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# TEXAS Game AND Fish

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



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Manuscripts should be addressed to Editor, TEXAS GAME AND FISH, Walton Building, Austin, Texas. All manuscripts should be accompanied by photographs. TEXAS GAME AND FISH always is interested in pictures of game and fish catches, unusual hunting and fishing scenes, bird dogs, and in group pictures of hunting and fishing organizations. Photographs used in TEXAS GAME AND FISH will be returned after publication.



COVER—

By Orville O. Rice

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ROGER M. BUSFIELD  
Editor

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# Nature Wins

**Study of fish passes and conditions in the Laguna Madre reveals how weather and tides have thwarted every effort to keep the Laguna fresh enough to prevent fish from falling victim to high salinity and consequent lack of oxygen.**

By J. G. Burr

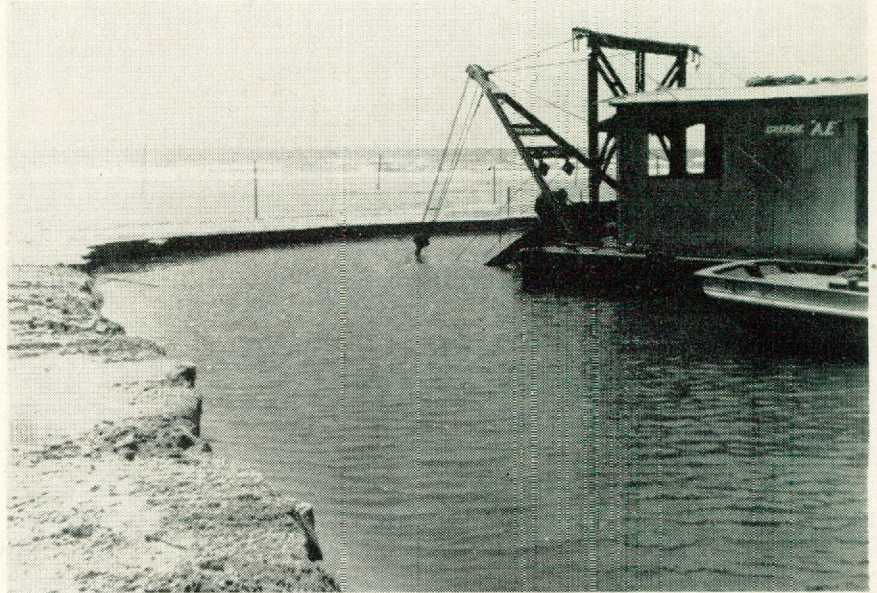
**N**EVER attempt to drive down Padre Island Beach unless the tide is low. You can safely go as far as Murdoch Landing if the tide is not too high, but beyond that and along the shell beach the road, if you could call it a road, is hazardous with any tide, and especially a high tide.

We learned that the hard way, after Willie Parker and the writer set out from Port Aransas with a low tide and ran into breakers that pushed us over on the deep sands to get stuck, or into the waves where we sometimes had to dodge to avoid the wreckage washed ashore. Into the waves too far means drowning the engine out. This happened once or twice but the momentum carried the car far enough inland to make it possible with pieces of lumber, jacks and plenty of hard work, to dig the car out and get going again. But the margin of escape along the stretches of shell was always hairbreadth, because there is very little starting traction in that pulverized shell.

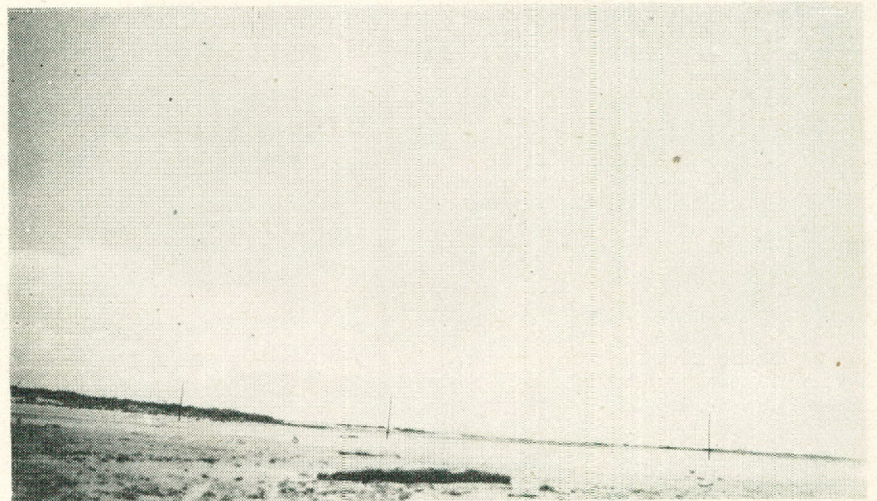
If you *will* go down the shell way, take jacks and a small lumber yard along; plenty of ice, food and water, gasoline and lube and don't be in a hurry to get back in spite of shell and high water, as we did.

Our purpose was to explore the beach, and the fish passes which have been closing up faster than the dredge of the Game, Fish and Oyster Commission could keep them open. Kodak pictures were taken of Corpus Christi and Murdoch passes and of a pass-like flat some thirty miles below Murdoch. Here the Laguna at high tide in the fall spills over into the Gulf, according to Bob Tanner, the pilot who flies a seaplane for the Game, Fish and Oyster Commission. Water was still standing in the flat, no doubt put there by the two foot tide in the Laguna which resulted from the little tropical storm late in July.

The coast, since the days of Jean Lafitte, has had its problems but the all-absorbing interest most of the time has been to make fishing better. It is well known that fish go back and forth through passes connecting the bays and Gulf. The interchange of water between the Gulf and the bays is also important, and particularly so with the Laguna Madre which has no pass in the upper section for a distance of some 45 miles and no outlet at the lower end. As a result there is stagnation, heat and high evaporation which causes salt concentra-



**BEFORE.** Game Department's dredge "A.E." is biting out the last chunk of sand bar in Corpus Christi Pass barring the way to the waters of the open Gulf just beyond.



**AFTER.** Corpus Christi Pass as it is today. Wind and tides have filled the pass.

tion and fish mortality if too much dry weather persists.

On these points and on the importance of passes there has never been any disagreement. But whether or not passes can be cut and kept open there have been flaming arguments for a generation. Will this go on forever, or will sweet reason point the way to an end?

It is to set forth what has been done the past seven years that the writer has gathered into concise form a clear per-

spective of all dredging operations and of the Laguna situation.

The Murdoch pass which was cut and recut several times after filling in with sand is again closed and the dredge lies silent at a Corpus Christi dock not having been in use since last November. Murdoch closed in the spring of the current year.

The Corpus Christi pass, first opened in 1938, was cleaned out and redredged

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TEXAS GAME AND FISH

## CHANGES IN

# Migratory Bird

## HUNTING LAWS

**A** CHANGE in the boundaries of the north and south zones, five days of extra shooting of mourning doves in the north zone and nine days of extra shooting of mourning doves in the south zone, the inclusion of a tier of West Texas counties in the Whitewing dove zone, and the elimination of the additional daily bag of 5 mallards, pintails or widgeons, are the major changes in the 1945 regulations governing the hunting of migratory game birds in Texas.

Twelve counties which were in the South Zone last year have been placed in this year's North zone. They are Milam, Robertson, Limestone, Leon, Freestone, Houston, Anderson, Cherokee, Nacogdoches, Rusk, Shelby and Panola counties.

Seven counties which were in the North zone last year but which are in the South zone this year are Kinney, Uvalde, Medina, Bexar, Comal, Hays and Travis.

The season on mourning doves in the North zone opens September 1 and ends on October 30. The season in the North zone ended on October 25 last year. The new regulations permit five days of additional shooting in the North zone.

October 20 is the opening date of the mourning dove season in the South zone and ends on December 18. Nine days of additional shooting are permitted in the South zone this year. The season ended on Dec. 9 last year.

Residents of Cameron, Hidalgo, Starr, Zapata, Webb, Maverick, Kinney, Dimmit, LaSalle, Jim Hogg, Brooks, Kenedy, and Willacy counties, all located in the South zone, get a break this year with some early and additional shooting. Mourning doves may be hunted in those counties on September 13, 16, 18, 20 and 23, from 12 o'clock noon until sunset, and thereafter from Oct. 20 to December 13 from one-half hour before sunrise to sunset.

Eight counties in West Texas have added to the Whitewing area. They are Val Verde, Terrell, Brewster, Presidio, Jeff Davis, Culberson, Hudspeth and El Paso. The whitewing season in those counties, and in the counties of Cameron, Hidalgo, Starr, Zapata, Webb, Maverick, Kinney, Dimmit, LaSalle, Jim Hogg, Brooks, Kenedy and Willacy, again is staggered. Hunting is permitted only on September 13, 16, 18, 20 and 23, from 12 o'clock noon until sunset.

Bag and possession limits on mourning and whitewinged doves are ten in

the aggregate of both kinds. No person may have in his possession more than 10 mourning doves or more than 10 white-winged doves.

The duck and goose season opens in Texas on November 2 and ends on January 20. But on those portions of Lake Texoma which are in Cooke and Grayson counties, the season opens on October 13.

The additional daily bag of 5 mallards, pintails or widgeons is no longer allowed.

The post-season period for possession of migratory game birds has been extended from 45 to 90 days.

No change was made in the regulation that does not authorize the taking of waterfowl by means of bait or live duck or goose decoys.

Daily bag limit on ducks, except American and redbreasted mergansers, is 10 in the aggregate of all kinds, including in such limit not more than 1 wood duck. Any person at any time may possess not more than 20 ducks in the aggregate of all kinds (not including American or redbreasted mergansers) but not more than 1 wood duck. American redbreasted mergansers, 25 singly or in the aggregate with no possession limit.

Daily bag limit on geese, 4 blue and snow geese (singly or in the aggregate) plus 2 of some other kind, including brandt, may be taken in a day, and 8 blues and snows plus 4 of other kinds, including brandt, may be possessed.

Rails and gallinules (except sora and coot)—15 in the aggregate of all kinds, and any person may possess not more than 15 in the aggregate of all kinds.

Coot—25, and any person may possess not more than 25.

Sora—25, and any person may possess not more than 25.

Woodcock—4, and any person may possess not more than 8.

☆

A fur-covered sea monster, more than 20 feet long, with enormous eyes and feet, resembling neither whale or seal, was washed up by the Atlantic on the rocky shores of Scotland. The beast, lying like an inflated prehistoric animal on the rocks, drew large crowds to the little Scottish village of Machihanish. Some at first were afraid to go near it. It is thought to have been killed during naval exercises or in action in the Atlantic.

# MEASURING VELOCITY

**A**N APPLE that fell from a tree 280 years ago taught ammunition makers how to measure the breathtaking speed of modern bullets and shot.

The law of gravity revealed to Sir Isaac Newton by a falling apple, is the principle behind the Boulenge chronograph—a type of time-record instrument used by ballisticians to compute velocity at the Winchester Repeating Arms Company division of Olin Industries, Inc.

The application of the law of falling bodies to the measurement of horizontal speed is far more simple than it might appear.

The acceleration of a falling body is known to be 32.16 feet per second. The Boulenge chronograph measures the distance that a "falling body" falls during the split of a second that a bullet or a load of shot passes over a given distance.

