prohibitions on night hunting and the use of big guns were imposed in 1832. From those dates onward more and more regulations were placed upon the so-called "freedom of hunting," climaxed by the first hunting license law in the United States established by New York in 1864. This introduced a period of ever-increasing regulation.

The development of more hunting restrictions over the years is a common story for each state, but these rules dealt largely with bag limits and length of season. By 1920, Edward A. Goldman of the Biological Survey spoke of the threatened extinction of many forms of wildlife due to the changing conditions brought about by man. Besides the rapid settlement of the country, he mentioned modern automatic firearms, the automobile, better roads and faster travel, culminated by the airplane. He stated that more than 3½ million hunting licenses were sold in 1919. Twenty-five years later in 1944, license sales had increased over 100% and all the problem conditions he mentioned were well developed. Wildlife had suffered se-

rious inroads on its numbers, but stricter enforcement of both old and new regulations and new management techniques had saved the day for many species of wildlife.

The stage was set for the biggest problem of all: where were these millions of sportsmen to hunt and how was over-harvesting due to their concentrations to be prevented? Wider accessibility from urban areas had resulted in a wave of posting of private lands against trespass, while newly available resources of the pheasant and built-up herds of big game were an attraction to hunters. In general, the problem of the eastern heavily populated states was one of managing the harvest of small game, and especially pheasants on private farm land, while that of the western states was one of managing big game herds on public range and forest lands. In either case, the number of hunters had to be regulated to prevent too great a harvest in certain areas or on

By Walter E. Scott

(*Wisconsin Conservation Department*)

certain species. Attempts to solve the farm trespass problem also were a primary element in controls established in eastern states.

Controlled hunting on big game supervised under state authority dates back to 1927, when Utah issued 150 permits to harvest elk from a herd that needed reduction. On small game, one of the first controlled projects was that set up in Michigan's Williamston Township by the Izaak Walton League, and operated as a cooperative venture with the state conservation department and University after 1930. This project largely centered around the pheasant, but all small game was involved. In rapid succession, most all other western states embarked upon controlled hunts for various big game herds in need of special management practices, and the so-called Williamston Plan was urged with variations throughout most of the populated pheasant states.

At the present time it can be said that at least 30 states have had experience with some form of controlled hunting. Twenty-two have had controlled hunts on big

game and nine on small game. Antelope, buffalo, elk, moose, bear, wild boar, and several species of deer figured in such big game hunts, while those for small game generally are based upon pheasant or waterfowl with other animals considered incidental to the plan. Because there is usually a great difference between the big or small game controlled hunts, they will be considered here separately.

The importance of controlled hunting on big game was stated clearly by H. L. Shantz of the U. S. Forest Service in 1938, when he reported that "Regulated hunting is recognized as the only remedy for the over-concentration of big game on many of the National Forests. Continual buck hunting does not control over-populations . . ." These harvests at first were mainly on small herds which would have suffered from considerable over-shooting by uncontrolled harvesting. A case in point is Wyoming's first season on antelope in 1929. Over-concentrations of hunters practically exterminated the animal in four counties. Since 1933, controlled hunts have solved this problem and met with public favor. At the present time, more western states are using this system on their larger herds of deer to reduce over-populations on certain ranges.

The general procedure on these hunts is to ascertain from surveys the needed herd reduction, determine from past experience the number of permit hunters needed to make the necessary harvest, and publicize the regulations of the hunt. In 17 states, hunters for such controlled harvests on big game were selected by public drawing or lot, but it is a surprising fact that frequently sufficient applications were not received and no drawing was necessary. This may have been due to the inaccessibility of the areas to be hunted. Seven states have held big game hunts in which those who applied first or arrived first on location were given permits. This system does not seem to be as good for administrative reasons, but may meet local conditions better.

It has been found that sportsmen favor controlled hunts for big game either because it increases the recreational value of hunting by preventing over-concentration of hunters, or it makes possible harvests on small herds. Ranchers have favored

★ *Continued on page 21*

Managed Wildlife Harvesting Through Hunter Limitation Is Found to Be Conservation Aid

Duck Bag Limit Up

THE 1948 migratory bird hunting regulations reflect better management of waterfowl resources and the U. S. Fish and Wildlife Service, in furthering its policy of setting the regulations by flyways, has made allowances for varying conditions in the different sections of the country as determined by the most extensive census operations ever conducted.

States in the Atlantic and Mississippi flyways have been offered a choice of a straight 30-day season or two split seasons of 12 days each. In these two regions the daily bag limit was set at four ducks with a possession limit of eight.

In the Central and Pacific flyway states, better nesting success warranted longer seasons and the raising of the limit to five ducks with a possession limit of 10. The Central flyway states were given a choice of a 35-day straight season or two 14-day split seasons, and the Pacific flyway area, one 40-day season or two 17-day seasons.

Texas is in the Central flyway and the State Game, Fish and Oyster Commission has accepted the choice of a straight 35-day season for ducks and geese.

Daily limits for geese in the Central flyway, which includes Texas, are: 4, including no more than 2 Canada geese (or subspecies), 2 white-fronted geese, or one of each species.

Heavy pressure on coots during past seasons as a result of restricted duck hunting prompted the U. S. Fish and Wildlife Service to reduce the bag limit on mudhens to 15 from last year's limit of 25. Rails also have decreased and the Service recommended that the season on these birds not exceed 60 days. The bag limit of sora rails was reduced from 25 to 20 birds a day.

Daily shooting hours have been slightly changed this year. Ducks, geese, brant, coot, rails and gallinules may be taken daily from one-half hour before sunrise to one hour before sunset, and mourning doves from one-half hour before sunrise to sunset. The shooting hours for whitewings is from 4 p.m. until sunset on September 17, 19, and 21.

On the opening day of the season waterfowl and coot may not be hunted prior to 12 o'clock noon. This regulation was in effect last year.

Sportsmen also get a break this year in shipping their duck and goose bag home. The regulations provide that ducks and geese may be shipped from Canada and Mexico as late as five days following

Whitewings

Brewster, Brooks, Cameron, Culberson, Dimmit, El Paso, Hidalgo, Hudspeth, Jeff Davis, Jim Hogg, Kenedy, Kinney, La Salle, Maverick, Presidio, Starr, Terrell, Val Verde, Webb, Willacy, and Zapata Counties: Sept. 17, 19, and 21 from 4 p.m. until sunset.

Protected Area

Unlawful to shoot white-winged doves between Rio Grande River and State Highway No. 4 (now Federal Highway 83) from the Zapata-Starr County line to the west boundary of the city limits of Brownsville.

Borden County: Season closed.

Mourning Doves

Bag Limit: Ten in the aggregate of either or both mourning and white-winged doves per day. Not more than one day's kill in possession.

Shooting Hours: One-half hour before sunrise to sunset.

Open Season—Mourning Doves

North Zone: Sept. 1 to Oct. 15, both dates inclusive, in Val Verde, Kinney, Uvalde, Medina, Kendall, Comal, Hays, Travis, Williamson, Milam, Robertson, Leon, Houston, Cherokee, Nacogdoches, Shelby and all counties north and west thereof.

South Zone: Oct. 20 to Dec. 3.

Exception: Cameron, Hidalgo, Starr, Zapata, Webb, Maverick, Dimmit, La Salle, Jim Hogg, Brooks, Kenedy and Willacy counties: Sept. 17, 19 and 21 from 4 p.m. until sunset, and October 20 to November 30, both dates inclusive, from one-half hour before sunrise to sunset.

Waterfowl

Open Season: Nov. 12 to Dec. 16, both dates inclusive.

Shooting Hours: On Nov. 12 from 12:00 o'clock noon to one hour before sunset; all other days of season one-half hour before sunrise to one hour before sunset.

Bag and Possession Limit

Coot: 15 singly or in aggregate with rails and gallinules. Only one day's kill may be possessed.

Ducks: 5 in the aggregate per day, including not more than one wood

★ Continued on page 16

the close of the season in the province or state where the ducks and geese were killed. In the United States hunters can make interstate shipments up to 48 hours following the close of the shooting season in the state where taken.

In connection with such transportation or importation, dressed birds, as a means of identification, are now required to have the head, head plumage, and feet attached.

The regulation which prohibits the use of automatic-loading or repeating shotguns capable of holding more than three shells still continues in effect. A new amendment this year, however, provides that the plug in such a shotgun must be incapable of being removed without disassembling the gun.

The post-season period for possession of migratory game birds remains the same as last year—90 days.

This year's regulations also prohibit the taking of waterfowl by means of bait or with the aid of live duck or goose decoys. Also prohibited is the use of cattle, horses or mules. Hunting migratory waterfowl from any power-driven boat or boat under tow or sail also is prohibited. Sinkboxes are out, too.

A note of caution to new duck and goose hunters. Be sure you have a hunting license and a federal duck stamp attached to the license. The federal duck stamp may be purchased at any postoffice.

The Texas pronghorn becomes a legal animal on October 1, 2, and 3 in Brewster, Jeff Davis, Pecos and Reeves counties; on October 5, 6 and 7 in Presidio county; on October 8, 9, and 10 in Presidio and Jeff Davis counties; and on October 12, 13 and 14 in Hudspeth and Culberson counties.

Special antelope hunting permits are required for the antelope hunts. These may be obtained from the State Game, Fish and Oyster Commission. They cost \$5.

**Dove Hunting
Map Showing
North and South
Zones Will Be
Found on Inside
of Back Cover**

Game Hog Menace

FROM Maine to Miami, from Texas to Seattle, the game hogs have been breeding. State after state reports the trend. Wildlife violators have been appearing in state and federal courts at an unprecedented, increasing rate since the end of the war. The trend is nation-wide. Hunting license sales have jumped to a new high of over 10,000,000, a nearly two-fold increase over 1941. But the increase in poor sportsmanship, of the clan of "shoot first—look afters," of the hunters without permission, jackers, spotlighters, illegal seiners, burrow, and den trappers, snarers and set-gun artists is appalling. Some of the violations are the work of well-organized rings, jacking for sale to the meat-hungry and moneyed public. But most of the indiscretions are committed by your neighbor and mine, right in our back yard. One hen pheasant, a single short trout, one bass to many, is the way hardened violators begin.

Look at Maine, where 18 men were killed during deer hunting last year; look at North Carolina where prosecutions skyrocketed from 1480 in 1945 to 4385 in 1946; look at Pennsylvania where 22 hunters—13 from West Virginia—were fined \$7,885.00 for massacring deer, look at Georgia and Alabama where Federal wardens were powerless to stop the widespread baiting and early shooting of mourning doves. No wildlife species is safe, none is on the protected list of this group of game hogs. And some of the stuff they shoot isn't even game, but songbirds, state refuge signs, or some other sportsman's back.

Utah's arrests for violations of the fish and game laws were nearly six times as great as in 1942; New Jersey's arrests increased 60 percent over 1945; Colorado had twice as many violators; Missouri 50 percent more; West Virginia convicted twice as many as in 1945; Texas had a 50 percent increase, and all other states reported at least a slight to moderate increase in lawlessness, according to a poll conducted by *Outdoor Life* magazine.

Conservationists throughout the nation are pondering the game hog's increase, and wildlife administrators everywhere are acting to halt the trend. Vermont has increased its state wardens from 14 to 28 by removing legislative restrictions: Maine, New Hampshire, and many other states are utilizing airplane patrols; several states have hiked minimum fines for convicted culprits; following the lead of Pennsylvania and Michigan, many states are increasing the efficiency of their law enforcement divisions by well-rounced training programs; short-wave radio is being used to

New Antelope Film

"The Texas Pronghorn" is now available for showing by sportsmen's clubs and other interested groups. This 16 mm film is in color and sound. It was photographed in the pronghorn country west of the Pecos and shows the family life of these fleet ghosts of the prairies and how the State Game Department traps them for transplanting in areas where the Pronghorn once were numerous. The film may be obtained from the State Game Department, Austin, Texas.

apprehend the wildlife thieves; most states are running well-conducted educational and publicity campaigns in an effort to reduce lawlessness. In the main these efforts are succeeding in bringing more violators to the bar of justice, but the appalling part of the situation is that, as hunters increase, violations increase at a far faster rate. There are not enough

By Leonard E. Foote

*Field Representative,
Wildlife Management Institute*

wardens to watch all the incoming hunters hunting waterfowl on opening day in some states, let alone the habitual and hardened offenders.

Ever walk into a set-gun? It is double-barreled death devised by some habitual offender who likes the small change he gets out of selling venison on the too open

market. Of all the nefarious devices to kill "game," the set-gun is the most deadly. To a sawhorse or a convenient log is fastened a double barreled shotgun in such a manner that its line of fire rakes a deer trail. A wire or string is set across the trail and tied to the trigger of the piece. Wardens in New Jersey and New Hampshire haven't found one yet that wasn't loaded.

Ever see what a deer snare will do to a dog or a man? It's peaceful hanging way up there by your heels until you slip into oblivion. The snare is the habitual offender's lazy way of taking venison for market.

Ever seen a hunter who has been shot in the back? Take a good look; you may be next. Take a good look at that neighbor of yours who has a reputation for an itchy trigger finger. Take a good look, too, and be sure the thing has horns, hair and hooks before you let drive; it might be that nice boy across the street, who is engaged to your daughter, or the kid who comes over and helps you rake the lawn on Saturday.

Aside from manslaughter, the habitual, ignorant or petty wildlife violator is also raising Cain with our wildlife supply. For example, look at the results from a Massachusetts pheasant study. Rigid control of illegal hen shooting during the open season saved 40 percent more of the golden eggers to produce a larger crop for the hunter the following year. What about the areas that did not have such stringent control? You know the answer to that one. Nose-dive the pheasant.

Or take a trip with an Illinois wildlife

★ *Continued on page 17*

A Preventive for Ticks

Having experienced the unpleasant sensations from chiggers and ticks, especially from diamond back ticks which have made me itch for six weeks to two months, I thought perhaps you would be interested in a preventive for these ticks and especially the deer ticks.

The sulphur and cream of tartar round tablets, which can be bought at almost any drugstore, if taken two tablets, three times daily for two days before going into the woods or where ticks abound, and then one tablet three times daily during your stay in the woods or tick infested area, will keep them from taking a hold in the skin. They will be found

crawling over the body but will not attach themselves to the skin.

I was told this several years ago in the Guadalupe hill country in the spring when I had about thirty of these tick bites and the itching was terrific. After taking these tablets as advised I would find these ticks on my skin but they would not bite. I presume they don't like the sulphur. The sulphur is not ideal but much better than the tick bite.

It has worked for me and for others who have taken the tablets. When I left off the tablets for two days, to see what happened, the ticks again started biting. This is a simple remedy, not expensive, so I am writing you as above. —M. W. Sherwood, M. D., Temple, Texas

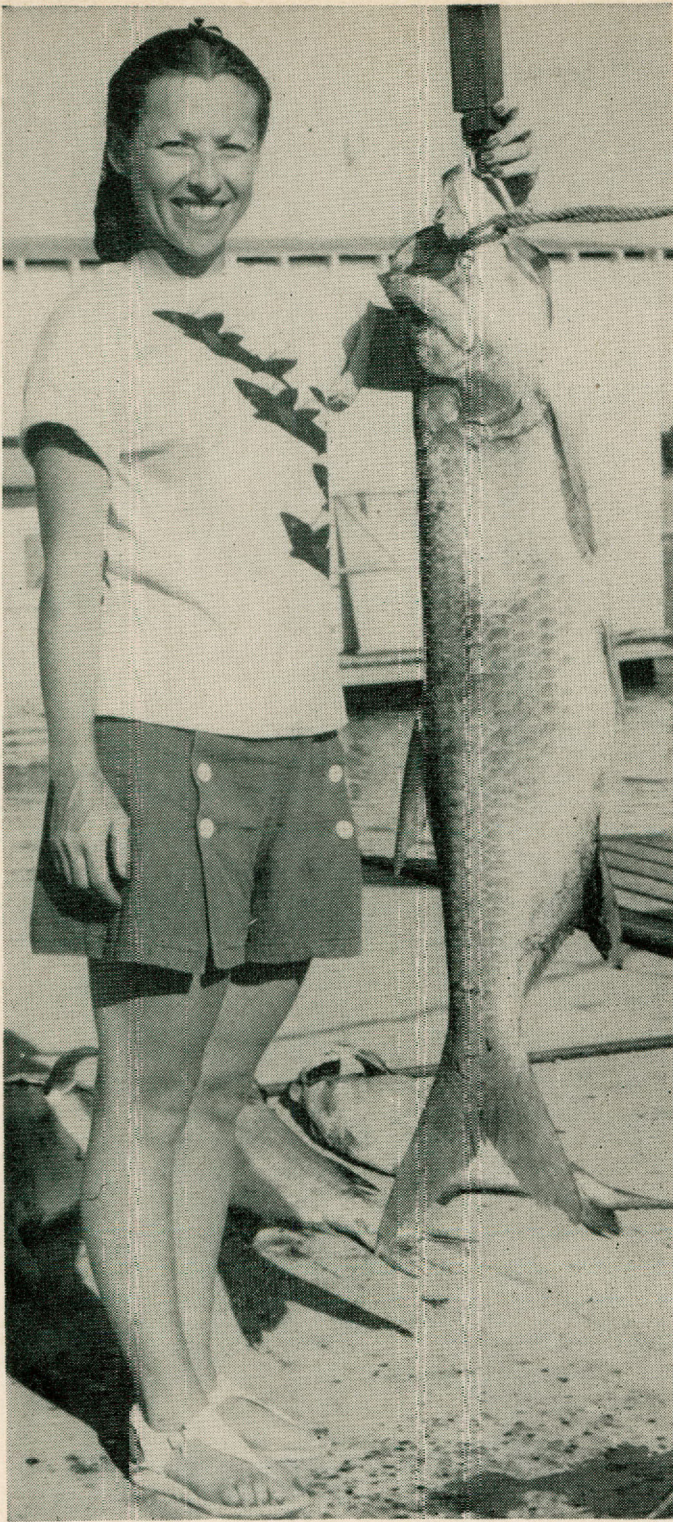


Good Fishing at
Port Isabel

Photographs by Lon Fitzgerald

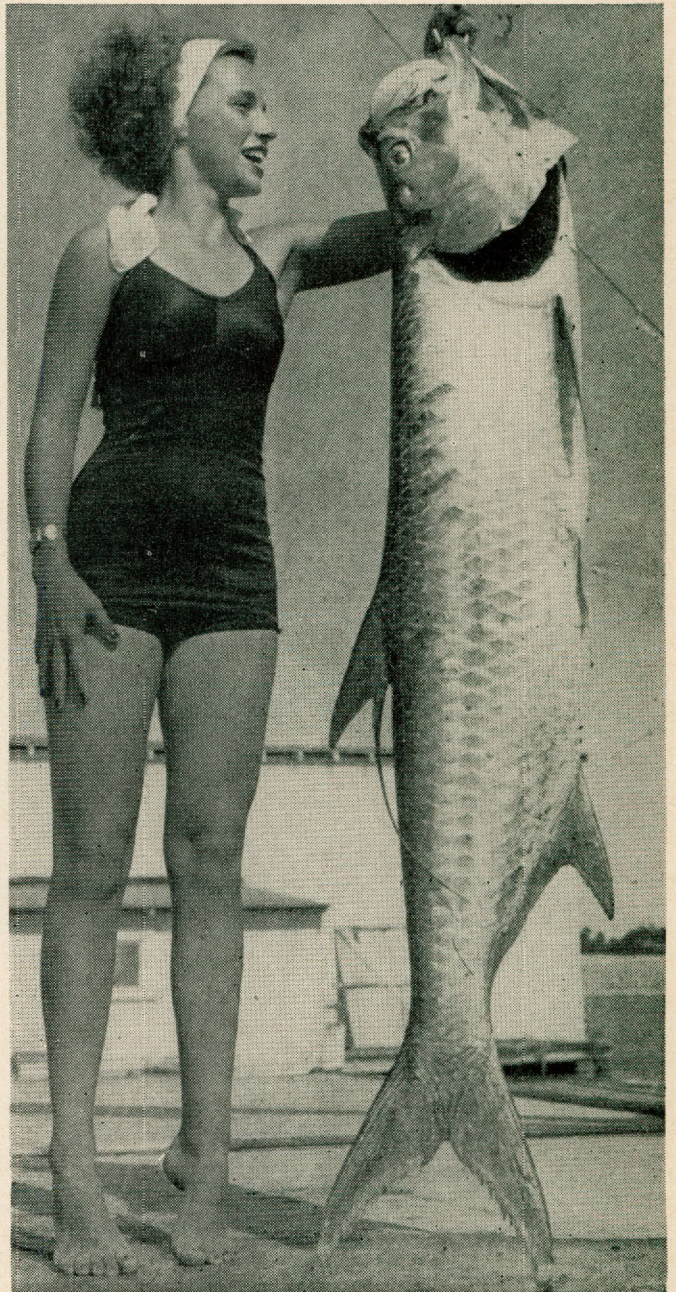


The largest tarpon caught during the rodeo was brought to gaff by Helen Lou Burnell. It weighed 121 pounds. Her brother, Charles, is shown standing beside the 116 pounder he caught on the same day his sister made her prize catch. Helen and Charles are the daughter and son of Mayor B. B. Burnell of Port Isabel.



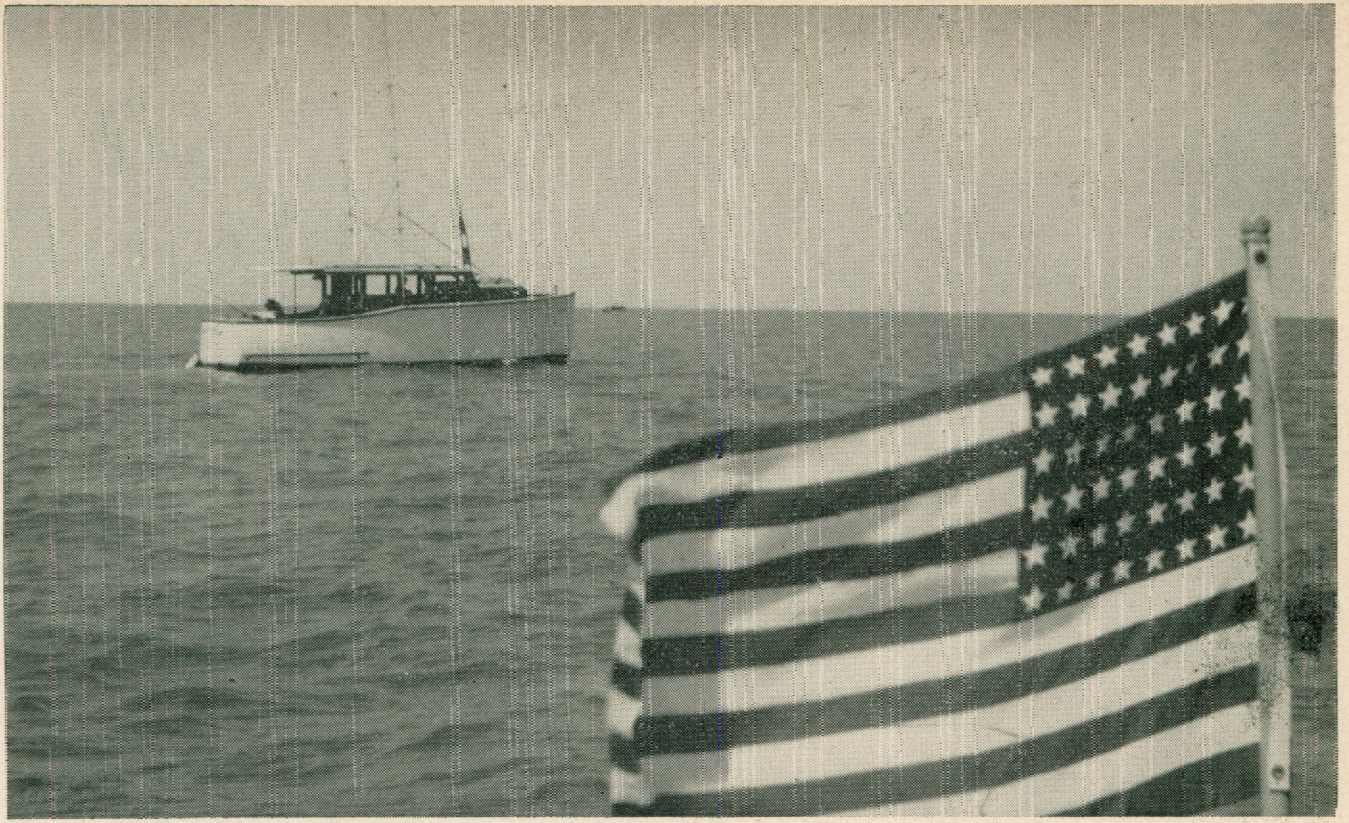
Although not the largest tarpon caught during the four day rodeo this 24 pounder gave Mrs. Charlie Goldtrop of Laguna Vista, Texas, plenty of fight before she brought him to gaff and the smile reflects the thrill of a hard earned victory over a flashing silver king.

Shirley Ann Morgan of Port Isabel just happened along when this tarpon was strung up. Shirley has to stand on her toes to match the height of the tarpon.





Mrs. M. Nowotny of San Antonio had a field day during the rodeo when she caught the king mackerel, tarpon and jackfish she is proudly displaying in the above picture. As usual, Mrs. Nowotny said the biggest one got away.