For example, if a body falls 16.08 feet in the time it takes a bullet to travel a mile, it is obvious that the speed of the bullet is a mile a second or 60 miles a minute. Thus, to compare a falling body with a projectile you need only know how far the body falls while a projectile is covering a specified distance, to de-

termine how fast the projectile is traveling. A simple table will translate the height of fall into elapsed time and into the speed of the projectile.

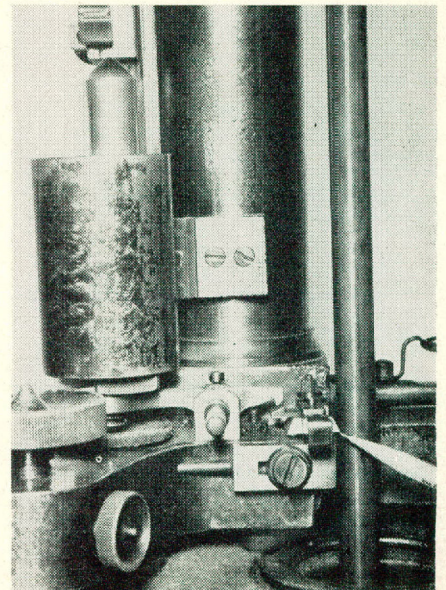
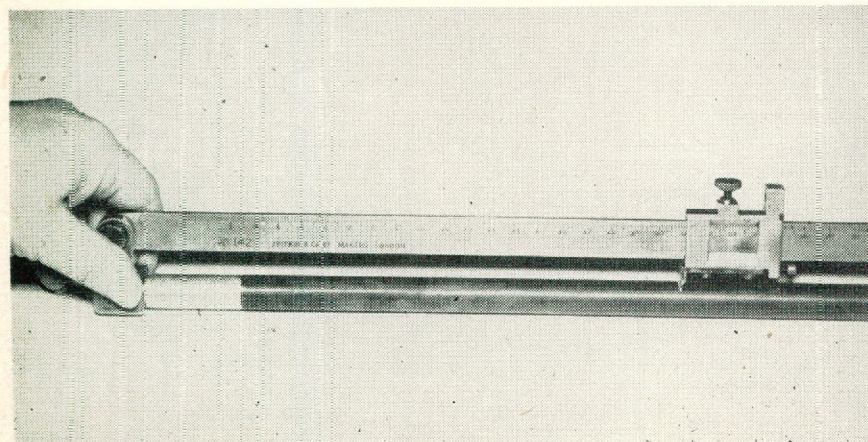
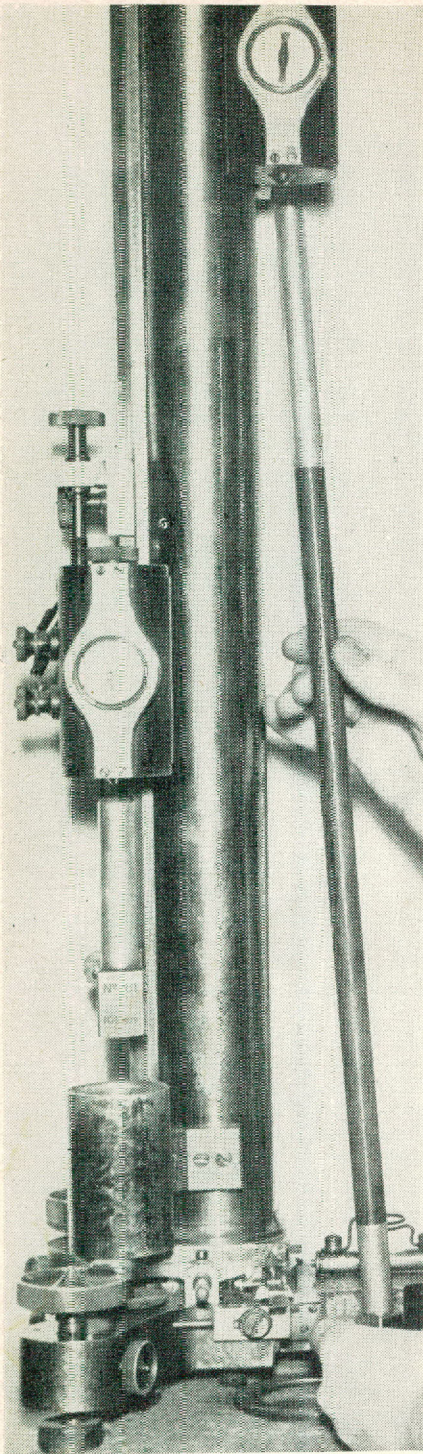
To do this it is necessary to use the projectile to release the "falling body" which is also used as a recording body, at the precise instant the projectile (bullet or lead shot) leaves the gun. The projectile must also mark the exact distance that the body has fallen at the instant the projectile reaches the target. The Boulenge chronograph was developed to do this very job—make a bullet or a load of shot measure its own velocity—with a little help from Sir Isaac Newton.

Let's watch how Mert Robinson, chief ballistic engineer at Winchester makes a velocity test in the New Haven range which is 150 feet long for testing shot-shells and from 50 to 120 feet long for testing center-fire ammunition. First he stretches a slender wire in front of the muzzle of the test gun in the velocity range. The wire is only three-thousandths of an inch "thin" so that it will be easily broken by the bullet or shot charge and not retard its flight. The wire is made of copper because an electric current must flow through it to one of two magnets on the chronograph located in an adjoining room.

The "falling body" that measures velocity is suspended from one of the two magnets on the chronograph. It is a rod 21½ inches long, and about ½ inch in diameter which is sheathed in a cop-

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**BULLET OPERATED.** Hanging the long "bob" which is the "falling body" of the Boulenge chronograph. The long bob falls from a magnet as an electric current is broken, when the projectile snips a thin copper current-carrying wire stretched in front of the muzzle of the test gun. Lower left photo shows how velocity is measured with a rule. The long bob falls a distance of 226 millimeters or 4 inches while the bullet of a caliber .348 Winchester cartridge travels a distance of 150 feet. The photo at the right shows a close-up of knife released by short bob, marking recording sleeve of long bob as it falls from magnet of the Boulenge chronograph at Winchester.



# HOW TO DISTINGUISH

## *an Antelope Doe*

To be on safe side never shoot an antelope whose horns do not flare back and extend beyond ears

By Daniel W. Lay



**A LEGAL ANTELOPE.** Note how the horns on this buck flare backward and extend well beyond the tips of the ears.

THE 1944 antelope hunt, the first in 41 years, set the general pattern to be followed in the operation of the 1945 hunt. Last year the Game, Fish and Oyster Commission authorized the issuance of up to 500 permits, depending upon the number of surplus bucks found by field men. After final checks were

made in late summer 402 permits were issued. Since not quite that many had applied for permits on the day of the deadline, no drawing was necessary. Of the 402 permit holders, 328 reported for the hunt and 290 antelope were killed.

Antelope hunting is limited to the region west of the Pecos because that is the only portion of the state in which the department has the authority to operate such a hunt.

This year the maximum number of permits to be issued has been set at 450. About 430 places have already been found and contracts for the hunt have been perfected with the landowners. Additions may be made to the list in August after the effects of summer rains have been determined. Antelope on some ranges drift considerably depending upon the location of good rains and the resultant good forage conditions.

The dates for the hunt have been set as follows: Brewster, Reeves, Pecos, and Jeff Davis counties October 1 and 2; Presidio and Jeff Davis counties October 4 and 5; Hudspeth and Culberson counties October 8 and 9. Two days of hunting on each ranch instead of three are considered sufficient, since most hunters last year got their animal the first morning.

Under the department contract with each participating landowner he may assign 20 per cent of the permits to anyone he wishes. He may also charge not more than \$25 for each hunter assigned to his ranch. Since antelope consume some forage that might otherwise carry livestock, the landowner is entitled to

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### JUST IN CASE

So you're going antelope hunting, as one of the successful applicants for places on the 1945 Texas hunt. You may have hunted antelope before in Wyoming or elsewhere; but most of the hunters will be making their first antelope trip. For those who are new to the sport, here are a few suggestions.

Come prepared to take home antelope. Plan to chill it in a local ice house before starting home. Travel at night if the weather is hot. Have a cotton picking sack or other material for wrapping the carcass to keep out flies and dust. A tarp and ropes will come in handy when you go to tie it on. If you are making a long trip or if you are going to make side trips before going home, you should plan to get dry ice expressed to you. Then you can safely ship the carcass by rail or truck. If you like livers and hearts, bring along a flour sack. In a time of meat shortage we hate to see wastage as a result of no advance preparation. And don't let anyone tell you antelope steaks and roasts aren't fit for discerning tastes.



**AN ILLEGAL ANTELOPE.** This is the head of an antelope doe showing the horns which never grow beyond the length of the ears.

# *Furry* DIVIDENDS



THE Number One fur animal in the United States is not the prized mink, the glamorous fox, or the beaver that founded the American fur market. It's a semi-aquatic rodent one rarely sees afield but always finds in the fur shops—the muskrat. The London market still calls it musquash, after the Cree Indians.

In Texas there are muskrats on the marshes of the upper coast between Galveston and the Louisiana line, in the irrigation systems along the upper Rio Grande River and in the upper watersheds of the Canadian and Red rivers in the Panhandle and plains country. The muskrats occur as far east as the Ft. Worth fish hatchery. On the coast they constitute a major crop and some of the landowners operate very profitable muskrat management programs. The 4,000 acres of marsh James Jackson is operating in Chambers County on our recommendations has increased its yield from about 5,000 in 1940 to 43,000 last winter. Some of Jackson's trappers received over \$5,000 apiece last winter for their share of the catch. This is one wildlife crop that can be managed like other cash crops of the land.

Like every other production program the muskrat rancher has plenty of problems. Believe it or not, there is a very real shortage of trappers, in spite of the fact that any beginner who will work can earn \$3,000 in three months at current prices. Equipment for construction and outfitting of trapper's camps is scarce. Even canes for staking traps are hard to get.

We have no very accurate estimate of the Texas muskrat catch but we know it approaches one million dollars annually when prices are up as they are now. The national muskrat crop is valued at \$30,000,000 to trappers.

Individual Texas trappers caught as many as 6,000 pelts the winter of 1944, when pelts brought up to \$2 each. But they waded mud and water in freezing weather and stumbled into plenty of 'rat and alligator holes earning their money.

Easily trapped, quickly skinned and dried, muskrats survive the pressure of trapping and high fur prices only by a peculiar combination of habits and adaptations.

A pot-hole marsh within sight of Chicago is as likely to have the mound-like muskrat lodges as any part of the

**A MUSKRAT TRAPPER.** Top: Going into the marshes of Jefferson county with his traps slung over his back. In the center photo the trapper has come upon a muskrat house and in the lower photo the trapper is setting the trap in the path used by the muskrats to enter their marshland home of sticks and twigs.



**By DANIEL W. LAY, Director**  
*Division of Wildlife Restoration*

five million acres of coastal marshes in Louisiana and Texas, or any other part of its range from Alaska to the Rio Grande. Along ditches and small streams runways, cuttings, and bank burrows are used instead of lodges, but in either case relatively few people ever see the nocturnal animal that makes this "sign." From Labrador and Alaska to Arizona and Mississippi, muskrats are at home in marshes. They became pests when introduced into Europe, as many species do when taken out of their normal environment. Florida is the only state without muskrats. Louisiana leads the other states with an annual crop of four to five million.