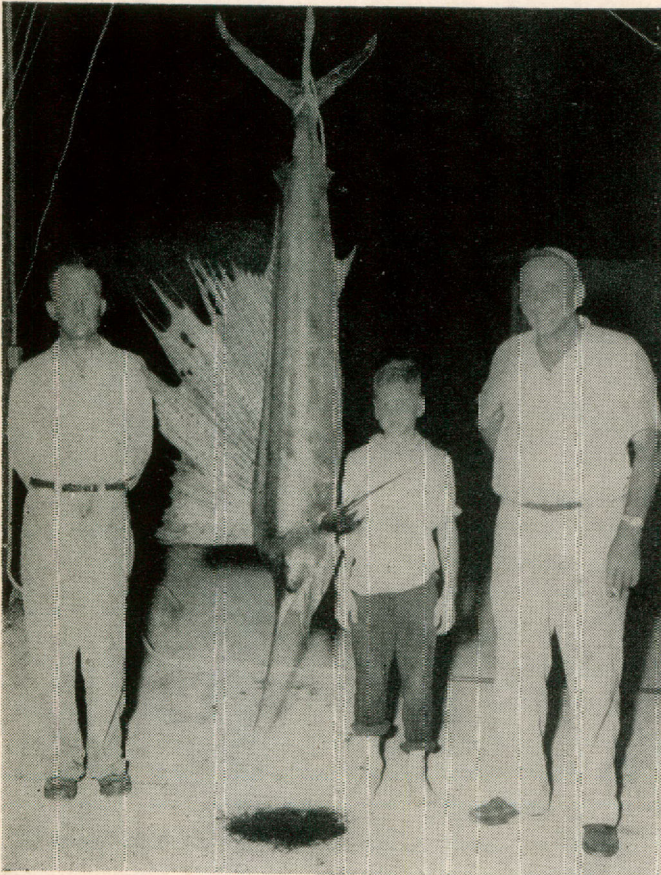


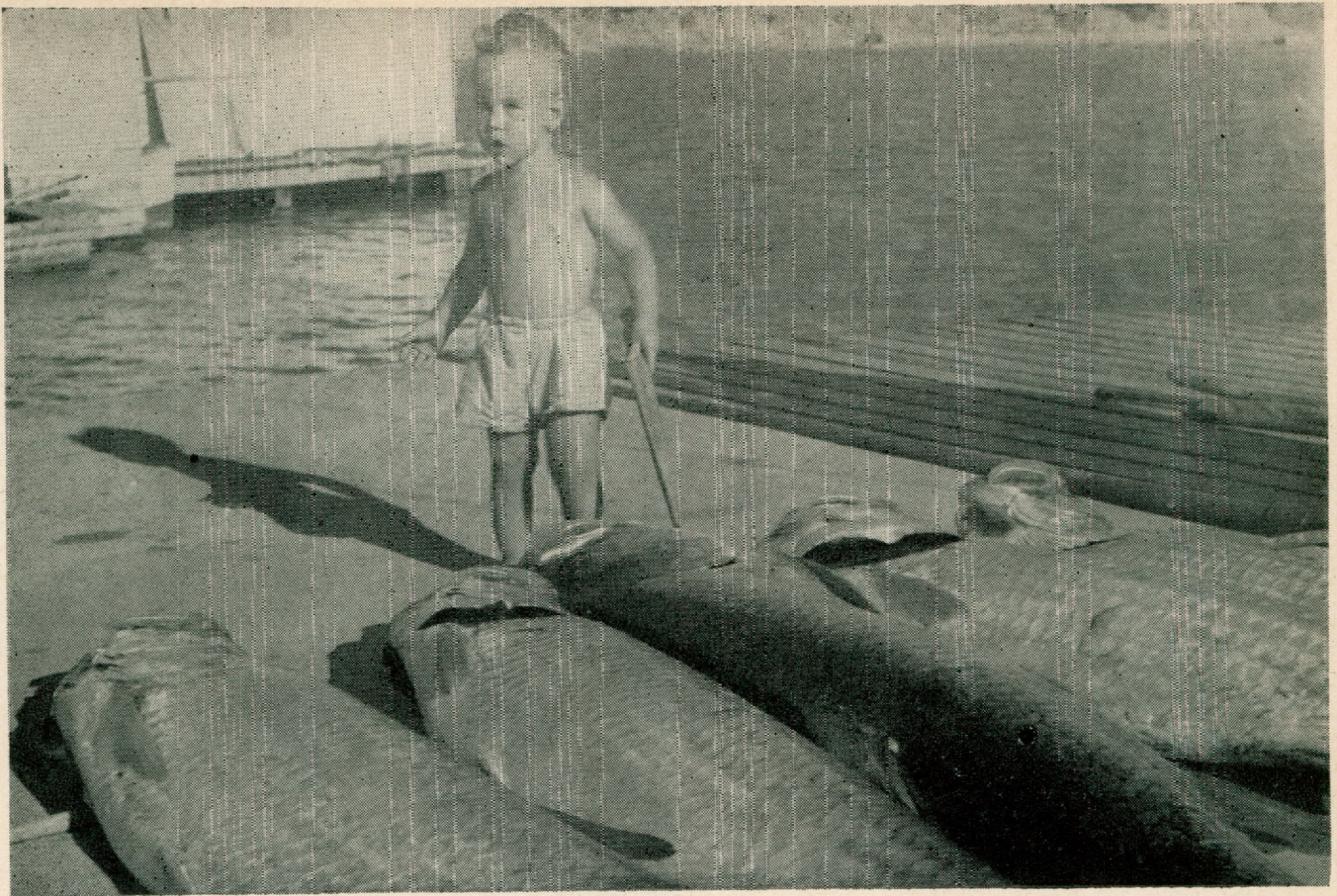
In the upper photo a cruiser with outriggers all set moves slowly through the blue waters of the Gulf in search of a sailfish. In the lower photo, N. K. Reyna, of Brownsville, brings in a Spanish mackerel, a catch not to be sneezed at during these days of high meat prices.





A good sun tan was all the three girls in the upper photo caught during the four-day rodeo. They are, from left to right, Shirley Ann Morgan, Lucila Yanez and Joe Mahurin, all of Port Isabel. Paul Affolter, Terry Affolter and E. M. Aiken are shown in the lower left photo with a 7 ft. 1 $\frac{3}{4}$ -inch sailfish caught by Paul. All are from Rio Hondo. David Armstrong of Donna is playing "Heigh Ho, Silver" in the lower right photo.





Here's a youngster all ready for the rodeo, small fishing pole and pop gun loaded for bear. However, fishing wasn't any too good for him so he looks over five of the largest tarpon which were

caught during the four day rodeo at Port Isabel for the size he wants to catch when he adds a few years, a foot or two to his stature and a little weight on his frame.

The Pollution Pendulum

YEARs ago, a friend of mine married a British girl. He was a practical joker and when his bride asked him what Americans do with potato parings, he told her that they throw them over the fence into the neighbor's yard.

Wishing to adjust herself to our ways, the bride followed his advice. The result was a decided strain on relations—marital, personal and international. True, she threw the parings over the fence but the neighbors threw their maledictions back. The give-and-take swing and counterswing, of the situation was dynamic to say the least.

And so it is with the pendulum of pollution, however you may lock at it. It is easy for X to dump its waste on Y, but it does not pay if Y has the power to impose its will on X. Cities dump their wastes on the country. Industrial plants dump their wastes into pleasant little streams. Mines dump their washings into rivers.

Unless the penalties for these acts exceed the profits that may arise from them, they are likely to be continued. When the penalty is sufficient the abuse stops.

This article is written in the hope that teachers can lend their weight to help the

pollution pendulum swing in the right direction. Without an enlightened public opinion, our happy, prosperous country may well reach the state of unfortunate, unhappy, uncared for conditions common in other parts of the world. I doubt if the Mississippi is as polluted as the Ganges, the Columbia as bad as the Yangtze, or the St. Lawrence as filthy as the lower Nile—but I do know of plenty of streams in which we have no pride. One maybe is in your own home town.

When the Indians roamed our country, they solved the problem of pollution by ordering their squaws to break camp and move to a new site. We today, who must stay more or less fixed geographically, face the alternative either of disposing of our filth or of adjusting ourselves to live in and with it.

If you could intelligently follow a

(Editor's note: The following article was prepared by E. Laurence Palmer, of Cornell University and was published in the November 1947 issue of the NEA Journal, official publication of the National Educational Association)

stream thru the average American city and beyond, you might get some idea of how the pollution pendulum swings. For the most part open country streams are, or were clear, sparkling, clean, with an abundance of life capable of maintaining itself, with water that may be drunk with some safety, and in which one may swim.

Hypothetically, our stream swings variously from this happy extreme of the pendulum. Perchance at the edge of the city is a milk plant whose wastes are dumped into the streams. Since these wastes are largely organic, they may not be so serious as some. However, since their disposal requires an excessive amount of oxygen, the oxygen content of the stream is lowered. This may make it impossible for some organisms which formerly inhabited the stream to live there.

The stream may no sooner make some adjustment to the milk factory wastes than it is called upon to accept chemical wastes from a manufacturing plant. These, too, may call for more oxygen for their reduction.

A little later there may be dumped into

★ *Continued on page 20*



How to Make Your Own Barometer for Fishing

The Pompano

WHEN thinking of pompano, most people conjure up visions of low lights, soft music and a garnished platter on which repose—according to epicures—the world's supreme sea delicacy, broiled pompano.

However, when a fisherman thinks of the pompano he envisions a flashing adversary which ranks high on the list of admirable game fish.

In addition to its culinary and fighting qualities, the pompano is one of the most beautiful fish in existence. Its trim, racy build, coupled with a powerful body provide speed and endurance in abundance to delight the sporting angler.

Especially on light tackle, the pompano—when compared pound for pound—is the equal of any game fish anywhere in the world. While usually caught in the surf on light surf-casting tackle, the pompano also provides plenty of sport for bait casters using artificial lures around piers and pilings.

Generally speaking, the pompano is usually called by its proper name, but, like so many other fish, it comes in for its share of misnomers such as: butterfish, Carolina pompano, cobblefish, crevalle, cobbler, pampano and permit. The last name is definitely another species of fish.

Like all members of the crevalle family, the pompano is a perfect example of nature's pattern for streamlining, with its bullet-like head and powerful tail. It has a bluish-gray metallic cast along its back, shading into a golden orange below.

The pectoral and anal fins are light orange, shaded with blue. Often this fish is confused with the permit, also a member of the pompano tribe. However, the pompano does not reach the size of the permit and, in addition, has more rays on its dorsal and anal fins.

The pompano is also frequently confused with the jack crevalle which can always be distinguished by the dark spot on its gill cover, a marking which is lacking on the true pompano.

The pompano is found in the Atlantic Ocean from Brazil to Cape Cod, but only the young are found at the extreme ranges. It is most plentiful from the Carolinas to Florida and in the Gulf of Mexico.

Most pompano are taken in the ocean fairly close to shore, especially in sloughs where sand fleas and other crustacea are present. Other likely spots are along rocky reefs, in bays, lagoons, cuts, inlets and around piers and pilings.

The average weight is from 1 to 2

IN AN article which appeared in the May issue of Texas Game and Fish I explained my theory of the effect of the moon and barometric pressure upon the feeding habits of fish. I have received so many letters on this subject that all my Lunar Fishcasters, which I offered free, have been sent out but I will have a new supply soon. If you sent for one and sent a self-addressed and stamped envelope please be patient. You will receive your copy as soon as a new supply is received from the printers.

In the meantime if you would like to do some experimenting here is how I make my barometer. It costs nothing to make.

pounds, although pompano of 3 to 4 pounds in weight are not rare; never exceeds 6 pounds. Many anglers catching permit, which will run up to and over 30 pounds, erroneously believe they have caught a pompano.

Unsurpassed is the flavor of the pompano, and among those who are considered authorities on sea foods, the pompano is classed as a great delicacy.

The favorite foods of the pompano are sand fleas, crustaceans, shrimp and hermit crabs.

While most pompano are caught on bait, they will strike small plugs like the sea runt, midget digit and midget river runt.

More pompano are taken by fishermen working the surf and, therefore, this is the most popular method. However, many fine catches are taken by bait casters who pay regular visits to piers, jetties and over shallow, rocky reefs.

For bait casting, as well as for this type of surf fishing, the regular salt water casting rods made of split bamboo, such as the "Riptide," cannot be beaten. The rod should be of medium or heavy weight, in 5 or 5½-foot length.

For surf casting or still-fishing, a light colored line such as 9 or 12-thread cuttyhunk, is recommended. The favored hooks are O'Shaughnessy in 2/0, 3/0 or 4/0 tinned finish and a heart-shaped sinker of sufficient weight to prevent undue "washing" is necessary.

Long casts are not always required, for at times pompano feed right in the

Obtain a long-necked quart milk bottle and a coca cola bottle. Fill the milk bottle full of water and insert the neck of the coca cola bottle down into the neck of the milk bottle. Note the water line and mark it. When the water rises from the milk bottle up into the neck of the coca cola bottle the barometer is rising and the fish are on the feed. The farther the water rises above the line marked the better the fishing. When the water in the neck of the coca cola bottle starts going down and reaches the lowest point possible, or your original mark on the bottle, you will find that fish are not feeding because the barometer is falling.—R. A. "Doc" Jenkins.

breakers. After a cast is made, walk back some 15 feet from shore and sit down, for pompano have excellent eyesight and are easily alarmed by anyone standing in the surf.

When using artificial lures such as the midget river runt, do not reel straight in but jerk the rod tip sharply at intervals in order to impart a darting motion to the lure; also vary the cadence of reeling. This will cause the lure to resemble something injured and make it more attractive.

Many anglers fish merely for the pleasure of catching a nice string of their favorite game fish and then proceed to give them away because they do not wish to be bothered with cleaning. Rare is the pompano fisherman who does not welcome the opportunity to prepare his own catch for he knows the delightful reward awaiting him at the table.

THE CATFISHERMAN'S BIBLE

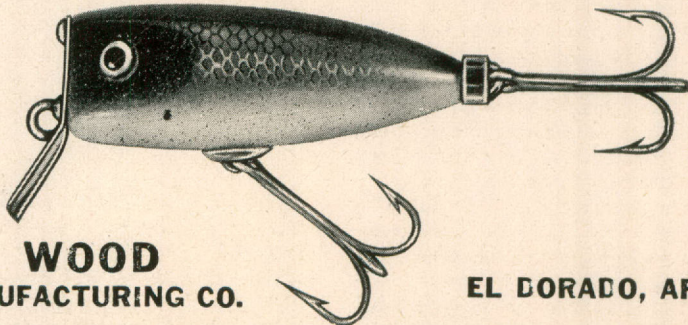
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DO YOU HAVE A DIPSY DOODLE?



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ARMS AND AMMUNITION

By Adam Wilson III
Gun Editor

Rifles For Antelope

THE Pronghorn, Ol' Fleetfoot, or the Antelope, as it is variously called, will once again become the target for Texas nimrods next month.

Since this unique member of the forked-hoofed mammal family roams the vast sweeps of Texas' great, open plains—possesses a pair of matchless telescopic eyes—and is gifted with four legs that can carry it at an amazing speed in a mile-devouring lope—the hunter should be equipped with a “special antelope rifle.” By “special” I do not mean to insinuate that the best arm for bagging the pronghorn *must* be some super-duper, custom-built, mile-range job which the average gunner may not care to own—but one that these descriptive words can rightfully be applied to: Long Range—Flat Trajectory—High Velocity!

The reason the better antelope arms should be capable of making long range hits is obvious because of the ground over which the animals are found. Occasionally, an old buck, retired from active duty, can be stalked up to within one hundred yards, but this is a very rare occurrence, and a hunter certainly should not enter an antelope territory with such a thought in mind.

Four years ago, when my father and I participated in Texas' first antelope hunt, I witnessed the killing of a fine old buck at a range less than one hundred yards. We rolled out of our blankets on the opening day at the crack of dawn, and made ready for a long and pleasant day especially tailored for memories. However, the hunt lasted approximately fifteen minutes for my senior, for we had not gotten out of sight of our campfire when we came up on a lone, grazing buck—one that had been fought away from the main herd by younger and more rambunctious bucks. We could hardly believe we had approached so close to the cautious Antelope. The nearness of the animal was probably the reason Dad's first 150-grain bullet from his .300 Savage powdered red granite rock just over the target's brown shoulders. A quick second, however, found its mark with a thud.