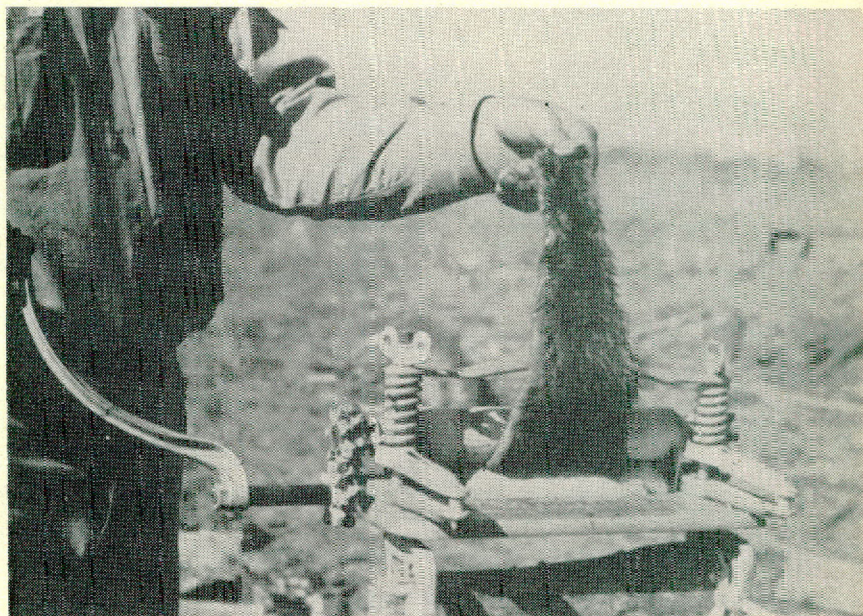
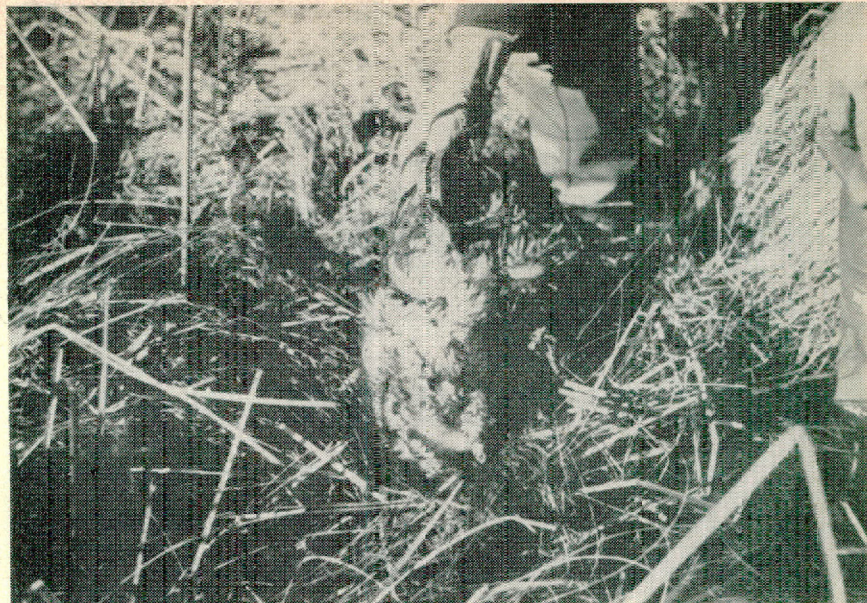
"Rats," as trappers know them, are two-and-one-half pound editions of the family Rodentia, about 24 inches long. They have the almost hairless tail typical of the group, although theirs is flattened laterally to facilitate swimming. The lips close between the incisors and the molars, so the four chisel-like amber-colored front teeth can be used while working under water. The hind feet are partially webbed and the under-fur is so dense and fine that one good shake after a swim makes it dry and fluffy. The beady eyes are those of a sturdy defensive nature, that puts up a good fight when cornered. The small furry ears can be found only by close inspection, but they serve an acute auditory system.

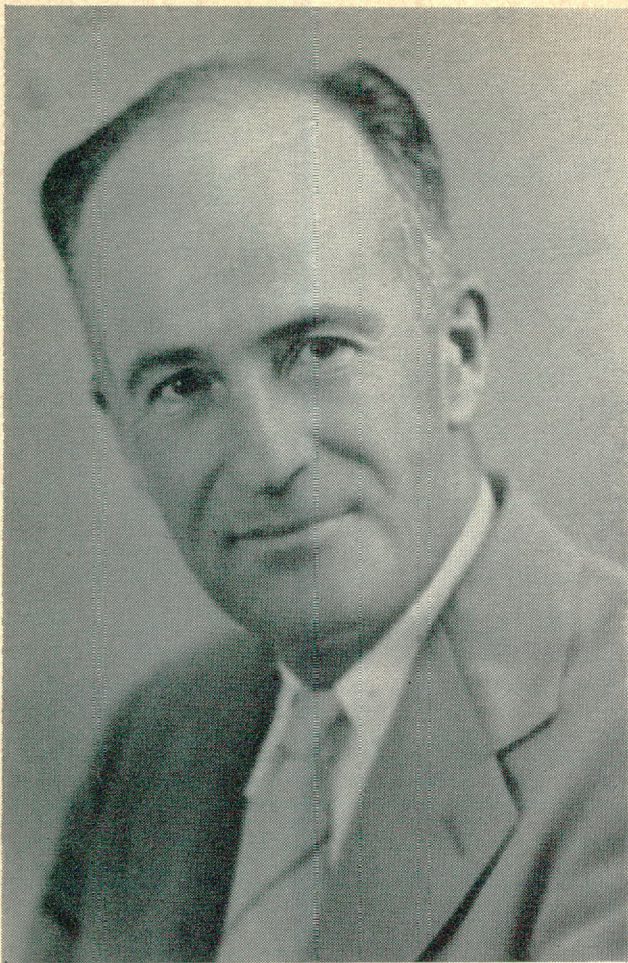
Foods of muskrats are principally roots, tubers, and succulent parts of aquatic plants. A few crabs, crayfish, mussels and other small animals are taken. One of the favorite foods is the nut-like corm of a brackish sedge. This is dug with the hand-like fore feet, brought to the surface, and eaten in the manner of a squirrel eating a hickory nut. The corm of this "three-square" sedge is so hard human teeth cannot scratch it, yet the muskrat slices it into small pieces. Most such marsh feeding is done on a small platform of vegetation which supports the animal slightly above water level. In times of drought or severe cold, muskrats manage to survive on almost any kind of vegetable material, from dead corn stalks to wood.

The lodge is built of partially chewed wads of plants and mud. It may be ten feet across and four feet high, although those of individual animals are usually smaller. The entrance is always below water and constitutes a plunge hole, into which the muskrats dive when the lodge is disturbed. Swimming away in one of the numerous radiating canals or tunnels

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**A MUSKRAT, Top, Heading for his marsh home, has been caught in the carefully concealed trap. After skinning, the pelts are processed through an ordinary clothes wringer as the center photo shows. In the lower photo the trapper is inspecting a pelt before putting it on stretchers for curing.**





H. H. DODGEN

—Jenssem Studios



H. E. FAUBION

—Jenssem Studios

## Dodgen Heads Department

H. H. Dodgen, *Executive Secretary.*

H. E. Faubion, *Assistant Executive Secretary and Director of Sand, Shell and Gravel.*

Frank Cowsert, *Director of Law Enforcement and Anti-Pollution.*

Vernon Skaggs, *Chief Clerk.*

**T**HAT'S the new lineup at the state game department following a meeting of the game commission on July 12 when the voluntary resignations of Wm. J. Tucker, as executive secretary, and Clyde R. Rudasill, as assistant executive secretary, were accepted.

Promotion of Dodgen and Faubion to the top two key positions in the game department necessitated the appointment of a new chief clerk to succeed Dodgen and a law enforcement director to succeed Faubion.

Frank Cowsert, captain of game wardens in the Dallas district, was promoted to the directorship of the law enforcement and anti-pollution division, and Vernon Skaggs was moved up from li-

cense clerk to the chief clerk's desk.

The appointment of Dodgen and Faubion, both native Texans and both connected with the game department for more than 13 years, met with the general approval of sportsmen the state over. Both are well known and both have enviable records with the department. They adhere to the principle that only through a well planned, well executed and aggressive conservation program can the wildlife resources of the state be safeguarded.

Most conscientious public officials have their critics. Mr. Tucker had his. But critics as well as his friends are quick to recognize that he has made Texas more conscious of its wildlife resources, more interested in conservation measures, more willing to observe the conservation laws. As the *Wichita Falls Times* put it: "If he had accomplished no more than that in his 18 years as head of the department, he would still have a right to be proud."

Dodgen plans no drastic changes in the department game and fish policies. Every effort will be made to conserve

the wildlife resources we have and to insure good hunting and fishing for those who hunt and fish as sportsmen. Every effort will be made to bring the department closer to those who hunt and fish and to those who have a genuine interest in the conservation of the state's wildlife resources.

Ambitious plans for the postwar era are now being formulated. They include a concentrated effort to improve the fishing generally in all of the public lakes and streams in the state and to make it possible for the little fellow to enjoy a hunt without a great outlay of cash and under the most favorable conditions.

Postwar plans also include a campaign to restore the bighorn mountain sheep to the prominence they once enjoyed on the ranges of West Texas. The pronghorn antelope was faced with extinction 30 years ago but a rigid program of restoration has resulted in the antelope increasing in such numbers that last year some four hundred hunters were permitted to kill an antelope buck.

★ *Continued on page 18*

# Molding Sinkers the Easy Way

By W. R. WALTON

**S**INKERS, and I do not mean dough-nuts, though their specific gravity may be similar, are one of the essentials of the bait fisherman's tackle. These of necessity are of various shapes and sizes to fit the conditions under which one is to fish.

My personal preference in summer, while the fish are active and feeding in all sorts of places, is to eliminate the use of the sinker entirely and keep the bait moving. However, when the water is high and turbid or its temperature remains low and consequently the fish are sluggish, the use of a sinker may become imperative.

In such circumstances, the position of the sinker on the line, relative to the hook, becomes important. For instance, when the sinker is tied in a stationary position above the hook, as in figure 1, this is likely to reduce both in speed and force the transmittal of the bite to the hand of the angler, this because the resistance offered by the sinker must first be overcome before the contact with the fish can be felt.

Consequently, and especially if the sinker lies behind a rock, the hook may be stripped without the fisherman's becoming aware of the loss. Old-timers, cognizant of this defect, overcome such possible theft by attaching a sinker to the line end, with the hook located well above it, as in figure 2. This also illustrates the dipsey sinker popular with many anglers. This last arrangement is good if the line be kept taut so as to readily telegraph news of the bite to the hand or rod tip.

A still better sinker and arrangement, in my opinion, is the one shown in figure 3, in which the line is threaded lengthwise through the sinker, above the hoop. In this arrangement a stop, consisting of a small section of twig, is tied below the sinker to prevent it from jamming over the hook knot.

This type of sinker, having a hole through its long axis for the free passage of the line, is called in British parlance a "tracing sinker." It is familiar

to American fishermen in the form of the egg-sinker, obtainable in many tackle shops but not very widely used. However, these sinkers are available only in certain arbitrary sizes which may or may not be just the weight appropriate to one's purpose.

For this reason, as well as economy, I make my own tracing sinkers in a style that is quite easy to mold. This may be used either as a tracing sinker or in the ordinary way, viz., tied to the

when solidified, the match sticks are withdrawn by means of a pair of pliers. Since their wood becomes somewhat charred and shrunken by the heated metal this readily is accomplished.

In order to remove the sinkers from the molds we simply split the wooden strip edgewise. In case straight grained wood has been used and the splitting is carefully done, the molds may be used repeatedly by tying or wiring the halves together again.

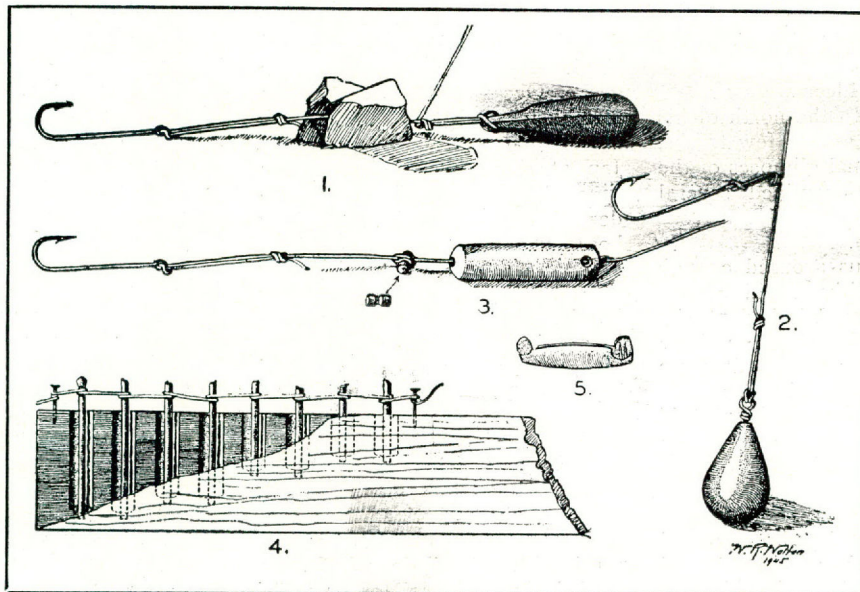
It may be seen from the illustration of the finished sinker, figure 3, that a hole has been made in it near one end. This is done with a hand drill and facilitates its attachment to the line end when so desired. In case you wish to be fancy, the tips of the sinkers may be tapered most easily by the use of a wood rasp, but this is quite unnecessary so far as results are concerned.

The material advantage gained by the employment of the tracing sinker is that this allows the line to run freely through it when

the fish bites and flees with the baited hook. Most game fishes, as you doubtless know, will run for some distance with a natural bait before gorging it. Just why this action occurs we know not, but perhaps it is due to instinct similar to that displayed by an old hen which has found a big worm in a well populated chicken yard. She promptly seeks solitude, where there ain't none, to the end that she might gulp the prize unmolested.

It is well known that such fishes as well as smallmouth bass and the chain pickerel always run with the bait. Should the former species feel any considerable resistance to his pull, he is most likely to drop it, like the proverbial hot potato, and refuse further to touch it. In these circumstances the tracing sinker becomes an asset, for it allows the fish to run untrammelled if the fisherman is alert and ready to give him line.

—Pennsylvania Angler.



end of the line. Having used this type of sinker for some years with satisfaction I present herewith directions and illustrations which should render its production by home manufacture an easy matter.

The mold, as illustrated in figure 4, consists of a soft wood (pine, cypress or poplar) strip,  $\frac{3}{4} \times 2$  inches, say, 18 inches. Along the center line of this, a row of holes are bored with a  $\frac{3}{8}$ -inch bit. Where a heavy sinker is desired, the hole may be from  $1\frac{1}{4}$  to  $1\frac{1}{2}$  inches deep. Lighter holes are provided for by sinking shallower holes as indicated in the figure.

To provide the passage-way, running through the long axis of the sinker, ordinary wooden match sticks are inserted in the center of each mold cavity. To render these stable, a fine copper or soft iron wire is given a single turn around their upper or free end. This is then fastened at each end by winding it around small wire nails, driven into the wood as shown in the figure. The molten lead is then poured into the molds, and

# A DEER HUNT ON GUAM

WE MET Joe while we were making some studies of rodents in connection with medical research. He was interested in the practical nature of our work in his quiet and polite way, which is typical of the Chamorros of Guam. Of course we asked him about the birds and animals around his mountain home and soon discovered that he was a good woodsman and a fine observer of animal behavior. The conversation soon turned to the subject of wild deer. As in the case of other animals out here, the sambar deer was introduced by the Spanish from the Philippines about 1770. It is somewhat different from the white-tailed deer back home, though about the same size. It is really more closely related to our American elk.

Joe told us that deer were numerous in the jungle to the north of his dwelling. We had seen a few tracks, had gotten occasional glimpses of the animals and had examined several nice skulls, but were still not very familiar with them.

Finally one of us aroused enough nerve to ask him if he would take us on a hunt sometime. We had official permits to collect the animal, and the parasitologists with our outfit were anxious to study a specimen.

To our surprise he was quite pleased and suggested that we go two days from then at about eight o'clock in the morning. He regretted that he could not go the next day, but he was already obligated to join a patrol to search for Japs, who were still supposed to be at large in this section of the island. The date was just right for us, and we agreed to be at his home at the specified time.

The next day we went about our usual field work but kept thinking about our coming adventures. Some of the other fellows thought us very optimistic. I could not help but think of the humor of the situation. Our hunting date was set on the Fourth of July. Back home in East Texas this date was often a troublesome one for the game wardens. Some of the game law violators would usually attempt to "open" the deer season on that day. I could visualize the

warden's worries in making his patrol plans for that busy day.

Early the next morning we were bustling about our laboratory getting our guns together. Since we were going into Jap country, we decided to take some carbines, as well as our 16 gauge shotguns; Joe had advised the latter. As it turned out, Mack, from North Carolina, and Chuck, from Illinois, carried carbines, while Mark, from Oregon, Muennink, a Texas Aggie from George West, and myself took the shotguns. We arranged for a jeep with some rope and a shelter-half to wrap up the kill, just in case.

Joe was ready when we arrived. He picked up his carbines and, dressed in his G. I. fatigues, led us single file into a grown-up coconut grove. Occasionally he would pause to look for a sign or to tell us about some engagement that he had with a Jap at that particular spot. Sometimes he would point out the evidence, in the form of mouldy-looking bones.

After proceeding through the coconuts, we entered the rough coral jungle. The G. I. expression for the jungle is "boondocks." I have not the slightest idea of its derivation, but it is probably of native origin along with "Huba Huba" and other familiar sayings. At any rate, the country was thick with pandanus, papaya, cycad, breadfruit and other trees, shrubs and vines. The ground was irregular and consisted of jagged coral with very little soil. We proceeded single file, all of us wondering how we could possibly find a deer in this thicket. However, Joe seemed to know what he was doing and did not appear disturbed at the noise we made in scrambling over the rocks. He told us later that the reason he desired a party of several members was in case we met a Jap.

He stopped after we had moved into the jungle about three-quarters of a mile. We seated ourselves as comfortably as we could on the sharp coral. We were glad for the rest,

but the mosquitoes seemed more appreciative and descended upon us. The vegetation was thick but by twisting around we could glimpse through the undergrowth and see possibly fifty feet down the slope. We began to imagine that the sambar deer must be part mountain goat to survive this environment.

Almost immediately Joe, who was at the head of our line, took up a thin leaf and began whistling through it. He would blow long and short whistles, then pause and then repeat the procedure again. This type of hunting was new to us. I was well acquainted with the method of attracting bucks by rattling antlers together but using this leaf call for deer was different.

Joe kept up his call for some twenty-five minutes when suddenly some of us were conscious of a disturbance on the slope below. Joe whistled again and then fired his carbine down through the brush. Before we could move, he was descending the slope and firing several more shots. We hustled down to find him standing over a nice six point buck.

After our initial excitement, we secured the kill to a stout pole with a rope which we had been so thoughtful to bring along. Also, we were glad that we had brought a large party, for the climb back to our jeep was truly a rugged one. The fact that we did not dress the deer made the weight add up to about 180 pounds. We wanted to get all of him back to the lab in fresh condition for the autopsy. We hurried as best we could, taking turns with our load, but when a tree of ripe papayas appeared on the trail ahead, we had to call time for a little refreshment.

Leaving our good friend a hind quarter, we drove rapidly back to our laboratory, where our formerly skeptical colleagues found a considerable amount of interesting material for their medical studies. By the time they were through with their examinations and we had secured the skin and skull as scientific specimens for the National Museum in Washington, there was just enough left of our 180 pound sambar deer for a swell chow.

**ROLLIN H. BAKER**  
Lieut. (jg) H-S USNR

## LIVE and LEARN

The young of the brush turkey are fully feathered when hatched and can fly almost immediately. They never know their parents, as the mother bird lays her eggs in hillocks of sandy soil

containing decomposing vegetable matter and allows heat from this source to incubate the eggs. The chicks must shift for themselves immediately when they come into the world.

The colors of wild animals represent all hues of the rainbow: red, orange, yellow, green, blue, indigo, violet, white, grey, black and white, and black.

\* \* \*

Headlights on fish? Yes, there is a fish called photoblepheron, which swims

in and out of the coral off Banda Island, lighting its way with strange luminescent spots near its eyes. It has a curtain of pigment to draw over these spots for blackout purposes, for it cannot "turn off the light."

\* \* \*

In Bolivia the natives use the armor-plated skin of the armadillo for musical instruments.

\* \* \*

A bird which has wings and yet can't fly is the penguin. And a bird which has no wings whatever is the apteryx of New Zealand. His native name is kiwi-kiwi. He has a long bill, big legs and grayish hair-like feathers over his wingless, tailless body.

\* \* \*

While it is by no means common for them to do so, close observers of wild turkeys have, on a number of occasions, noted the fact that the hens sometimes grow beards. Occasionally they also grow spurs. The spurs, however, are not so prominent as those of the gobbler.

\* \* \*

As one of the results of a recent study of the black bear in Pennsylvania, authorities state: "It has been conservatively estimated that \$5,000 is spent by sportsmen in bagging each bear. This money is spent on travel, guns, ammunition, lodgings, clothes and other items."

\* \* \*

The apportionment of \$806,500 among the states for the restoration and development of their wildlife resources during 1945, under the terms of the Pittman-Robertson Act, is the smallest amount since the act became effective in 1938.

\* \* \*

The voracious kingfisher sometimes consumes seven times its own weight daily.

\* \* \*

The hoatzin, found in Venezuela and British Guiana, has fingers with claws on the forward edges of the wings when very young. It uses wings like a second pair of feet. As the bird grows older, more feathers develop and fingers and claws gradually disappear until they are merely little horny knobs.

\* \* \*

The black swan is native only to Australia. This graceful bird of sombre plumage has a red beak and the under sides of its wings are white. It is frequently seen in zoological gardens in this country but its natural habitat is confined to Australia.

\* \* \*

Although the busy beaver has been known to reach a weight of 68 pounds, he belongs to the same family as the squirrel and the mouse. Fossil remains indicate that the same animal, in prehistoric days, weighed as much as 400 pounds.