I have seen only one other antelope killed less than one hundred yards away.

Wilson dropped this fine buck with, what he calls, “an ideal antelope rifle”—a .270 caliber Winchester Model 70, equipped with a Weaver K-4 telescopic sight.

So happened my father was the gunner on that occasion, also. The first buck was about sixty yards from the muzzle of the rifle, while the other was approximately ninety yards away. But as aforementioned, these are uncommon happenings, and one should not take the chance of carrying a short-ranged rifle into antelope country, hoping to surprise one of those aged, deaf, maybe half blind bucks. Usually a coyote or panther beats the hunter to them.

Since the average shots can be expected

to be taken *over* one hundred yards, the rifle designed for shooting across the plains should not be sighted in for less than 200 yards! Most hunters are lucky if they can reach the 200-yard mark. My first antelope crumpled at 202 yards, but his curiosity caused him to move up to this range. The red pick-up truck, which we had driven to the hunting ground, evidently was so different from anything he had seen before, he felt he must investigate. With a high head he left his

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Your Outboard Motor

Outfitting your outboard with new spark plugs is repaid later in time and effort saved when old and corroded plugs may cause bad starting.

Controls should be tight enough to hold at any desired setting. The spark control lever can be made to hold by lightly turning the screw that is found under the base of the lever. Carburetor controls can be tightened by turning the nut located where the needle enters the carburetor body (models that do not have a nut at this point need to be replaced with needles valves when the carburetor controls become loose). Care should be taken when tightening any controls since overtightening causes excessive wear on the bearings.

It is a good idea to tighten all the bolts and studs that might work loose. Pay particular attention to the fly-wheel nut, propeller nut and fuel line connections. The fly-wheel nut can be pulled tight by placing an opened wrench on it and striking sharply with a hammer. To tighten the propeller without snapping the sheer pin, grasp it firmly with one hand and tighten the nut with a wrench. Never use pliers on soft fuel line connections but ease them fairly tight with a wrench.

Examine the propeller for dents and uneven places occasionally. If the dents and nicks are not serious file them smooth. If the propeller is bent or damaged badly . . . see your dealer.—R. A. "Doc" Jenkins.

Waterfowl

★ Continued from page 5

duck. Possession limited to two day's kill, including not more than one wood duck.

Exception: American and Redbreasted Mergansers: 25 singly or in the aggregate per day. No possession limit.

Geese and Brant: 4 in the aggregate per day or in possession, including in such limit either 2 Canada geese (including Hutchins or cackling goose) or 2 white-fronted geese, or 1 of each.

GALLINULES AND RAILS (EXCEPT COOT)

Open Season: Sept. 1 to Oct. 30, both dates inclusive.

Shooting Hours: One-half hour before sunrise to one hour before sunset.

Bag and Possession Limits

Rails and Gallinules (except Sora): 15 in the aggregate per day or in possession, including Coot.

Sora: 20 per day, or in possession.

Fourth-Acre Pond Gives Family Plenty of Fish

WHEN 66¾ lbs. of fish are served over the table from a fourth-acre fish pond in one year, it's time to sit up and take notice. Why, that's at the rate of 255 pounds per acre. That is the record of J. W. Friday, a cooperator of the Sulphur-Cypress Soil Conservation District, who lives about six miles northwest of Winnsboro.

Back in 1945, Mr. Friday who operates a 107-acre dairy and general farm had to dig a pond to furnish water for his stock. He being a cooperator of a soil conservation district, asked technicians of the Soil Conservation Service to assist him in laying out his pond. When the technicians had finished with the job, they suggested that Mr. Friday should stock his pond with fish and invited Mr. Friday to attend a fish production meeting being conducted by the Hopkins-Rains-Wood Soil Conservation District in Winnsboro.

Mr. Friday did attend the meeting and there he heard T. N. Winn, district conservationist of the Soil Conservation Service located at Tyler, tell of the experimental results obtained over a period of years on fish production by the Auburn Alabama Experiment Station. Such statements as: "You can produce 300-400 pounds of fish per surface acre per year" and "A bream should weigh ¼ pound at one year of age and a bass should weigh 1 pound at the same age," sounded mighty high to Mr. Friday. However, some of the good things which had been said about increased profits from soil conservation farming had sounded a little far-fetched

at first, but Mr. Friday decided to do just exactly as the man said.

The first step was the stocking of the pond. The man said 100 bass and 1,000 bream for each surface acre if the pond was fertilized. Also to this could be added 25 channel cat and while not recommended, white perch could be substituted for 25 per cent of the bass. Mr. Friday had good cows and good chickens, so why start off with scrub fish. No sir, the best were none too good, so he sent his order through channels so that he could secure his fish from his nearest State Fish Hatchery. And why not? Didn't his state have the best brand of fish available, raised by men who knew their business? And too, they were free for the asking which is not to be overlooked.

Mr. Friday ordered his fish, and sure enough, on September 10, 1945, the big fish hatchery truck pulled up in Winnsboro and Mr. Friday along with many of his neighbors were there to get their fish. Mr. Friday took home twenty bass, 250 bream, ten channel cat and ten white perch. They looked awful small to Mr. Friday then, but he resolved to do his best with them.

As Mr. Friday recalled, the pond was supposed to be fertilized each month during warm weather. So when April of 1946 came, he began to apply fertilizer to all the water under five feet in depth. Now the man said to use 8-8-4 at the rate of 100 pounds per acre, but 5-10-5 was the nearest thing he could find so he faithfully applied it each month from April to September. And surprise of surprise by September, he began to catch bass which would weigh one pound and bream which weighed one-fourth pound. Mr. Friday does not have any record of how many fish he caught, but he was very pleased.

Now here is where Bob, Mr. Friday's high school age son, enters the picture. Bob was taking Vocational Agriculture, and one thing he learned was the value of records. So Bob decided to keep a good record of how many fish the family ate from the pond in 1947. Here is what Bob found went over the table from this one-fourth acre pond: white perch, 10 pounds; bass 19½ pounds; channel cat, 17½ pounds; and bream, 16¾ pounds. Largest of each species was 1½ pounds for white perch, 2 pounds for bass, 4 pounds for channel cat and 5 ounces for bream. The cost of fertilizer was \$14.40.

The Fridays are still fertilizing. Already in 1948 up to May 26 they have eaten 40 pounds of fish from their pond. Mrs. Friday has caught a channel cat which weighed 4¾ pounds on a pole and line and all the Fridays believe in stocking right, fertilizing regularly and fishing heavily. What's more, they have the proof.

Bunk!

"Eat fish and grow smart" is an old, old saying, but scientists say that it's all the bunk. A recent release from the Ohio Division of Conservation says:

"Science does not recognize any one food as more beneficial to the brain than another. What food is good for the whole body is also good for the brain.

"Fish meat is considered rich in phosphorus and a German scientist of the nineteenth century started the idea, 'No phosphorus, no thought.' As a matter of fact, the human brain attains almost its full adult size during the first six years of a child's life and during the time when its chief article of diet is milk.

"The flesh of fish is lighter and more easily digested than most of the flesh meats and, therefore, it is suitable and desirable food for so-called brain workers or persons engaged in occupations involving little physical exertion and much mental labor."

Know What's Behind Your Target

The National Rifle Association has conducted yearly surveys on hunting mishaps and today has records of hundreds of such accidents in its files—avoidable cases which were caused by ignorant hunters who had not made sure of what was behind their targets or given a thought to the possibility of a ricochet.

If you go hunting don't forget that rifle bullets travel a long way, and even shotgun pellets have some range, and all of them will ricochet. Ricochets can be avoided by using common sense—Do not shoot onto any flat hard surface (water, rock, baked or frozen ground, etc.) unless you are sure that the background is clear as far as your bullet can travel. As for ranges and background—the box that the ammunition comes in will tell you the range and a map survey or a personal reconnaissance of the ground you are going to hunt over will take care of your background. Use these precautions and you won't become a case in the Washington files of the NRA.

REMEMBER:

A .22 caliber Long Rifle cartridge is dangerous up to one mile . . .

A .30-30 cartridge is dangerous up to one mile and a half . . .

A .30-'06 cartridge is dangerous up to two miles . . .

A .22 caliber bullet will penetrate at least seven one-inch boards, so be careful where you tack up your target.



Be sure of your Backstop

Game Hog Menace

★ Continued from page 6

expert, and see what pre-season shooting does to new-born fox squirrels squealing

in their den tree. Just four more you won't have a crack at come September. Or stop in at a wildlife refuge, where ducks are being banded and look at the lead shot some of those ducks are carrying around.

They won't last long; lead is highly poisonous to the inside of a mallard.

Not only has there been an alarming rise in hunting and fishing violations but these same "sportsmen" may even break a civil law or two in their desire to come home with the bacon. Four deer were hijacked from a moving commercial carrier by several teen-agers in Vermont, and a Racine, Wisconsin man stole a deer, lugged it home and was having the head mounted for a trophy when he was arrested.

The 1947 hunter neglected the commonest of safety precautions and many deaths resulted from these petty violations. Most of the states makes it illegal to carry firearms in a car unless unloaded and either incapable of firing or lodged in a carrying case. This law is a safety measure pure and simple, yet in Wisconsin, officers arrested 239 hunters in November because they failed to abide by this precaution. Many guns were found loaded and COCKED in the cars checked. This is a deplorable

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HUNTING TIP. A safe waterproof match holder for ordinary wood kitchen matches can be made of an empty 12-gauge and an empty 16-gauge shot shell. The 16-gauge shell, which will hold more than a dozen wooden matches, slips inside the 12-gauge shell, but fits tightly enough to provide ample protection.

LETTERS

Salt-Water Cats

Having just returned from a five days' fishing trip at Port Aransas, I want to write you about a subject which I hope will interest you.

My first fishing trip to Port Aransas was in 1911, and in the past few years I have fished there on a number of occasions and it is a well-known fact that the boatmen are anxious to take out parties for trolling purposes, but only a limited number are willing to take out parties for still-fishing, except when the sheepshead fishing is good in winter, where I fished for ten days in February and March.

On my last trip there, with my daughter as a guest, we still-fished in the Bay, except for one morning, and caught a great many, what the boatmen call, "Whitings" which the boatmen are willing to take up, as well as gaff-topped catfish. I do not know the official names of either. We threw back into the water at least fifty of the common salt-water cat, or scavenger cat, as they call them, as it is almost impossible to get a boatman to bring them in.

I did bring some of them back this time, and have on previous occasions, as well as having caught and eaten a number of them, while at Boca Chica for a week, in 1934, and find that these plain salt-water cats are just as satisfactory to eat, as the fresh-water cats, which are very popular in our country. The old negro chef, on the Sante Fe diner for many years, is very fond of them and has served them on many occasions on the road to people when they did not know what they were eating, and the chef at the hospital, who has been with us for twenty years, has just told me that the ones I had dressed at Port Aransas and brought to them here, were as delicious a catfish as any he has eaten from the waters around Temple.

Now, the point is this. The boatman threw away at least fifty of these cats, from eight to twelve inches long, each morning and afternoon when we still-fished, as they will not eat them or go to the trouble of getting them in, and you could hardly get anyone to clean them at the fishing wharf, and in fact, it is considered a disgrace for the boatmen to bring any of them in. These catfish, if sold in Temple, dressed, would bring a minimum of seventy cents a pound, and with the heads on, they cost the negroes today, fifty-nine cents a pound. It seems pitiful to me that particularly with the high cost of food, so much valuable and edible food is being thrown back into the water daily on the Gulf Coast, and especially Port Aransas, and I cannot speak for any of the other fishing resorts.

These fish, as I understand, are called scavenger cats because they eat the trash and filth around the docks, and this has prejudiced the boatmen against them. They can be caught easily and at a minimum expense, and if an effort was made to encourage the sale of them with proper

information and advertising, a great deal more fish-food could be sent in to our inland towns. We have many fishermen in our country who are only too happy to come home with a string of these catfish.

Personally, I continue to bring them home not only to eat myself, but to give to some of the colored employees working here at the hospital who can hardly afford to pay the prices for meat, and there is nothing which I can bring them that they enjoy more.

This attitude arises, in my judgment, from prejudice which is not properly grounded and there could be large numbers of these catfish caught and sold to restaurants nearby without even having to go to the expense of shipment. As it is now, you are well aware of the fact, when we buy redfish or fillet of trout in the hotels today, we do not know whether we are getting a drum, shark or what.

There was a prejudice against the kingfish on the Atlantic Coast, which you are familiar with, which was finally overcome. It is a delicacy now, and when I caught my first one, many years ago at Freeport, they told me there that they were not good to eat, nevertheless, I brought them home and found them to be delicious.

I feel sure that we threw at least 200 or 300 catfish back in the water while fishing at Port Aransas for the five days, and it has been the same on every occasion we have fished there for the past several years. Please accept this purely as a suggestion.—M. W. Sherwood, M. D., Temple, Texas.

Deer For Boys

I am sending you a picture of myself, my dog and a deer, that someone killed and left on the porch of the Boy's City, on or about June 28th. The Supervisor of Boy's City called me and said someone had left the deer on their porch, and after I had examined it, I was of the opinion that someone had run over the deer and since he was interested in the boys having it I gave it to them.

The dog pictured here is a Wirehair; he is a smart little dog, a constant companion of mine and has at times been a



great help in enforcing the game and fish laws. One time I was chasing a couple of violators that were shooting doves out of season, and, one of the men threw the doves out of the car before I could stop them, but this dog made short work of find-

ing and retrieving the dead birds (his name is Skipper). Skipper is also handy on night patrol inasmuch as he will warn me if we are near someone, or if I see fit to catch a little shut-eye, I have no fear of anyone sinking the boat with me or cutting the anchor line, not that anyone would think of doing such a thing to a Game and Fish warden. But one must be ready for any emergency, when operating a patrol boat at night.—Capt. H. D. Campbell, Corpus Christi, Texas.