★ Continued on page 21

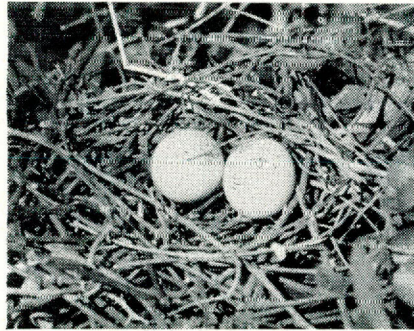
## Past and Present

# Whitewings

By CHAS. G. JONES

TWENTY years ago there were at least three million whitewings in the Rio Grande Valley. They nested in hundreds of thousands of acres of brushland which covered the banks of the Rio Grande and nearby Resacas, or old river bed. Community nesting was in use. As many as fifty thousand whitewings reared their young in one big colony and there were many such colonies along the river and Arroya Colorado which forms the county line between Willacy and Cameron counties.

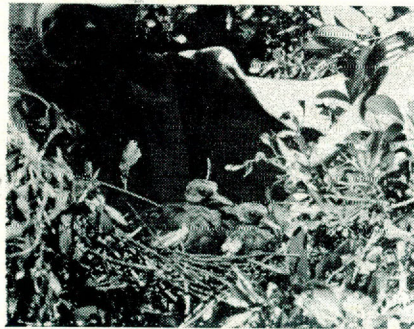
In the late summer and early fall the whitewings would collect, forming flights numbering a quarter of a million. Every



Whitewing Eggs

morning and afternoon they would wing their way over the same route, going out to feed and returning to roost.

Barbecues were very popular at the time and civic clubs and land agents would get good marksmen to kill hundreds of whitewings, often to be served to excursions of homeseekers coming to the Valley. In some instances nothing but the breast was good enough to keep. Legs and wings were thrown away. Yes,



Growing Up

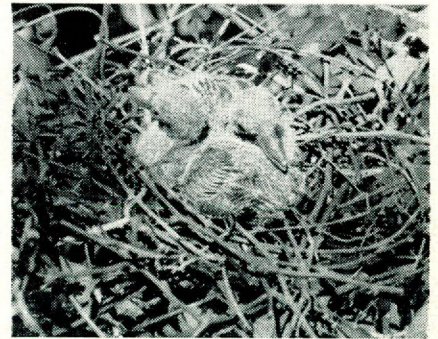
there were millions of whitewings and wanton destruction was rampant.

People in the Valley decided that the season wasn't long enough so they appealed to Mr. W. R. Montgomery, Hidalgo County representative in the legislature, to enact a law permitting the shooting of whitewings to start on the first of July and to continue into

November. The law was enacted. And what a slaughter of whitewings followed. Mother birds were killed during the nesting season.

Three days after the opening day of the long open season I went into the rookeries where thousands of whitewings had been nesting. The sight that greeted my eyes was appalling. There were thousands of dead young in the nests, in the tangled brush, and others that had fallen from the nests, dead on the ground. Rotted eggs by the bushels were in the nests. Mother birds returning from feed or water were easy prey to the waiting hunter. The stench of the decomposing young forced me to leave the rookeries.

Fortunately those who took part in that slaughter realized what had been done. An appeal was made to Representative Montgomery to change the opening date of the season. This was done. A law was enacted setting the opening date of the season on August 8. Then Homer Leonard succeeded Montgomery as state representative and he



Just Hatched

authored a measure which resulted in the whitewing season opening on August 20. Later Leonard got the opening date set for September 1. Then the federal government classified the whitewing as a migratory bird and at present the whitewing season is set by the Secretary of the Interior upon recommendation of the Fish and Wildlife Service.

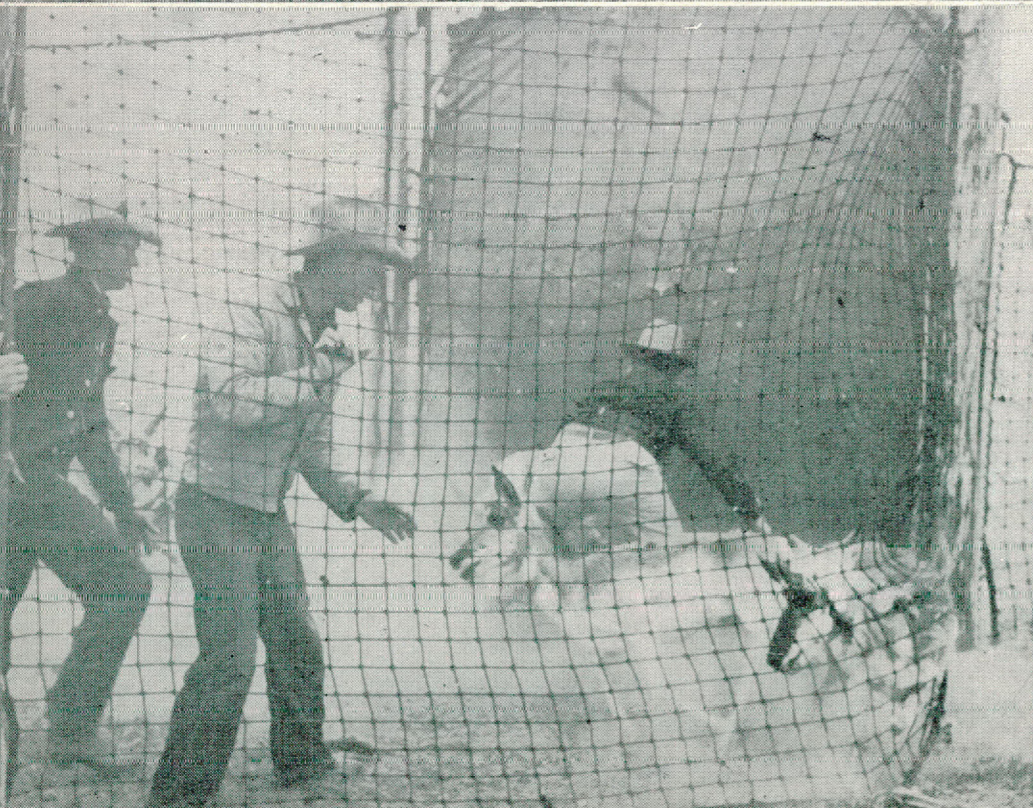
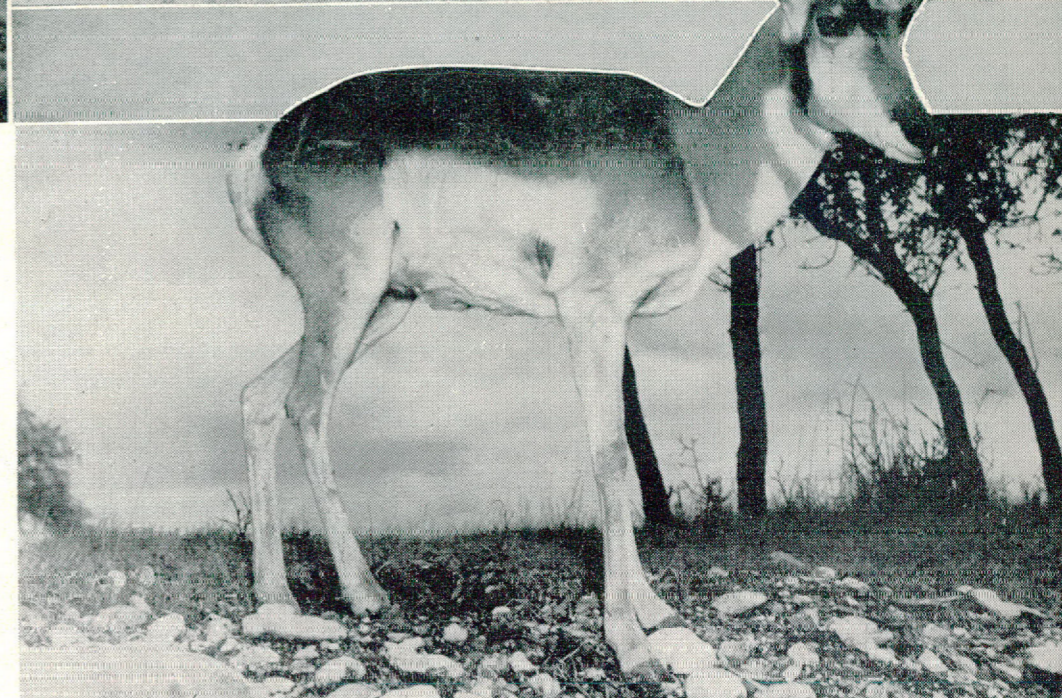
Even with the shorter open season the whitewing still is in for trouble. More and more acreage in the valley is being reclaimed for cultivation. Plows are turning nesting places into crop producing fields. And more and more hunters are converging on the valley every year to hunt and kill the few remaining whitewings.

Unless you have been in the valley during the whitewing season you have

★ Continued on page 18



Thanks to a sane program of trapping and distribution the pronghorn antelope has staged a sensational come-back in Texas. Antelope are trapped on over-populated ranges and released in sparsely populated areas. In the upper left photo, antelope are being herded toward the trap. The top center photo shows the trapping crew erecting the net fence which guides the antelope into the trap. The upper right photo shows a herd of antelope in a trap. Two members of a trapping crew have just bulldozed an antelope in the left center photo. Lower left shows the transportation which takes place when the crew goes into the trap to bring antelope out. A young antelope is being taken to a shipping crate in the lower center photo and at the lower right antelope are being released on a new range.



# Nature Wins

★ Continued from page 4

two or three times and is now closed on the Gulf side so completely that it requires close examination to discover its location, as one drives along.

Only Cedar Bayou pass has remained in good condition since 1938 but now shows a tendency to close.

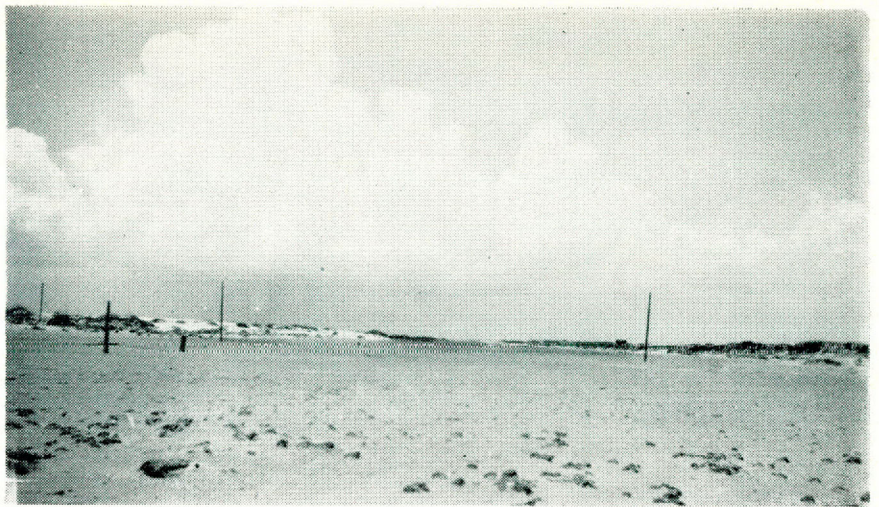
This is the net result of pass cutting at an expense of \$114,426.00 for operation plus the original cost of \$26,629 for the dredge, as shown by warrants drawn on the Fish and Oyster Fund.

The opening of fish passes has been a dream for more than a quarter of a century, and possibly much longer than any one can remember. The citizens of the coast from Rockport down to Brownsville, and particularly, Kingsville and Corpus Christi, have enthusiastically supported and urged the pass cutting.

U. S. Engineers, on the other hand, pointed out from the beginning that fish passes will not remain open, and this judgment has been supported by the experience of the federal government and at least one state in the middle Atlantic. But Texas had to make the experiment in order to be convinced and yet it is extremely doubtful that the evidence of a fair and prolonged effort will be accepted by a great many persons along the coast. There will be some who will say that the cuts were not wide enough or that they were slanted in the wrong direction, or that jetties would have kept them open. But the outstanding fact is that while Murdoch was open, the salinity of the Laguna was not reduced beyond the immediate vicinity of the pass. The Gulf water moved in and out as an entity without mixing appreciably with the water of the Laguna. One engineer stated that to be effective, the pass should be ten miles wide.

In the seven years of the experiment, four years were devoted to the Padre Island pass at Murdoch Landing which was named "Yarborough Pass" in honor of the former Commissioner who resides at Corpus Christi. It should here be noted that Mr. Yarborough is an excellent gentleman and a successful business man and is in no way responsible for the fate of the marine enterprise. Nor did Mr. Scarborough covet all the credit for the dredge itself was named "A.E." the initials of Senator A. E. Wood, former chairman of the Game Commission. This again is no discredit to the senator who has been, for many years, the champion of conservation work and had the courage to sponsor a trial of the coastal venture.

Former Coastal Director W. W. Boyd and his successor J. B. Arnold were strong supporters of a pass through Padre and other islands along the coast. In 1938 when the Corpus Christi pass was being opened Mr. Boyd, in his annual report, expressed the belief that a pass on Padre at Murdoch Landing "would eliminate entirely the destruction



**MURDOCH PASS.** A few years ago water flowed through a dredged channel which ran between the two center poles. Today, the pass has been closed by shifting sand.



**THIS DEPRESSION** in Padre Island 30 miles south of Murdoch Landing is the pathway of storms and tidal waves and bisects the 20 miles of sand flats of the Laguna which are covered with water only by the high tides of winter. It is then that the Laguna spills over into the Gulf.

of fish life in that body of water (the Laguna).

Here is how it worked out in practice. The Murdoch pass was first cut through on April 14, 1941. It was 120 feet wide at the top, eighty feet at the bottom and five and a half feet deep and its lineal distance was 8,800 feet. The time consumed was 130 days.

Mr. Arnold, in his annual report of that year, said: "At that time, heavy rains fell along the coast and the salinity of the upper part of Baffin Bay fell from twice that of sea water to almost fresh enough to drink. Winds from the north prevailed and the fresh water flowed down into the Laguna and salt water pushed out through the pass."

With ideal conditions that then prevailed an unusual thing was noted. Mr. Al Kleberg of the King Ranch reported the present of shrimp, flounder and jelly fish around Riviera Beach and Los Olmos Creek. Such a thing had been un-

known in Baffin Bay. But he said they all disappeared when the area again became too salty. Around a pass there is always good fishing and while the Murdoch cut remained open commercial fishermen reported good hauls.

The pass, which was opened in April, was completely closed late that winter, says the annual report of 1941-42. By mid-November 1942 a recutting of the pass was completed. The pass closed again during the winter of 1943 and dredging was resumed in the following June and continued into 1944, says the report. The pass was open in November 1944, says Bob Tanner who made aerial trips over the Laguna, and the entire coast. So, in November the dredge moved to the upper Laguna and in March 1945 it docked at Corpus Christi. About this time the Murdoch pass was again choked up with sand and when visited on July 30 this year the end next to the Gulf was completely filled

up for a quarter of a mile, and Corpus Christi pass at the beach was completely obliterated for a half mile.

Returning to August 1943 the annual report comments that the Laguna was getting nearly back to its usual high salinity, the upper half (which means around Baffin Bay and Point of Rocks) showing 72 parts per thousand of salt. (Equivalent to 72,000 parts per million.) The weather record for heat was the greatest in 55 years, says the report, and hard head catfish, redfish, trout and flounders began to die in the upper Laguna. Fortunately, before mortality became general, rain fell and the fishes ceased dying.

The weather record shows that rain started in August and in September the rains were torrential with 4.26 inches at Corpus Christi and 11.44 near Baffin Bay. The total rainfall for the period from August to December was 13.75 at Corpus Christi and 17.13 near Baffin Bay. This gave the Laguna a good start for 1944 which was comparable to the spring of 1941 but by July of 1945 the Laguna was again the scene of fish mortality because of scant rainfall.

This fish loss was given widespread newspaper attention and there was much criticism because the legislature had refused to renew dredging appropriations for the next biennium. The dredge appropriation for the current year was still in effect and, as above stated, the dredge was docked and the two passes hopelessly closed. Why jump on the legislature?

On July 19 the writer visited the upper Laguna and Baffin Bay. At Riviera beach the salinity was 82,880 parts per million and at Viola Beach, 84,100. The temperature of the water was 89° and 96° respectively and a field test showed dissolved oxygen to be less than one part per million. Some fish mortality had been reported but most of the fish had left the death trap some time ago. The only fishing in Baffin was in the deep water in the region of Point Penascal where good catches were reported. At Point of Rocks there was some fishing but the fish were sick, in poor condition and not disposed to bite, said fisherman W. B. Brown. Most of the mortality, he said, was along the shallows of Padre Island. There the water was necessarily hot which contributed to the scarcity of oxygen. There is some reason why fish gather there which will be explained later.

The salinity at Point of Rocks was 70,960 parts per million and the dissolved oxygen 2.2 parts per million. Further up near Bird Island the salinity was 83,100 parts per million and the dissolved oxygen 1.2 p.p.m., insufficient to sustain fish life, and some were seen floating.

Near Pita Island the salinity was 63,100 parts per million which was unusually high for that area, and the dissolved oxygen was 2.4 parts per million. Fish caught there by some sportsmen were apparently in fine condition. A mile further north at 9 a.m. there was no

wind or wave action and a test showed no dissolved oxygen in the water.

Most of the mortality occurred in the region of Corpus Christi pass at a pocket known as Dead Man's Hole. Here there is no circulation, according to Pilot Bob Tanner. Increase of salt by evaporation and little oxygen are causes of fish mortality which is not unusual in summer weather.

Tanner on July 17 flew over the area and much of the Laguna with Joel W. Hedgpeith, marine biologist for the Department who made this statement:

"A noticeable number of dead fish, mostly mullet, with a scattering of redfish and flounder, were seen in two or three pockets of reddish brown water just inside the end of the Laguna below the site of Corpus Christi pass. South of that region the water was less discolored although it is a yellowish green, and only an occasional dead fish was seen along the shore, possibly no more than might be expected under 'normal' conditions. The flight was made as far south as the northern edge of Baffin Bay, and along the land side of the Laguna in this vicinity there appeared to be a dead fish about every hundred yards. After two or three miles, on the northward return trip, no more dead fish were seen. Evidently the conditions causing high mortality have not yet been reached in the Laguna Madre except in the two or three pockets just south of Corpus Christi pass in the vicinity of a locality known as Dead Man's Hole, and even in these localities the destruction of fish life is not yet total, as large numbers of live fish were seen."

The measure of security enjoyed by fish in the Laguna for the four years up to the spring of 1945 can be attributed to the rainfall which, for the period, averaged 30.86 inches which is well above normal precipitation for the area. As this rainfall for most of the time took care of the needs of the Laguna and Baffin Bay it is not conceivable that the pass, even when open, made any material contribution to the well being of the said bodies of water.

It looks like from now on that Nature will have to take its course just as it has done for centuries and that man can do very little about it. But as deserts may have oases, so there may be a concealed advantage in the vast stretch of sand flats along the Padre shore of the Laguna. Reference was made to the dying of fish along the shallows of Padre Island on July 19 which raised the question as to why fish would remain there where heat and lack of oxygen would certainly be fatal. (The writer did not take the water temperature at the Padre shore but at Viola Beach the temperature of the shallow water was 96 degrees where nothing but small minnows could live.)

As heretofore stated, Baffin Bay salt had become intolerably high and most fish had left. Indications were that many had gone to the cooler depths around

★ Continued on page 25



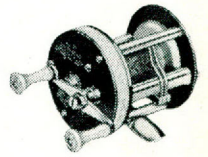
For the  
Bait Casting  
Angler

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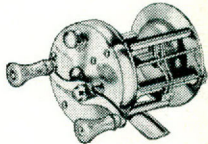
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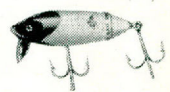
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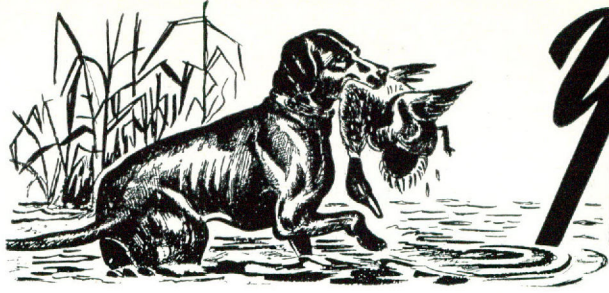
BUY AND KEEP MORE WAR BONDS



**R**ABIES or hydrophobia is a disease known since ancient times. Only in the last few years however, has exact information become available on the cause, transmission and control of rabies. Although such information is available the incidence of rabies is more prevalent at the present time than in several years. The report of the Committee on Rabies of the United States Livestock Sanitary Commission show that there were 9,690 cases of rabies in the United States in the year 1943. Statistics forming the basis of this report were collected by the Bureau of Animal Industry of the United States Department of Agriculture and made available to the committee through the courtesy of the Chief of the Bureau, Dr. A. W. Miller.

The disease is primarily one of the dog although a wide variety of animals are susceptible to infection. In the year 1943, 8,515 dogs, 349 cattle, 35 horses, 45 sheep, 60 swine, 316 cats, 19 goats, and 41 humans died from rabies infection. In addition to the incidence of infection among domestic animals, 310 cases of rabies were diagnosed in wild animals, 125 were coyotes and 101 were foxes, the remaining cases occurring in prairie dogs, civet cats, skunks, rodents, and bobcats. Texas had the doubtful distinction of having 1,143 cases, 1,092 of which were dogs and 3 were humans. This is more than 10% of all the cases in the entire United States. It may readily seem from these figures that the chief source, or reservoir, of rabies, is in dogs.

The disease is caused by a virus which is present in saliva of affected animals. It is usually contracted from the bite of a rabid animal. Every person or animal bitten does not necessarily develop the disease. Probably about 15% of people bitten by rabid dogs develop rabies. From 35 to 45% of dogs, 40% of the horses, and 25 to 30% of cattle become infected. Whether an animal becomes infected depends upon the size and location of the wound and various other conditions. The amount of virus in the saliva of a rabid animal may be variable



# Your DOG

## RABIES

in quantity and virulence. The period between the bite and the appearance of the first symptom may vary from 14 to 285 days.

The term "hydrophobia" literally means fear of water but affected dogs show no fear of water. The use of the term probably has its origin in the fact in many cases in human beings a dread of water does become established. The usual symptoms of rabies in dogs follow a more or less regular pattern. The first symptom is a change in behavior, the dog may appear more affectionate, or a gentle dog may become surly. The dog may seek dark corners and hide. Its voice may have an odd tone. Later the animal develops partial paralysis, staggers, its throat becomes paralyzed and it is unable to eat or drink. It may develop the furious form in which it will attack dogs, people, or any object, or it may develop the dumb form of rabies. In the dumb form the outstanding feature is paralysis of the lower jaw or "dropped jaw." In addition to the dropped jaw the animal is quiet, does not like to move around, eventually becomes completely paralyzed and dies. The course of disease in both the furious and dumb forms is usually short, the animal dying in 3-7 days.