Treed Bobcat

I have just read with much interest "Fanged Fury" in Game and Fish. I recall that Eugene Reagan, of the well known Texas Reagan family of Live Oak County, who was one time Sheriff of that County, told my father, when I was a small boy, of an occurrence almost identical with that related by H. C. Gimson, except that in his case, there were three of the coyotes that treed the bobcat and Gene was successful in killing all three of the coyotes, as well as the cat. This occurred in the 1890's near Oakville. He was convinced that the coyotes would have killed the cat had he not treed and I believe that they intended to eat it.—S. L. Gill, Raymondville, Texas.

Dear Sir:

To my mind, there is hardly anything more important to our continued enjoyment of outdoor life than the preservation of our natural resources. A practical conservation program carried out with the cooperation of sportsmen and the general public would be the finest achievement any agency or group could attain to. The contribution toward such a goal which your publication is making is great. I salute your editorial policy, and trust we will have many enjoyable numbers in the following issues.—Frank Hawkins, Bay City, Texas.

I enclose herewith my check for two one-year subscriptions to "Texas Game and Fish" and I wish you would please send Mr. George Eager, Tucumcari, New Mexico also a copy for the coming year. I do really enjoy reading this magazine, and you are doing a wonderful job to educate the people and preserve the game and fish, and I would like for our New Mexican friends to know what we are doing in Texas.—Guy C. Victory, Lubbock, Texas.

Game Hog Menace

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able situation and indicates how dangerous the current upsurge in wildlife violations really is.

Many "game gunmen" have little or no respect for private property, nor are they courteous to the landowner on whose farm they are hunting. The vast increase—nation-wide—in posted lands and posted waters is mute evidence of the reaction to the attitude of the game gunman. Fences are out, livestock shot, chickens

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Brazilian Red Shrimp

AMERICAN housewives are missing a bet. Conditioned for years to believe that any shrimp showing a tinge of red in the shell was a spoiled shrimp, they have built up buying resistance accordingly and, as a result, are missing one of the finest foods in the sea. Brazilian red shrimp, commonly called redtails or brownies by the fishermen, should be a premium shrimp. They keep better than do the white shrimp and have every bit as good a flavor, if not better, than the ordinary shrimp of commerce.

Their difference in appearance is the only thing against them, and in this, one is reminded of the old story of the salmon packer who had a lot of white salmon that he could not sell until he put a label on the can saying, "Guaranteed not to turn pink." Maybe we should do something like this with the brownies. Emphasize the fact that these are Brazilian red shrimp, the finest food in the sea, "guaranteed not to turn white," and see what effect that would have in marketing.

The brownies, as every fisherman knows, are much like the white shrimp of commerce. However, they spawn earlier, over a more extended period, they reach the bays earlier, apparently leave the bays earlier, and live in deeper water off shore.

Interested in the utilization of this shrimp, which should form an important addition to our commercial fishery, and give our fishermen a chance to spread out, all the information available at the present is given here with in the hope that it will aid in promoting the increased use of this fine food.

According to investigations made during the spring and summer of 1948, by Dr. Paul Heegard, of the University of Copenhagen, in coopera-

tion with the Texas Game, Fish and Oyster Commission, at Port Aransas, Texas, the redtails spawn about eight to ten miles off shore. He says, "It seems that this shrimp has an elongated spawning season in deeper water, but the full length of the spawning season is not known with certainty. The investigation showed the possibility of waves in the spawning. The first wave took place in January and February, and these larvae developed into post larvae, which went into the bays in March and April. A second wave of spawning was noticed in April and May, followed by the post larvae entering the bays in July."

Inquiry from Dr. W. W. Anderson, of the U. S. Fish and Wildlife Service shrimp investigation, added some further facts. He says:—"As you are aware, we have two species of the Brazilian group on the northern Gulf. The redtail appears to occur in greater abundance than the other. Along the Louisiana and Texas coast, during the operation of the *Pelican*, we consistently took this shrimp out to a maximum depth of ninety fathoms. However, the population, apparently rather widely scattered, and no concentrations were found that were at all comparable to those occurring with the common shrimp. The bulk of the offshore population of this shrimp, appears to be distributed from the outer limit of the present offshore fishery into deeper waters.

"In Louisiana the young redtails are very abundant on the inside bays, four or five weeks in advance of the young of the common shrimp and seem to decrease in abundance rapidly with the occurrence of young common shrimp in bays.

"The big factor in the failure of

By J. L. Baughman

Brazilian redtails to market as well as the common shrimp is their natural coloration, which is brownish-red. The industry and the consumer has always associated spoilage of shrimp with a pink color, which occurs when common shrimp begin to go bad. Therefore, when a few Brazilian shrimp get mixed in with common shrimp, it is assumed that they are bad shrimp. Consequently, the industry has had trouble in marketing Brazilian shrimp as a fresh or frozen product. When either common or Brazilian shrimp are handled, soaked, peeled, or canned they have a pink color and the objection to the Brazilian shrimp is therefore lost in these methods of handling."

This last suggestion of Mr. Anderson's is most interesting. On June 5, 1948, I contacted a number of dealers and obtained the following estimate on the cost of preparation of Brazilian shrimp in this manner, suggesting that this might be one solution. The figures they gave me were as follows: Sixty pounds of tails cost \$27.20 at the price then prevailing. Fifteen per cent loss for peeling would make the tails cost fifty-four cents a pound. Add to this two cents a pound for peeling, three cents a pound for freezing in one pound packages, one cent a pound for plastic, heat-sealed bags, and three cents a pound overhead and you have a total cost of sixty-three cents a pound for peeled, cooked, frozen shrimp before it leaves the dealer's plant. This still leaves room for a fair margin of profit.

As an alternative to preparing this shrimp in this manner for the domestic market, it might be of a great deal of benefit to the industry, to conduct an intensive educational program on the advantages of Brazilian shrimp, placing special emphasis on the large users, such as hotels and restaurants, which are continually on the lookout for a high class product.

Game Hog Menace

★ Continued from page 18

stolen, orchards and crops are raided, and farmers have been ordered off their own lands at some game hog's gunpoint. Is it any wonder that wildlife conservationists are facing increasingly difficult farmer-sportsmen relationships? Is it any wonder that the farmer sees little incentive in adopting habitat improvements that will increase the wildlife on his land?

Since 1941 hunters have increased so fast that if each licensed hunter were to take illegally one pheasant, the kill would almost equal the estimated total South Dakota pheasant kill of 1943, the year of maximum pheasant abundance. What makes the situation most alarming to con-

servationists, however, is the year around pressure placed upon wildlife. A hen pheasant shot illegally during the open season may be a small loss, but the illegal taking of the same hen in the spring, prior to the breeding season, represents a potential loss of from three to five legal cocks. Nor can the wild hen be replaced by restocking; most states report such low survival, especially with spring-released birds, that the wild hen shot is usually worth much more than the fines and costs the violator pays. While the fines are staggering in the aggregate they represent much less than the value of the game taken. Thus although \$44,238.50 in fines were assessed New York violators in 1959 cases in 1946, the game taken probably could

not have been replaced for several hundred thousand dollars.

You are the one these game gunmen rob when a quail is shot out of season; your sport is jeopardized when the game hog cuts the farmer's fence, your heritage is lost when you fail to report a game cock violation. Without the backing of at least 90 percent of the real sportsmen a game law is unenforceable. If you want your sport to continue, assist in combating the game violator at every turn along his nefarious trail. Without your continued action your wildlife resources are doomed to annihilation for selfish purposes. So put a plug in the game hog hatchery in your bailiwick and save your wildlife while there's still enough left to save. The situation cannot safely continue. Americans will lose too much and the game hogs gain too little.—"Florida Wildlife."

The Pollution Pendulum

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the stream wastes from a coal mine or even finely broken fragments of minerals that can hardly be disposed of by oxygen. The only way to eliminate them may be to settle them out by gravity. Given time, this will take place, but meanwhile the stream may not be performing the functions of which it is otherwise capable.

Usually as the stream leaves the city more or less completely wrecked anyway, the city shows its final lack of respect by dumping into its waters the wastes from its so-called sanitary sewers. This may be the final blow that reduces a beautiful, wholesome stream to little more than an open sewer.

Again, give our stream time and it will recover from all these blows. The heavy, inorganic pollutions may settle harmlessly to the bottom. The chemicals may be neutralized by elements picked up by the stream as it flows on its way. The organic stuffs may find themselves converted by available oxygen to some form in which they may be of food value to many kinds of life.

Our pendulum may swing back to where it was originally unless the stream reaches another town or city where the swing from purity to pollution again begins.

According to figures supplied by the United States Public Health Service about 108,000,000 Americans live in communities that lack adequate and safe water supplies; of these, 27,000,000 live in so-called rural communities. When we remember that typhoid, dysentery, and many other diseases may well be associated with the manner in which we supply ourselves with clean water, it is obvious that our problem is not a trivial matter. Father, it is a must on our list of things to be solved.

True, the Health Service estimates that an adequate program for water purification would cost seven billion dollars, but the alternative is one we do not care to consider.

Just what can we as teachers do to help meet this situation? Should we put great lists of figures on the blackboard and scare the children into the conviction that our world is going to the dogs? I doubt it.

Should we take a trip to the community filtration plant with our children and let the attendants explain some details we ourselves do not understand? I doubt it, in spite of the fact that this is probably one of the commonest kinds of exercise followed by teachers who wish to be progressive and have at least one field trip a year.

With relatively simple experiments, children can be taught how to recognize certain kinds of pollution. With a few other suggestions, they may be shown a few things they may do to counteract pollution in a small way. These activities may

Texas Oyster Industry Ripe for Rehabilitation

Dr. P. Korringa, leading European oyster culturist, is now in America at the invitation of researchers into the "Causes of Oyster Mortality" along our own coasts.

Dr. Korringa was honor guest at a national oyster meeting held at Asbury Park recently. After attending the meeting, Dr. Korringa in company with Dr. S. H. Hopkins of A & M's Department of Biology and other specialists in marine life inspected oyster beds, research laboratories, and packing plants along the Atlantic and Gulf coasts. The tour led to the A & M Campus where a detailed study of researches now in progress under project No. 9 of the A & M Research Foundation was made.

Several members of the Biology Staff at A & M have maintained an interest in problems centering around marine ecology. Since long before Project No. 9 was begun, Dr. Hopkins, Dr. Potter, and Dr. Doak were all members of The Marine Resources Committee for Texas. Dr. Doak has collected information indicating a wide interest in rehabilitation of oysters in Texas. In light of this background Dr. Korringa consented to answer questions regarding the possibilities of rehabilitating Texas oyster beds. He cited the parallel between conditions on our coast and those which existed in Holland prior to the establishment of a prosperous oyster culture there.

According to Dr. Korringa, as long as Holland's oyster beds were open for exploitation they steadily deteriorated until they became worthless. He compared an oyster bed that is public property to an orchard in the wild. Everybody gathers prematurely, none plant, spray, prune, or fight weeds, and the orchard goes down. Oysters require the same kind of intelligent and industrious care as does any other crop. The methods for restoring are known but our beds continue to decline.

Holland, through governmental research agencies, first established the biological facts essential to sound practice. She then established an experimental and demonstration farm in order to illustrate the feasibility of profitable oyster culture. The oyster bottoms were then leased to private planters who were placed under contract to use proven techniques. A thriving and prosperous industry quickly developed. Choice oysters in Holland bring \$1.20 per dozen. When asked how this compared with prices here, Dr. Korringa intimated that no comparison was possible because we "have no choice oysters."

Dr. Korringa pointed out that the Dutch refer to the rapid influx of men from all walks of life into the oyster business as a "Second Klondike." He pointed out that

form the basis for convictions that later on may guide them in making wise decisions when they come into sufficient authority to have genuine influence.

By all means, children should be shown what they can do to avoid, as far as pos-

sible the bad effects of the pollution that always is to be found to some degree in almost any water that has come near man.

Great problems—such as the pollution of oyster beds and its possible far-flung

sible the bad effects of the pollution that always is to be found to some degree in almost any water that has come near man.

1. The biological and other scientific information being gathered by the A & M Research Foundation has been an essential first step. This data should be made widely available to legislators, fishermen, industrial users of shell and to others who may be interested in oyster rehabilitation.

2. An Experiment Station for the continuation and extension of such studies should be established in some favorable coast position, preferably in conjunction with existing agencies.

This station should include oyster plantings of commercial size as a means of demonstrating the profits which could be expected from an oyster business scientifically handled.

3. The laws governing shucking plants should be modified either to encourage or require the shucking of oysters on barges above the beds. This measure would enable the return of fresh shell, with young oysters attached, to the beds at a minimum cost.

4. The laws limiting the acreage available for lease to one individual should be revised to make it possible and preferable for oyster planters to capitalize upon mechanized methods. To limit the acreage has the same effect as limiting wheat culture to a few acres per farmer. This would force the abandonment of tractors and combines and necessitate a return to unprofitable scythes and cradles. Power dredges are for the oyster industry what combines are for a wheat field. They entail too great a capital outlay for use on a small acreage.

5. The laws limiting the acreage available for lease to one individual should be revised to make it possible and preferable for oyster planters to capitalize upon mechanized methods. To limit the acreage has the same effect as limiting wheat culture to a few acres per farmer. This would force the abandonment of tractors and combines and necessitate a return to unprofitable scythes and cradles. Power dredges are for the oyster industry what combines are for a wheat field. They entail too great a capital outlay for use on a small acreage.

6. A police force adequate to protection of private plantings should be provided for at least one favorable area. When its value is proven it could be extended to all favorable waters.

Dr. Korringa was able to convince all who listened to him that *The Time is Now Ripe for the Rehabilitation of the Oyster Industry in Texas.*

★ Continued on page 25

Controlled Hunting

★ Continued from page 4

the harvests because it is a method whereby damage to the range by small herds often can be controlled without eliminating the herd altogether. In both Wyoming and Texas, ranchers have gained some financial returns through hunters' fees or credit for animals shot on their property. Herds regulated in this manner frequently have been improved to the extent that they have more trophy possibilities for sportsmen in future years. It seems to be preferable to charge a reasonable fee for permits issued in controlled big game hunts. This practice helps to defray administrative expenses and discourages applications from those who may not plan to use their permit.