Since it is reported that the virus may be present in the saliva 8 days before an animal shows symptoms it is essential that dogs suspected of having rabies, or dogs that have bitten people be held in strict quarantine for a period of 14 days in order that a correct diagnosis be made. It is essential that the animal be confined in escape-proof quarters

since animals developing rabies will make every effort to obtain their freedom. If the dog escapes or is killed before definite symptoms develop a correct diagnosis is impossible.

There were 316 cases of rabies diagnosed in cats in the United States in 1943, 21 of these cases occurring in Texas. Although the incidence of rabies in cats is not as high as in dogs, a rabid cat is one of the most dangerous animals in existence. It usually becomes very bellicose and will suddenly attack animals or persons, especially children, jumping up to the face and inflicting severe wounds with its teeth and claws. Later the cat loses its appetite, it becomes difficult for it to swallow, eventually becomes completely paralyzed, and finally dies.

The control of rabies as recommended by the Committee on Rabies of the United States Livestock Sanitary Commission depends upon the following outlined measures:

1. The proper disposition of rabid and suspected rabid dogs and the definite diagnosis of the disease in these animals.
2. The destruction of definitely known bitten dogs and the strict quarantining (or destruction) of contact dogs for at least 6 months.
3. Strict licensing of all dogs.
4. The impounding and disposal of stray dogs.
5. Strict general quarantine measures over a sufficiently wide area.
6. The prophylactic vaccination of dogs.

## Dodgen

★ Continued from page 10

Dodgen feels the bighorn sheep, which is now nearing extinction, can be brought back in time.

Plans to improve fishing in the waters of the gulf off the Texas coast also are well up on Dodgen's agenda, also a determined effort to restore the oyster to its former rank as king of the coastal reefs.

In assuming his new duties, Mr. Dodgen asks the support and cooperation of Texas sportsmen and commercial fishermen in conserving the wildlife re-

sources of the state and improving hunting and fishing generally, and in working with the game department to carry out its constructive program, a program designed to benefit everyone who loves to hunt and fish.

## Whitewings

★ Continued from page 13

no conception of the concentration of hunters. The opening day of the whitewing season in Hidalgo, Cameron and Willacy counties will see not less than four to five thousand hunters afield in cars, on bicycles, horseback and afoot.

Many come to the valley in planes. Shortage of gasoline and tires, along with a supposed limited amount of ammunition, have proven no handicap to the whitewing hunter for the number on opening day never seems to decrease.

The kill last year during five afternoons was estimated at 160,000 birds. Yes, it is a royal sport and a wonderfully palatable bird, but how long we can continue to enjoy shooting whitewings is the \$64 question.

★

The average cock pheasant, dressed, will weigh more than the average cottontail rabbit, dressed. Pheasant weigh 2 pounds, rabbit 1½ pounds.

The right ammunition in the right gun will prevent a serious accident  
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# Prepare Ye for Safe Hunting

Dated: From Now On

Dear Sportsman Sams  
and Curious Charlies:

Most of you have often heard of "the letter edged in black." For you who haven't, it is a written communication enclosed in an envelope with the border trimmed in an opaque color bringing news of a death. I well remember when it was a dreaded reality, and those of us who "stoop" to listen to hill-billy programs have heard those words put to tear-jerking music.

Maybe this letter isn't a true "letter edged in black" because it actually doesn't bring word that one has met permanent disaster. It just brings a warning to help prevent such misfortune from taking place—I hope.

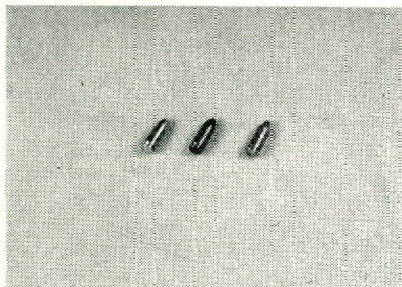
The war in Germany is over. We thank God for that, but their weapons are still taking lives of those receiving war souvenirs. Our government takes special pains in examining all such items, but unfortunately many of these "trophies" reach civilians through channels not under government supervision. Many of these things in the form of guns and ammunition are not dangerous. They are just as safe as your ol' thirty-thirty IF handled with the proper respect.

Not long ago I read an account of a man being fatally injured when he fired a Walther Model 38 German Service pistol. Now that pistol has been proven to be one of the best handguns ever produced. It is rigidly constructed and has reserve strength to stand pressure generated by the ammunition loaded and prescribed for its particular type. But, such stuff as Schmeisser machine pistol loads (kind used in above case) at a muzzle velocity of about 1600 feet per second are entirely too hot for Walthers and Lugers. The cartridges chamber very nicely in both of these guns, but

By ADAM WILSON III

there is nothing nice about what happens when you pull the trigger on one of them loaded with that "high-vitamin" fodder. All of the higher velocity numbers that I've seen are coated with black enamel, or other dark substances, to distinguish them from other 9 m/m Parabellum loads.

The safest warning to issue should read something like this: "Beware! Do not touch any form of military arms or explosives." Now that would be a cruel order to try to enforce, especially on us who just "gotta see how some of that foreign stuff pays off." I have had the pleasure of fooling around with several present war guns and their G. I. ammunition, BUT the pieces were stripped



**AN EXAMPLE of "so near alike, but yet so far." The right and left specimens are 9 m/m loads with a muzzle velocity of 1150 feet per second, which may be used in Lugers, Walthers, and other pistols of that type. The center black number should never be used in an arm except machine guns or machine pistol type of guns. This cartridge's potent powder generates a M.V. exceeding the other two loads by four or five hundred F. P. S. (Muzzle velocity varies with different barrel lengths).**

— Photo by Roger Adkins

and thoroughly inspected—then extreme caution was taken.

New types of arms are appearing on battlefields most every day. Tricky explosives are turned out of laboratories—domestic as well as foreign—into the hands of troops, to accomplish a large part of their purpose before we know they exist. Therefore, we in civilian life can't know of the latest dope on these, or how to handle them safely—we aren't supposed to know. Most of you do know that such shells as large as the 20 m/m and up are loaded with a projectile usually containing a very sensitive nose. Give one of these babies a little jar (15 pounds to be exact on some numbers) and you'll be "pushing up daisies" soon afterward. We are, more or less, careful around the larger bore types of ammunition, but have a tendency to handle all the small bore variety with about as much care as we would a pocketful of nigger-shooter ammunition. There is where a serious mistake is liable to be made. I know that Germany manufactured rifle cartridges loaded with explosive slugs, and I understand that other countries have done the same. You can't be too careful with this kind of ammunition.

Of course, there are hundreds of different kinds of booby traps, a few of which leak into our good ol' U. S. A. Those things are designed to injure or kill in a cunning, unexpected, and nasty sort of a way. Guns and ammunition go into action only when deliberately forced to do so, but you must BE VERY SURE YOU KNOW THEIR NATURE and PURPOSE. I am not afraid of you who "kinda live from one gun to another" playing with a booby trap—unless it is concealed in some form of a gun. In most instances the guns that

★ Continued on page 22

# Furry Dividends

★ Continued from page 9

under the marsh sod, they may not surface until they are two hundred feet away and completely screened by marsh vegetation. Along ditches and streams where marsh plants are limited muskrat dens are in bank burrows instead of lodges.

The two to four or more litters of four to eight each explain in part the success of the species in remaining widespread and numerous in spite of heavy trapping. One acre of productive southern marsh may yield 30 pelts a year without depleting the breeding stock. The average for many large tracts is more than ten pelts to the acre. Even at \$1 each in normal years this constitutes a major source of income to many landowners and trappers, who usually share the fur revenue approximately 50-50. In the South the breeding continues all winter and research biologists have not yet determined how many litters one female may rear each year. It is known that the gestation period is only 29 or 30 days, and that the young breed before they are a year old.

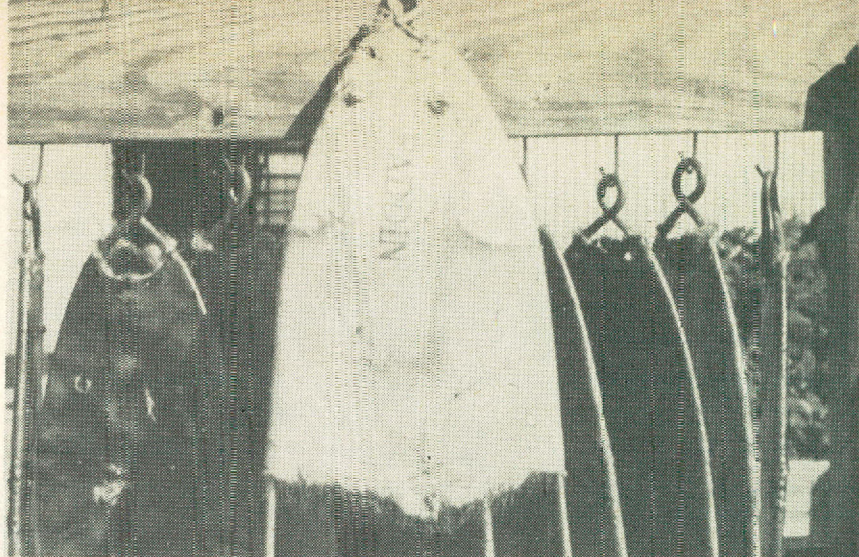
The size of the litters varies with the length of the breeding season. In the South the average is four to the litter. In Iowa, where they breed only in spring and summer, the average litter is 6.5.

Chambers inside the lodge are dark and damp, where the animals spend most of the day and where the young remain for 14 to 16 days before their eyes open and another two weeks until they are weaned. Within three months they are approaching adult size and must leave the lodge altogether. Those that desist are slashed to death by their mother which is by then nursing or perhaps weaning a younger litter.

This crowding in the lodge brings about much wandering and fighting. Those that can't find a vacant spot and build their own lodge, eventually perish in one way or another. The high breeding potential counteracts this mortality in one way and makes it necessary in another. Those that normally succumb to marsh hawks, minks and raccoons are negligible to the welfare of the species. Those young that drown when their mother unceremoniously dives into the plunge hole while they are suckling likewise serve only to keep intricate natural processes functioning.

When over-populations occur, expanses of marsh are denuded and the occupants are forced to migrate. Much fighting occurs, and the muddy trails out of an "eat-out" are littered with wounded and dead muskrats. This often occurs on southern marshes when water and food conditions are ideal and trapping is not heavy enough to prevent. Ill-advised prohibition of trapping on certain sanctuaries has resulted in disastrous "eat-outs" which practically ruined the marsh for water-fowl and other species for several years.

Four thousand families in Texas and Louisiana alone depend upon muskrat



**A MUSKRAT PELT, Top: On stretcher for drying. Bottom photo shows a day's catch on drying racks.**

trapping for their principal source of income. Many of these are descendants of the French who settled the Bayou Teche and Abbeville country. With their pirogues and bayou camps, they harvest the fur crop under handicaps of weather, mosquitos, and snakes; yet they love it. In the fall when trapping season approaches, an old trapper can hardly wait for the legal date for setting traps. Packing into the marsh 200 to 300 of the two-trigger traps (that kill the muskrat when it steps on the pan) and the canes that hold and mark the traps is back-breaking work. Yet the average trapper is a middle-aged man who has been at it all his working life. And the most successful trappers are the wirey light-weights of the clan. Few men over 150 pounds can walk the marsh day after day. They sink too deep into the mud and peat and floating turf.