In nine southeastern states, a total of 25 Cooperative Wildlife Management Areas, with a minimum size of 50,000 acres, have been set up on National Forest lands in cooperation with the states. On 11 of these units, controlled fishing and hunting is practiced even to the extent of wild boar and bear hunting on a party basis and special "wilderness hunts" into inaccessible areas. Whenever necessary, selection of hunters is accomplished by a drawing.

Pennsylvania, Michigan, Minnesota, Ohio and Wisconsin are the only north central and northeastern states with experience in controlled big game hunts. These are usually for antlerless deer, and still on a small scale except for Pennsylvania's 1946 antlerless deer season by special permit in several counties. The legal authority for such limitation of hunters is lacking in many states in this area. However, Wisconsin's controlled hunt on antlerless deer was operated through trespass powers of the Fish and Wildlife Service on lands supervised by them. In Wisconsin's hunt this year almost 20,000 sportsmen applied in hunting parties for the available 6,000 permits. Although administration was complicated by so many applicants, the use of IBM machines to select the permittees and preparation of photostatic copies of their applications to use as permits, facilitated the details considerably. This combination application-permit form is shown in figure 1.

Controlled hunting on small game species has developed largely in connection with public hunting grounds programs for the primary purpose of securing trespassing rights on farm lands favorable to pheasant hunting. Following the Williamston Plan in essentials, Connecticut had 160,000 acres under permit control in 1946, Pennsylvania three experimental areas in 1937, Michigan a half million acres in 1936, Ohio 15 areas in 1938, New York 122,000 acres in 1943, New Jersey almost 128,000 acres in 1935, and Ontario many units controlled by rural municipalities.

In most of these projects, the farmers were given protection with refuges and regulated car parking, special privileges in controlling issuance of permits and

assistance in posting, preparation of ticket-permits, stocking, and improving game conditions. Hunters sometimes paid an additional hunting fee to the farmer, but this generally was frowned upon as poor business. Hunting privileges usually were limited to seasonal permits for the farmers and members of cooperating sportsmen's clubs with limited daily guest permits to outsiders on a first come, first served basis. It is obvious that these plans allow for favoritism in selecting hunters, and some are bound to be disappointed on peak days, but the projects did succeed in opening more lands to public hunting. Such units, usually sponsored by conservation departments, still operate in at least six states and provinces.

The experience of New York is important because they eliminated some possible defects by leasing their areas at 10 cents an acre, and issuing all permits themselves on an equitable basis, after the farmer's family was given a seasonal permit. No more than three hunters were allowed on 100 acres at a time. They operated full-time checking stations on each area during the pheasant seasons and secured much valuable information. However, in 1943, after the five-year experimental period, this plan was judged to be too costly with

Fish Fails to Gain Weight

A trip to Texoma from Talco proved good luck for Mrs. Paul Newman, who in her first fishing experience on the lake landed a two-pound black bass that bore a rodeo prize winning tag from the 1947 version. Instead of being worth \$100.99, the fish now was valued at \$10 in consolation prize money.

The fish was caught in the same approximate location where it had been released last season. It had grown only one-eighth of an inch and had put on no weight.

an expense figure of \$1.56 per permit per man day on even the best area.

The Province of Ontario found it was necessary to limit the number of special permits issued to hunters for their favored Pelee Island pheasant hunting. In 1939 a total of 1,600 hunters crowded the island with one hunter on each 10 acres. The cooperating farmers were pleased to see these permits limited to only 900 during following years, and the idea spread throughout the province. However, in their plan, rural municipalities setting up such cooperative hunting areas are permitted to charge a fee which goes into the local public treasury.

At present, besides the Williamston Plan cooperatives still active, several states have types of public hunting grounds with only limited hunting permitted. Illinois has six areas of special value for either pheasant or waterfowl for which permits are issued in the order of application. Hunters pick the area and day they wish to hunt. Michi-

gan manages one marsh for waterfowl on which 300 permits are given to those who come first. Any overflow of hunters is shifted to a nearby unrestricted area. Ohio has one area for waterfowl on which a drawing is held to determine the selected hunters. A specified date and blind number are assigned and alternates are drawn for anyone who cannot use their permits. In North Carolina the number of available blinds on the Mattamuskeet National Wildlife Refuge's open hunting area is limited, but selection of hunters has not been necessary to date. However, the strict regulations requiring an authorized guide probably reduces the number of applicants. Indiana has had a little experience in limiting waterfowl hunters on one public area to the number of available boats, and Iowa successfully has limited waterfowl hunters on two public areas by determining the number of blind locations and requiring the removal of all blinds at night. Hunters built blinds on their boats and occupied the locations on a first come, first served basis.

The following items are mentioned by way of summary:

1. In the western states, controlled hunting is now an important management method used especially to prevent overshooting of both large and small herds of big game and prevent over-concentrations of hunters even where over-shooting might not have serious effect. Most western states have secured legal powers authorizing this type of harvest.

2. In the rest of the country, controlled hunting still is in the experimental stage, except for certain cooperatives on the National Forests in the southeast, and public hunting grounds cooperatives protecting landowner trespass rights, especially during pheasant seasons.

3. Except for the southeastern states, the legal authority to limit hunter numbers in even problem cases frequently is lacking. Although projects such as this can be operated by states in cooperation with federal agencies on their lands, using their trespass powers in issuing permits, enabling legislation would be desirable.

4. Big game herds needing additional harvesting or reduction on inaccessible areas might best be controlled through this method. Over-concentrations of hunters on especially desirable deer, waterfowl, or pheasant areas might be prevented in this way to benefit both the hunter and the game. The selection of applicants and distribution of permits by machine methods can reduce administrative difficulties.

5. Wildlife managers should investigate the possibilities of controlled hunting to solve special problem cases. The value of such projects to research workers through checking stations has been proven in many instances.

6. No one desires to see more restrictions placed upon the sportsmen, but with full understanding of the programs, both the sportsmen and the general public often favor such additional regulations, which will improve the recreational enjoyment of orderly hunting and prevent over-harvesting of wildlife resources.

Time for Resources Inventory

By Fairfield Osborn

President, New York Zoological Society
 President, Conservation Foundation
 Author, "Our Plundered Planet"

SUPPOSE your radio blared forth today the news that a great new continent has been discovered—billions of acres of unspoiled land, rich in forests, grasslands, mineral deposits, wildlife, and deep, clean-running rivers. An air survey has indicated that there is no equivalent area in the world so completely fitted to become the home of millions of prosperous, well-fed, happy people. This new land belongs to no one but a few thousand scattered and for the most part nomadic peoples. It stands there for the taking—a great untouched stock of natural living resources.

One cannot help but wonder, should such a phenomenon be possible whether the human race would make the same mistakes in "conquering" a vast new land area that we Americans have made in "harnessing Nature" in these United States.

Less than five centuries ago Columbus brought home to Europe the greatest news flash of all time. Even so, more than a hundred years were to pass before a thin fringe of colonists was permanently established along our Atlantic coast and a few scattered Spanish outposts had found root in what is now California. Over two centuries more elapsed before the "winning of the West," and the actual settlement of the Great Plains did not take place until a few short decades ago. In these really recent years we truly began to roll.

These general facts are cited for the purpose of reminding us that it took some time as human history goes for the pressure of population to carry our people into the great interior of our country. Only a little while ago our resources seemed limitless. Land was cheap. Virgin timber was free for the cutting. Rich grazing lands stretched away beyond the horizon. The history of many a pioneer family starts with the stripping of a farm in Maine or Connecticut, a move to Ohio, on to Iowa and off across the plains to the Great West—leaving a trail of spoilation and waste.

In the colonization of a great new continent would we repeat the errors of the past?

In the beginning the American people took over the custody of some 1,900,000,000 acres of land. Some 40% of it was in virgin timber. A billion of the total acreage—over half of it—was suitable for crop lands, farm pasture or range-grazing lands. The remainder represented natural desert and mountain tops. That was the inventory



MOTHER NATURE SPENT A MILLION YEARS PUTTING UP PRESERVES FOR US—NOW LOOK AT 'EM!



Time to take an Inventory of Our Pantry

of our resources, our pantry, when the United States went into business.

How do we total up today? Let us check the timber item. Of the approximately 800 million acres of virgin forest that fell to the care of the founding fathers only about 133,000,000 acres—some 17%—is reported to remain. About half of the original total acreage is in second and third growth forest including scattered farm woodlots. And how are we administering this pitiful remnant of our former wealth? The Forest Service of the Federal Government in its last annual report states that in 1909 the total stand of saw timber in the United States came to 2,826 billion board feet. By 1945—a generation and a half later—our national "woodpile" had been reduced to 1,601 billion board feet—a reduction in our inventory of some 44%. This does not indicate the amount of standing timber represented by those species of trees that were not considered valuable in 1909, but which are now included in the latter total. Nor does it reveal the fact that of our remaining 133 million acres of virgin forest 96% is in the

western states. So far as virgin timber is concerned the east, the south and the central states have practically none of it.

This is only part of the forest story. It is reported that we are consuming our now limited supply at the rate of 54 billion board feet each year while our annual growth rate is only 35 billion. Consumption surpasses replacement by more than 50%. It does not take much paper to figure how long at this rate it will be before we can close out our timber inventory.

Let's look at the farm land item. The most recent report of the Soil Conservation Service estimates our present farm croplands total at approximately 460,000,000 acres. Erosion, largely man-made, is said to take away 5,400,000,000 tons of our life-supporting topsoil every year. It is stated that 3,000,000,000 tons wash or blow away from American farms every twelve months—enough to fill a freight train that would girdle the earth 18 times. Erosion by wind and flood is estimated to carry away some 21 times as much plant food from our soil as the total of its

productive crops. The total red ink item representing annual soil loss in the United States approaches \$4,000,000,000. This total is made up of the losses of soil, plant nutrients, direct loss to farmers, plus the cost of damages by flood and erosion to highways, railroads, waterways and other facilities and resources.

So the story goes. Our forests and our grasslands are the basis of our national wealth. Oil, minerals, all our other resources add to the total, of course, but it is by our forests and our grasslands that our people eat and live.

Ding Darling is so very right. It is high time to take an inventory of our pantry. No family could live and thrive by such inroads on its capital and no one can spend more than he earns for long. No sound business could pursue a policy by which capital replacements were not adequately and regularly planned. And by the same token no nation can survive that spends its wealth faster than it can be replaced. The most tragic chapters of the human story bear this out—Greece, Spain, China, India and many more throughout the history of man.

The time for our defiance of the laws of nature has come to an end. If we do not cease the practice of using up our resources faster than they can be replaced we too will become a "have not" nation. As Ding predicts, our trusteeship will have failed and the race will spend the rest of its history fighting for what little resources remain. As for the United States we can then get along without a stock-taking, for there will be no inventory on our shelves. Old Mother Nature will have become Old Mother Hubbard.

WATER DEPTH IN FISHING

The wet fly fisherman is up against a tough problem of water depth. In other words, he must remember that trout feed at varied levels in the water. The result is that wet flies sometimes will take fish only when deep in the water, again when near the surface, or perhaps somewhere between these extremes.

Not always is it necessary to fish deep water when the weather is warm and the sun shining brightly. Often under such conditions fish will be feeding in shallow water along shores and reefs in streams and lakes. This is because hot weather sends minnows into shallow water. Fish know this and frequently go into the shallows to feed. When such is the case, live minnows are good bait, and small streamer flies are deadly.

Earthworms create soil by disintegrating rock in their digestive tract.

In addition to poison ivy, other plants such as wild parsnips, Queen Anne's lace, poison sumac, wild carrot and nettles will cause cases of skin irritation.

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\$100.00 for Hunting Rights
Room and Board for Each Hunter
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DRIFT FISHING HINT

In drift fishing the bait or lure should hit bottom frequently. If it does not, the bait is not being fished deeply enough. The penalty of correct drift fishing is occasional snagging on the bottom, but it is the best way to produce good results.

VIA AIR EXPRESS

Very young mussels, called glochidia, attach themselves to birds' feet and feathers and thus get a free ride to other waters.

IN CARRYING MATCHES

A large, tightly corked bottle is a good storage place for matches on hikes and on fishing and camping trips.

LOW WATER PRECAUTIONS

The more shallow the water, the more accurate and careful the cast of bait or fly must be.

PORK RIND FOR FLY ROD

A pork rind lure is excellent for bass when used with a fly rod. Such a lure is made for the fly rod as well as for the casting rod and offers an opportunity for splendid sport.

BIVISIBLES FOR SUNFISH

Size 10 gray or brown bivisible flies are good lures for sunfish, and use of them helps the novice to get the feel of fly fishing for trout and bass. But even a seasoned angler can have plenty of sport angling for sunnies with flies.

WHERE BASS HIDE

In river fishing for bass look for strikes around those patches of heavy rocks which occur in river beds and which provide excellent cover and feeding places.

"Early Bird" Has Sharp Eyes

"The early bird catches the worm"—but he doesn't do it by listening for him. The Ohio Department of Conservation says that worm-hunting birds find their prey through the sense of sight, rather than the sense of hearing. This is contrary to popular belief, as many think the perky robin is listening to the faint sound made by earthworms when he cocks his head to one side.

As a matter of fact, say the Buckeye state authorities, this movement allows the robin, or any other bird, to better use his vision. Birds do not have bi-focal vision, each eye working separately, which makes it possible for most of them to almost see in the circle without turning the head. They see best when a single eye is pointed directly at one spot.

The sound made by earthworms is very slight and resembles a gentle smacking of the lips. The average robin will eat about seventy earthworms or the equivalent in insect food a day.

New Nylon Lures Are Developed

Newest claim on the interest of fishermen is a recently developed line of nylon lures of the Jap feather jig type in 33 different styles and weights for all forms of casting and trolling.

The new lures have solid nickel-plated brass heads with crimped white nylon monofilament tails attached directly to the metal. The diameter of the monofilaments used in this gleaming nylon lure is .006".

The nylon tails are specially processed for maximum reflection of light and are permanently attached by high pressure crimping machines. Because the surface of the nylon monofilament is smooth, the tails resist soiling and discoloration. They are long-lasting in either fresh or salt water.

The trolling lures can be rigged on a through leader with nearly any size hook, and the casting lures are equipped with rustless hooks securely mounted with an oversize "Monel" metal pin. The hook is mounted loosely on the pin to give a "free wheeling" action.

Tested by anglers in various parts of the country, the new lures have already been used with success for taking sea trout, crevalle, mangrove snapper, blue fish, weakfish, mackerel, kingfish, tuna, snook, red fish, tarpon, bonita, dolphin, albacore, barracuda, striped bass and other game fish. Reports of results with the lures and their durability have been uniformly enthusiastic.

HUNTING LEASE

2000 acres, 45 miles from San Antonio, in heart of prolific deer country and comprising former game refuge. Plenty of deer, running water, beautiful cabins built for year around occupancy and accommodating 10 persons comfortably. Available for five-year lease at \$1.00 per acre per year. Limited to five guns. Write

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Rifles For Antelope

★ Continued from page 15

herd of feminine admirers and trotted in the truck's direction. Having only a matter of hours in which to fill my license, and since I had had a lot of fun helping other members of my party get their game, I shot the buck as he paused to study the intruders of his range. As my rifle was sighted in to hit center at 200 yards, the shot was a very simple one. *Be prepared for long-range shooting when hunting in the country where the buffalo's partner still plays.* Two hundred yards is usually the minimum range.

Now as for the flat trajectory item. A rifle with a flat trajectory, coupled with a long range hitting ability, possesses two of the most important qualifications for the ideal antelope killer. Several older-type rifles have a long range, but their bullets arrive at their destination only after having traveled a high, rainbow-type trajectory curve—thereby leaving much guesswork to be done on targets nearer the muzzle than the sighted-in range. The old .45-120-500 Sharps, for example, became internationally famous as 1,000-yard target rifle, but, sighted in at that distance, a gunner would have to hold several yards below a target located around 500 yards. Other rifles shoot flat with a low curved bullet path, but their range is limited. Illustrative of this, is the little .22 Hornet, or .218 Bee. These small calibers are among the flattest shooting arms on the market—up to 200 yards. Beyond this range accuracy falls off, and killing power dwindles. A slug from the old Sharps is not a speed demon at 1,000 yards, but it is totin' enough killing power to anchor a half-ton animal for keeps. Probably needless to say, the Sharps, Hornet, or Bee are not suited for antelope shooting.

A rifle with a low, or flat, trajectory curve, and with plenty of remaining killing power up to 500 yards, permits the gunner to sight in the piece at 200 yards, or 300 yards, and yet be in a position to connect on game 100 to 200 yards beyond the sight-in range with a minimum amount of "hold over;" and, also, be able to take care of a nearer target—less than the sighted-in range—without a bothersome amount of "hold under."

We can illustrate with the .270 W.C.F.—one of the finest commercial arms for open country shooting on game the size of our antelope. The last .270 I sighted in to hit center at 200 yards was putting its 130-grain bullet 2½ inches high at 100 yards, eight inches low at 300 yards, 24 inches low at 400 yards. By sighting in at 250 yards, some .270's will rise only 2½ inches at 150 yards and drop their pill a mere three or four inches at 300 yards. Considering the fact that the pronghorn is approximately sixteen inches deep at the shoulders the experienced .270 rifleman can make kills up to 400 yards, and over, without too much difficulty.

Two years ago I was using my custom-built .30-06 on an antelope hunt. The

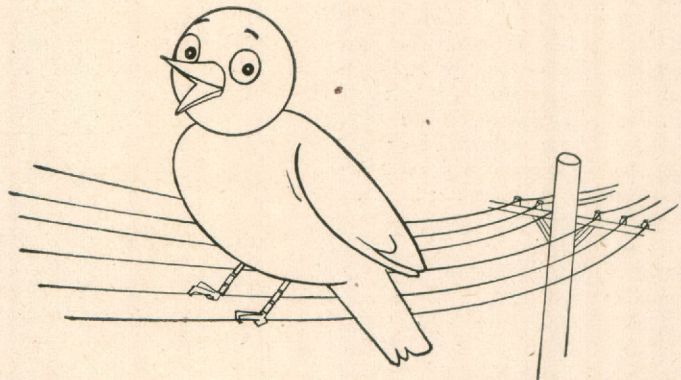
Lyman No. 48 sight was set for 200 yards with 180-grain bullets (I couldn't get 150-grain, my choice for the pronghorn, at the time of the hunt). We spotted our game about a mile away one afternoon, "glass them," and found a couple bucks with heads suitable to hang over anybody's mantelpiece. After two hours of careful stalking, we finally bellied up to a rise and peered over it. They were still grazing about unconcerned. Again we viewed their heads through our field glasses, and began to cull out "just average" and small horns. My companion found the one he wanted to take home and show the boys. The range was estimated to be about 300 yards. Having his Weaver K-4 telescope sight, mounted on a .270 Winchester, set for a couple of hundred yards, he said, "I believe I'll hold 'bout eight inches over that ol' big boy's back, and see what happens." I watched through my glasses. At the report of the rifle, the animal flinched and immediately afterward I saw a crimson splotch appear low on its side. The herd wheeled and started running up a long slope, leaving the wounded buck behind with a very sick expression on his face.

The buck I selected was among the departing group. Since my friend's .270 bullet dropped almost two feet from the point of aim, I knew the range where his buck first stood was much nearer 400 yards than 300 yards. My selection put another 100 yards of Texas plains between

us, which meant I would have to hold still further over the bobbing target. The first .30-06 bullet raised a puff of dust just a mite over. The next one clipped his neck, almost brought him to the ground, and caused him to change his course. As the addled buck topped the ridge, he ran head-on to another hunter who rolled him the last time with a .300 Magnum. My hunting partner finished his buck with a well-placed .270 bullet at 350 long paces.

All the above goes to show that if our arms had not been of the long range, flat trajectory, and high velocity variety, we probably would not have touched a hair. With rifles in the .30-30 class, we would have had to hold feet instead of inches over our targets, which would, of course, have left a lot of room for error. Our only trouble was range estimation in a country that neither of us had been accustomed to shooting over.

I list the best antelope rifle calibers, and bullet weights, thusly: .270 (130-gr.), .30-06 (150-gr.), .30-40 (150-gr.), .300 Sav. (150-gr.), 7m/m (139-gr.), .257 (100-gr.), .250-3000 (100-gr.). None of these calibers' muzzle velocity falls below 2660 feet per second. With a 150-grain missile, 2,500 f.p.s. should by all means be the minimum. Bullets weighing between 100 and 150 grains should have a muzzle speed as near as possible to 3,000 f.p.s. I do not recommend a bullet lighter than 100 grains for antelope, and then I like for it to



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be traveling over 3,000 f.p.s. for the best results.

Readers will note that I always give the .270 a very slight edge over the world-renowned .30-06 when I "talk antelope rifles," even though I, personally, prefer the '06 for all shooting of game found in the United States, and Mexico. I have always felt that I could do anything with my .30-06 that I could do with the .270 caliber, although the smaller caliber is a bit more accurate with the 130-grain bullet over the longer ranges. I stick to the '06—among the reasons—because it reaches the target with a heavier bullet. A light bullet must depend upon its high speed, which generates much shocking power at moderate ranges, to kill its game. The light jobs, such as the .250 and .257 calibers, are not carrying much authority at 300-400 yards after they have lost their speed. A heavier slug, say 130 to 150 grains, delivers a whale of a jar at the moderate range, and still brings 'em down 'way out yonder because of the extra weight. Any bullet must kill chiefly by tissue and bone destruction—not shock—at extremely long ranges.

The .257 and .250 calibers, 87, 100, and 117 grain missiles are not going to tear a very large hole in an animal beyond 250 yards, but both of these calibers may be classed as suitable antelope loads since they may be fired with amazing accuracy, and a good marksman can place the light bullets where they will do the most good. I have seen them perform wonderfully well; I have seen them fail terribly.

It is interesting to note that hunters of the Lone Star State are gradually learning which rifle to leave at home when they enter the wide open spaces. The first Texas pronghorn season brought out hunters with their regular deer rifles and carbines—many of which were lever-action saddle guns in calibers .30-30, .32 Special, .25-35, and .35 Remington, .351, etc., with the auto-loading action. Shooting of the western speedster was a new type of game to most of them, but on all previous occasions when something needed shootin', the ol' "thurty-thurty" (or reasonable facsimile) had always got the job done. But, how untrue on the fleet-footed, and wary antelope. It was really amusing—sorta sad in some instances—to watch fellows trying for the pronghorn with rifles in the short and medium range class—arms having muzzle velocities of 2,200 to 2,300 feet per second, and with high trajectory curves. Had not the game been comparatively tame, after forty years of rigid protection, a great number of hunters would have had to return home with a report of "no luck."

A report on the arms and ammunition used on the next Texas hunt showed the .300 Savage, .30-06, and .270 as the top "big three." The game was wilder, but 87.2 per cent of the hunters got a trophy.

Last year, the third open season on Texas pronghorn, the .30-06 walked away with top honors as the most popular rifle used. The .300 Savage came in second, and the .270 won an easy third. Rifles of the .257 and .250-3000 calibers worked nearer the top of the list, while arms in

the .30-30 class dropped nearer the bottom—where they belong!

Of course the .270 and .30-06 will continue to hold top billing, with an increasing number of them appearing each year. The .300 Savage will probably drop to third place and remain there, while the .250 and .257 will eventually come up with fourth and fifth rating.

Also, last year I noticed quite an increase in telescopic sights. The "glass" sights are truly one of the most helpful gadgets that can be attached to the antelope rifle. It not only assists greatly in eliminating errors in sighting, but is very handy in selecting a good trophy before firing. Fact is, I consider a good 'scope an essential requirement on the ideal antelope rifle.

The new prospective pronghorn hunter certainly should not let anybody kid him with, "All ya' need to kill one of those things is a pinch of salt, and a strong stick." It takes a darn good rifle, properly equipped, with a long range, flat trajectory, and high velocity—to bag 'em without a lot of guessin' and hopin'—A. W., III

Privilege, Promise, Responsibility

When you buy a hunting or a fishing license, or a duck stamp, you purchase a privilege, a promise and a responsibility. Wildlife is public property to be cultured, maintained, and used in the best public interest: wildlife belongs to no one of us, yet to us all. Your license entitles you to hunt or fish in seasonable times under proper regulation. *This is the privilege.* Your license money is used to perpetuate wildlife and enhance your opportunity to leave in trust for the next generation the same free hunting and fishing privileges you now enjoy. *This is the promise.* Your license requires that you obey the law, that you commit no crime against society by hunting or fishing contrary to regulation or at unseasonable times, and that you strive constructively for proper development and wise use of this nation's wildlife. *This is the responsibility.*

Both the *privilege* and the *promise* depend upon the *responsibility*. Are you doing your share?—Leonard Foote, Wildlife Management Institute.

The Pollution Pendulum

★ Continued from page 20

effect on citizens; the fouling of drinking-water supplies in large cities; the reduction of the amount of life a stream can support after a forest fire on adjacent territory has reduced the water's acidity, raised the water's temperature, and otherwise upset

balances—may hardly be significant to most children.

On the other hand, a series of aquariums in which living things are maintained may be modified variously so that observations may be made that will be useful in forming convictions later on. Anyone with sufficient imagination to be a good teacher will be able to devise a set of worthwhile experiments along these lines. Or if the teacher will set youngsters to work on the problem the chances are that they will find something that is significant and interesting.

Among the things children may conclude are the following: Foul water may have a bad odor. Some water that is dangerous may not smell bad. While one should not taste water to see if it is foul, water that has a definite taste may usually be looked upon with suspicion unless it is a mineral water of known properties. Waters in open streams should ordinarily be considered unsafe for drinking. Some springs merely represent an underground stream come again to the surface; they may be as badly polluted as any surface stream. Shrimp, crabs, oysters, and similar seafood must be taken from waters free from dangerous pollution if they are to be used as food by man.

Children can visit a stream below and above their community and from these two places collect water for use in their aquariums. They may stock these aquariums with various living things and observe differences.

In some cases, it may be possible to collect a series of water samples at different points where the stream flows through your town, to see if living things at certain points find conditions impossible for continued existence.

Boys and girls may make posters indicating existing conditions at frequent points in local streams, being sure to give credit where credit is due and not to limit the information supplied to adverse criticism. If the water problem is being handled properly locally, it is important to develop pride by recognizing that fact.

Children can do little things that help keep their community clean and their streams free from pollution. After picnics, they may dispose of the refuse by burying it rather than by dumping it into waterways. Springs known to be safe can be cleaned and improved not only for the purpose of making them available as a water supply for travelers but for demonstrating advantages to the visiting public. I know one scout troop that elected once each month thru the year to see to it that certain local springs were improved for public use.

There are many private and public agencies interested in pollution problems. These may be called upon for assistance.

Let's not dump our waste in our neighbor's yards or streams. This is not the way we like to do in America. I hope.

POOLS BELOW RAPIDS GOOD

Pools at the foot of rapids and riffles are good places to fish, for the reason that swift water deposits food in such spots, and fish wait there for it.

Small Fish Aid Fight Against Mosquitoes

SMALL, darting fish, a species which gets credit for aiding the building of the Panama Canal, have entered the Dallas fight against mosquitoes.

Aquarium Director Pierre Fontaine said that he has supplied the health department with numerous *Gambusia Affinis*, which have been prescribed for scores of Dallas' private fish ponds, to keep down the breeding of mosquitoes.

The *Gambusia Affinis*, a species common to Dallas and Texas, is known as the fish that built the Panama Canal because of the part it played in wiping out malaria-bearing mosquitoes in the tropics.

The tiny surface-feeding fish—maximum size for females is one and one-half inches length and males one inch—feed largely on mosquito larvae, destroying the insect before it becomes dangerous.

When U. S. Army engineers faced the problem of wiping out malaria in order to complete the Panama Canal, hundreds of thousands of *Gambusia Affinis*, also known as mosquito minnows, were shipped to the canal area and released in fresh water streams, lakes and swamps.

Visitors to the Dallas Aquarium probably never realized the importance of the diminutive animal as they watched its lightning-like aquatics.

The little fish has another distinguishing note, according to Director Fontaine. It was the first domestic fish sold in the United States as a tropical fish. In the late 1800's a *Gambusia Affinis* sold at about \$2, and granddad was probably sure he was getting an imported pet.

The little warrior against mosquitoes is a live-bearing fish. The female will bear 25 to 75 young at one time and she bears every 28 days, Fontaine said.

A surface-feeding fish, the *Gambusia Affinis* has great difficulty in picking food from the floor of a lake, stream or aquarium. The shape of its mouth is such, however, that it has no difficulty in attacking insect larvae on the top of the water.

Because of its liking for mosquito larvae, the tiny fish still upholds its reputation as an aid to public health and as the fish that built the Panama Canal.—Dallas Times-Herald.

SPORTSMEN CLUB INSTALLED

The Bosque County Sportsmen Club was recently organized at the recreation building in Meridian State Park. The club's aim is devoted to improving the hunting and fishing of this country.

Its motto is "Sportsmen are made from boys—Take a boy along when you go hunting or fishing."

The club is now trying to buy a site on the new Whitney Lake on which a clubhouse will be constructed in the near future.

IN TROLLING, BE SLOW

In trolling, move the boat just fast enough to keep the lure from snagging on the bottom. Lures that move slowly and go deep catch the most fish.

LURES FOR NEXT SEASON

From time to time during this season jot down the names of lures and flies which have been good producers. Then be sure you have a good supply of them for next year. Some may prove duds 12 months from now, but the chances are that most of them will again be effective.

BASS FEED DESPITE HEAT

Bass often will be found feeding during a blazing hot summer afternoon. In the hot hours look for bass around water vegetation and obstructions. They also congregate around springs and at the mouths of feeder streams, and where a moving current keeps the water well aerated.

HATCHERIES NOT NEW

There is nothing new about the artificial propagation of fish. A German scientist, Stephen Jacobi, hatched trout in little troughs on his estate in 1741.

Things You May Not Know

Lack of buffalo grass is the reason bison did not migrate east of the Mississippi river.

Human ears cannot hear the incessant clamor of the bat as he flits about overhead because the bat's signaling voice lies in the wave band of about 50,000 cycles or vibrations per second. Human ears can only detect sound in the band from 20 to 20,000 cycles.

For parental energy in looking after its young, the house wren has all other birds topped. One wren was recorded as having fed its young 1,217 times during the daylight of one day.

Ducks have an almost telescopic eyesight. They can focus their eyes for near or far vision.

The killer whale is known as "Tiger of the Sea" and is afraid of neither man nor beast. It will attack anything that swims. They even eat the tongues of living whales. The male killer has a huge scimitar-shaped dorsal fin six feet high and as the beast swims, just at the surface, the waving fin looks like the neck of a serpent. This is responsible for most of the sensational sea-serpent stories. It is not afraid of boats or small ships.

It takes 3,000 cocoons to make a pound of raw silk. The worm which spins each cocoon eats fifty times its own weight in mulberry leaves.

Fascinations Of Fishing

Fishing is a sport which makes a powerful appeal to millions of people. Among its devotees are countless persons who occupy positions of large responsibility. People find in this recreation that it helps them to forget for the moment the cares of their ordinary life.

They are engaged in a contest with the wily finny creatures, to determine whether human skill and experience shall be able to outwit the fears and cautions of the watery creatures. Thus the mind of a fisherman is occupied for the time with effort to size up the habits of fish, and beguile them into taking his bait.

There is an element of mystery about it, as the fisherman gazes at the watery surface, and wonders what swimmers are floating through those dark waters, and if there are any big ones in that company. There is a thrill when he gets one on his line, and a feeling of triumph as he lifts it safely out of the water. It is a form of triumph of man over nature.

The sport of fishing seems to cultivate a feeling of patience and philosophy in the minds of its devotees. There are times when for some reason the fish do not seem interested in the bait, and will not bite. The fisherman acquires the habit of waiting patiently until their appetite returns, or until it seems best to drop his line into some new spot.

The scenes of Nature by which the fisherman is surrounded, help him to acquire this philosophical habit of mind. While he is waiting to see if the fish will bite, he is interested by the life about him. The singing of the birds in the trees overhead pleases him with its melody, the swaying of the trees and the grasses in the wind, the rippling of the water on the surface of the lake, appeal to his sense of beauty. Even if on some day he gets but few fish, the contact with Nature has been refreshing and stimulating.—Longview News.

Legal Retribution Overtakes Poachers

Legal retribution overtook three Florida deer poachers in a big way when they appeared before a Levy County Court, the Wildlife Management Institute advised recently, and the wisdom of Judge H. S. Wilson in handling game-law violations might well be emulated by other jurists throughout the country.

Instead of the customary not-too-severe fines, the poachers got their choice of serving six months in jail or of buying deer to replace those killed. They chose the easier course and were billed by the Florida Game and Fresh Water Fish Commission for nine imported Wisconsin deer. The fee was a tidy \$810.

The Judge witnessed the release of the deer at Devil's Hammock near Bronson.

MOURNING DOVE - WHITE-WINGED DOVE OPEN SEASONS 1948

MOURNING DOVES

OPEN SEASON -- NORTH ZONE:
Sept. 1 to Oct. 15, both days inclusive. Shooting hours, one-half hour before sunrise to sunset.

SOUTH ZONE: Oct. 20 to Dec. 3, both days inclusive, except in Cameron, Hidalgo, Starr, Zapata, Webb, Maverick, Dimmit, LaSalle, Jim Hogg, Brooks, Kenedy, and Willacy counties where mourning doves may be hunted only on Sept. 17, 19, and 21, from 4 p.m. to sunset, and from Oct. 20 to Nov. 30, from one-half hour before sunrise to sunset.

BAG LIMIT: Not more than 10 per day and not more than 10 in possession.

hunter may not have more than 10 a day of either or both species (Whitewings or mourning doves) in the aggregate.

White-winged Doves

OPEN SEASON: Sept. 17, 19, and 21, inclusive.

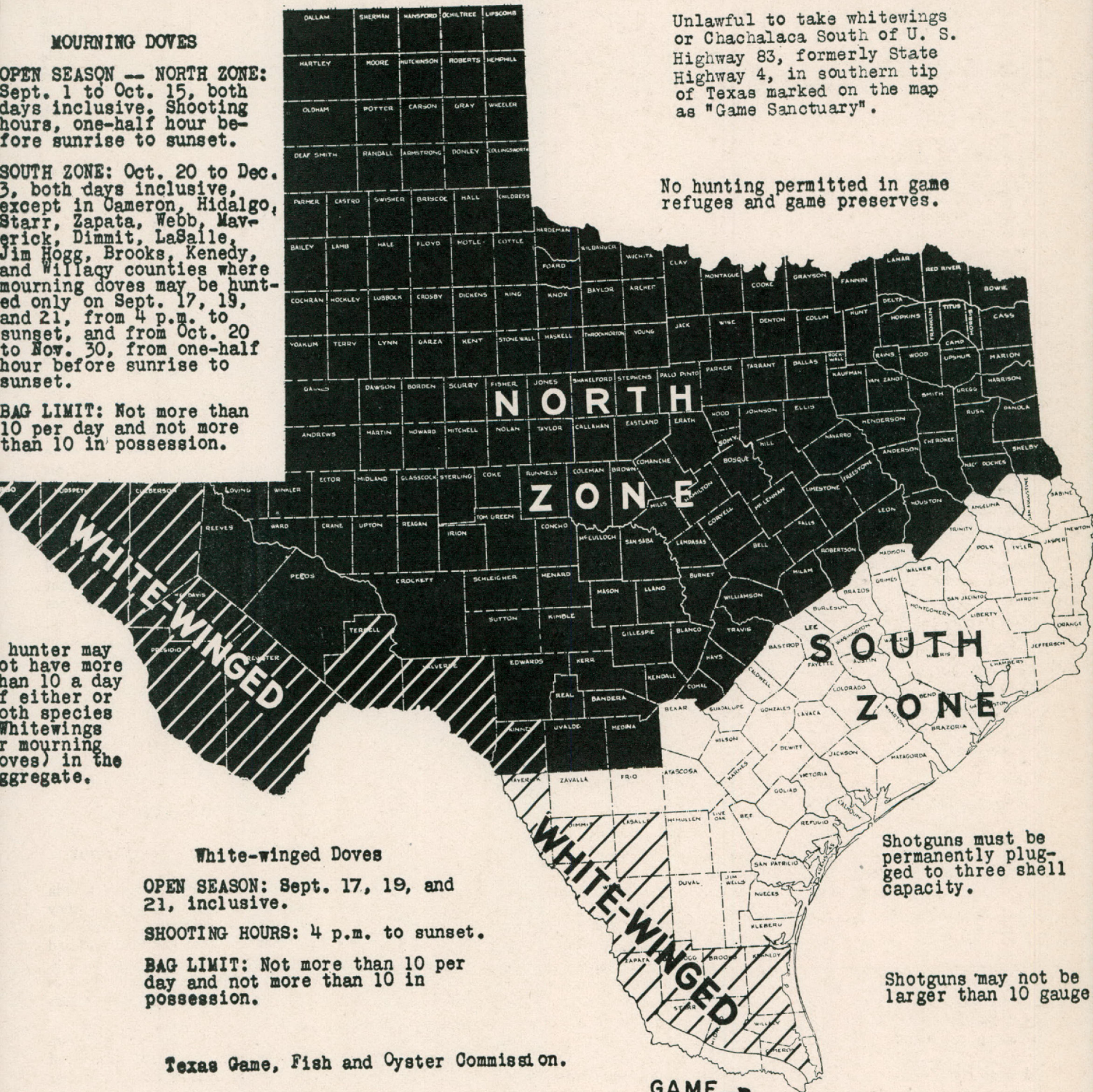
SHOOTING HOURS: 4 p.m. to sunset.

BAG LIMIT: Not more than 10 per day and not more than 10 in possession.

Texas Game, Fish and Oyster Commission.

Unlawful to take whitewings or Chachalaca South of U. S. Highway 83, formerly State Highway 4, in southern tip of Texas marked on the map as "Game Sanctuary".

No hunting permitted in game refuges and game preserves.



GAME SANCTUARY

Shotguns must be permanently plugged to three shell capacity.

Shotguns may not be larger than 10 gauge

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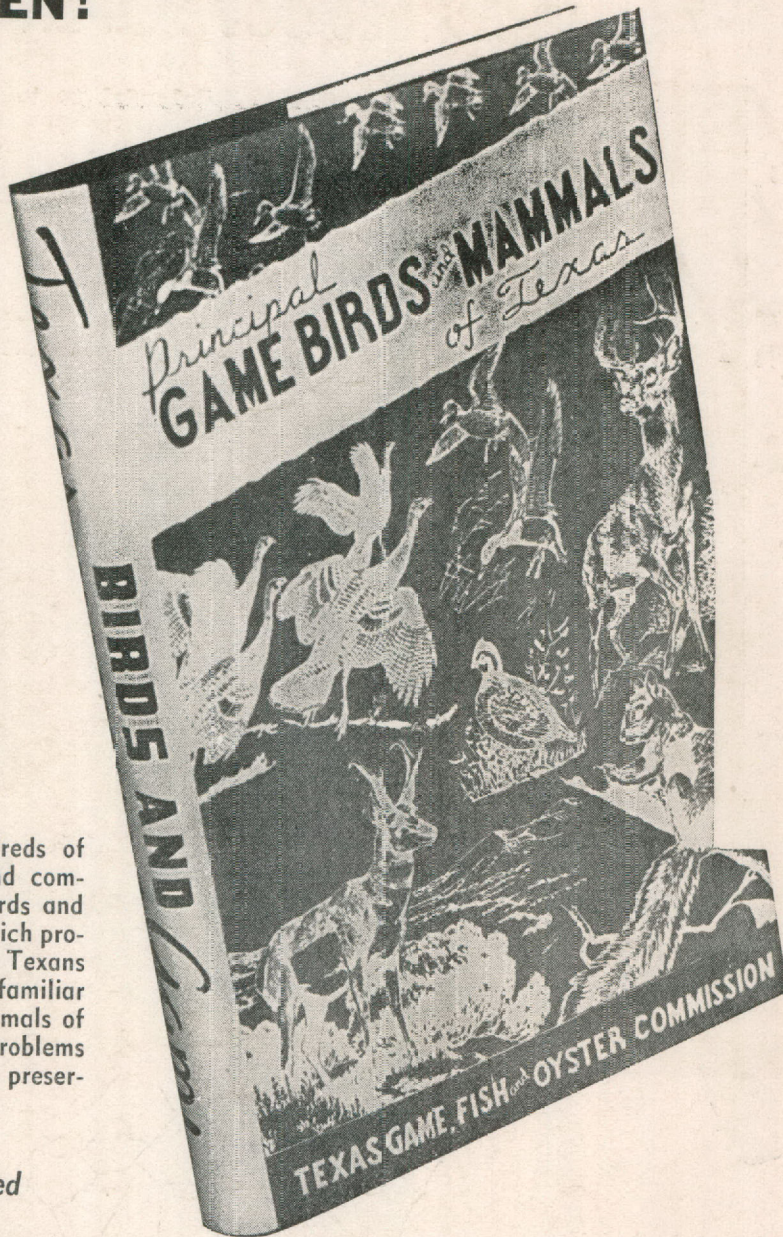
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