In many states muskrat trapping is scattered and less profitable. But farm boys and other part-time trappers reap a respectable harvest from the ditches and stream and pond margins. Their individual catches average only 22 to 30 a season in Illinois, whereas a hundred a day is not uncommon for a trapper on the better coastal marshes. The best

one-day catch I know of was made by Vernon Koehler of High Island, Texas, who brought out 220 pelts one frosty day during the winter of 1942. Yet the scattered catches of muskrats in farm country (653,000 annually in Illinois) yield an aggregate of many millions of dollars in pelt value.

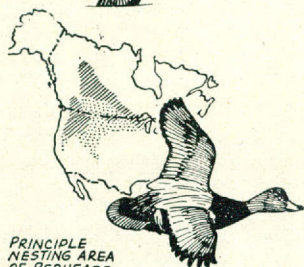
A well-managed muskrat marsh is as profitable as most farm land. So it is not surprising that the technicalities of muskrat ranching in the wild have received considerable study. Methods are well developed and concern in general the stabilization of water levels, controlled burning, and regulated trapping.

Uncle Henry Hillebrandt, whose house on stilts in marshland has been the landmark for the head of East Galveston Bay and Oyster Bayou since 1915, is 78 but he trapped more than 2,000 muskrats winter before last. The first trapping season he has missed since he quit sailing lumber sloops to Tampico was when a kidney had to be removed. He has a generous respect for the intricacies of muskrat behavior, after years of trapping and watching them come and go. "Damn you me," he says, "they got more sense than some people."

# Waterfowl Count SHOWS 20 Million Drop

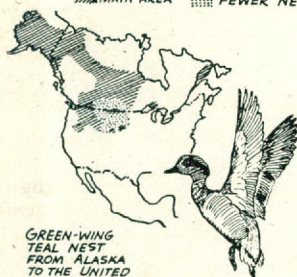


CANVASBACK  
BREEDING  
AREA



PRINCIPLE  
NESTING AREA  
OF REDHEADS

▨ MAIN AREA    ▩ FEWER NESTS



GREEN-WING  
TEAL NEST  
FROM ALASKA  
TO THE UNITED  
STATES



PRINCIPLE  
NEST SITES  
OF WIDGEON



GREATER SCAUP  
BREED ALONG THE  
ARCTIC COAST—  
LESSER SCAUP  
NEST FURTHER SOUTH  
Both are called "Bluebills"



CANADA  
GEESE  
NESTING  
SITES

ON THE basis of its annual inventory of the migratory waterfowl in the United States, the Fish and Wildlife Service of the Department of the Interior estimates the population at 105,500,000. The 1945 estimate represents a decrease of approximately 20,000,000 from the 1944 figure.

Dr. Ira Gabrielson, director of the Service, said that the current estimate of the decline in the population of ducks, geese, and other migratory waterfowl, may not be exact. He pointed out that the 1944 population may have been overestimated, that the 1944-45 shooting season was the "most freakish in the memory of the oldest hunters," and that millions of ducks which normally winter in the United States may have gone on south to Mexico, Cuba, Hispaniola, or even Central American countries.

"The fact remains," Gabrielson said, "that on the basis of tabulations made throughout the country by Fish and Wildlife Service biologists, game management agents, and refuge managers, aided by state game wardens, and personnel from many other federal and state agencies, the total breeding population of ducks and geese is estimated at about 105,500,000."

During the 1944-45 shooting season, he declared, in many parts of the country the birds, delayed in Canada by mild weather and plenty of food, were nearly a month late. Some famous duck areas, particularly on the Atlantic Coast, never did get a good flight. In others, as in parts of the Great Plains area, the supply of birds was the best in two or three decades.

"Abundance of food and water throughout most of the parts of the country undoubtedly resulted in an unusually wide dispersal," Dr. Gabrielson said, "and this may have resulted in a substantial number of birds being overlooked in the inventory. In general, however, the Fish and Wildlife Service tabulators and their assistants obtained an approximately normal coverage. Every important wintering ground was covered by air, chiefly through the cooperation of the Coast Guard, Naval Air Service, and the Army Air Forces."

On the basis of the four great flyway systems, the losses in population show

up almost entirely in the Atlantic and Mississippi regions, as increases were recorded for both the Central and Pacific flyways.

"In all flyways there is evidence that we must watch the status of some species such as the Redhead, Lesser Scaup, Ruddy Duck, and Canada Goose," Dr. Gabrielson declared. "A few species, among them the Gadwall, Baldpate, Pintail, Green-winged Teal, and the Snow and White-fronted Geese, registered gains throughout the country."

## Live and Learn

★ Continued from page 13

The "song" of the tiny cricket, an insect which is less than an inch long, can sometimes be heard as far as a mile. Mister Cricket is the only one who "sings a song." Mrs. Cricket makes no sound at all.

\*\*\*

The barn owl will eat its own weight in food in a single night. Its diet consists of mice and rats around barns.

\*\*\*

One of the strangest mammals in the world is the dormouse, famed in legend and story. He is not a mouse at all, but more closely related to the squirrel family. He is the only mammal that can shed his tail like a lizard in order to make his escape from capture. And he soon grows another tail!

\*\*\*

Bats have the finest of all fur and the greatest number of hairs per square inch of all animals.

\*\*\*

The ginkgo tree is the only living plant which exists today in the same form as it did in prehistoric days.

\*\*\*

The fact that the porcupine has a particular yen to eat synthetic rubber tires has had wide publicity. But now another "synthetic appetite" comes into view. Stray dogs in the West are said to be eating auto license plates—the plates are made from a soybean base. Hunters who park in secluded spots are taking a lot of chances these days.

# Prepare Ye

★ Continued from page 19

come here to the United States from battlefronts aren't traps, and contain no planted devices—it's just that so darn many of us don't know how to treat these weapons. Seldom do they perform an act not listed on the program.

Here's a couple of DON'TS that should always be heeded:

1. Don't attempt to discharge any fire-arm loaded with a cartridge which was not manufactured *especially* for that particular arm.

2. Don't convert foreign rifles to handle American cartridges until you have gotten the advice of a competent gunsmith, or authority on foreign and domestic weapons. There are technicalities which enter into a "charge" that, unless given proper attention, will cause a lot of serious trouble.

As we think of it, the human body is designed very artistically—and I could add that in some cases exciting to observe, but it is awfully unattractive scattered over a wide area blasted by pieces of jagged metal. Therefore, when conducting experiments or just playing around with these memorials of victory in the form of devices created to destroy—HANDLE WITH CARE!

If you know your business, or can get information from reliable sources, our enemies' and allies' weapons can afford many interesting hours of experiment and pleasure.

So, when making your rounds over the country and see weapons that have been retired from battlefronts in possession of one of our kind (the other kind will remain at a safe distance) don't discourage him, but do tactfully give out a few words of caution. Let's keep our next of kin from receiving a genuine "letter edged in black."

Happy powder burning, Joe and Charlie, but don't let it singe your eyebrows.

Your friend,

Signed: *Justanothersamorcharlie*

★

West Texas! Where the deer and antelope play. Where seldom will be heard a discouraging word in a few days because beginning with October 1 hunters for the second time in some forty years will be drawing beads in the general direction of the pronghorns.

I have a feeling there is going to be some changes made in selection of shooting irons out there this year. Several of the fellows found that their old reliable "thutty-thutty" just didn't have enough stuff on the ball, or maybe I should say behind the ball, to get the job done on those swift moving and distant targets. Many rifles of the .30-.30 class will be absent, and they should be. During last year's season I saw several owners of rifles with a m.v. of about 2200 f.p.s. having to "ante-over" their bullets to the targets. In some cases the slow slugs would have done well to have

gotten there on the second or third bounce.

Antelope are among the most beautiful of all creatures in the eyes of the nature lover. To see them move over the open country they love to roam, furnishes a picture that no artist could do justice to with a brush. After I'd made my "kill" last year, I took a hop in an airplane over choice hunting grounds. The picture became even more impressive as several large, herds were brought into view at once. We of the Lone Star State are fortunate to have the antelope added to our large variety of shootable game animals. Thanks to the untiring efforts of several members of the Game, Fish and Oyster Commission who "brought them back." These sporting animals are here to stay if we kill them as sportsmen, and, that is to kill cleanly and fairly.

Here's my idea of a few of the best Texas antelope cartridges and bullet weights: .270, 130 gr.; 30-06, 150 gr.; 30-40, 150 gr.; 300 Sav. 150 gr.; 7 m/m, 139 gr.; .257, 117 gr.; 250-3000, 100 gr.

With lighter high-velocity bullets, range estimation will not have to be as near correct as would be necessary with the use of slower, heavier slugs. Shocking effect delivered by fast, light bullets is more important than tissue destruction of slow, heavy bullets when your game is antelope at long hard-to-estimate ranges. In the case of the .257 and 250-3000 calibers, however, the heaviest bullets should be used, since the light small bore bullets have a tendency to disintegrate on impact thus failing to give adequate penetration. I would use these numbers only as a last resort. Personally, I think both of them should be labelled: "For Ladies Only." I have always held a greater admiration for any man who is over-gunned, than one who is under-gunned. The former will kill his game suddenly and humanely, while the latter, even though he may get his, will leave many head to die a lingering death in the woods.

Circumstances prevent me from participating in this year's hunt, but I'll sure be thinking of all you guys who will be opening the season with a bang. Lead 'em long, fellows, and the best of luck.

★

I dropped in on the 5th floor of the Transit Building in San Antonio the other day, which incidentally is the home of the M. L. and M. J. Stith telescope sight mount works. The purpose of my visit was to have a couple of rifles "geared" for this Fall, but while I was there I gathered some information about our Texas scope-mount-man.

In the late twenties Mr. M. L. retired from active business with a well-known adding machine company. He located on a ranch near Rocksprings, Texas, in Edwards County. Shooting had always been one of his favorite pastimes, but his eyes began to deny him of the accuracy to which he had been accustomed.

Something had to be done, so he did it.

With crude material he built a telescopic sight and mounted it on one of his rifles. It worked. He built a home shop, and soon the reputation of his gadget spread miles around. All of his friends and neighbors had to have one just like it. In 1937 Mr. Stith moved to San Antonio where he now employs some thirty or forty skilled and long-experienced craftsmen.

On this particular day of my call, I passed a bench where a rifle was being crated for its journey to Alaska. Other Stith merchandise reaches such places as Hawaii, Africa, Latin America, and all forty-eight States.

Both M. L. and Jack Stith make you feel very welcome in their attractive establishment whether you are just a gun-crank on the browse or really have business there.

I think we Texans are fortunate to have such an institution in our midst. After they "stick" your scope on, it is prepared to receive a lot of rugged treatment, comparatively speaking, which will certainly remove a bit of worry from a fellow's mind who sometimes has a "glass" mounted on his saddle rifle.

Stith minimizes caution that is usually taken with a telescope sight mounted rifle.

★

To compare caliber .30 military ammunition with the modest little .22 caliber cartridge may sound far fetched. Not so many years ago no one would have dared to make the comparison, but today because of a lucky mistake that's become almost a legend in ammunition making, the .22 has become big league ammunition. Hundreds of the most respected men in shooting have made careers with this accurate cartridge that is now used in teaching the fundamentals of shooting to every soldier, sailor and marine before he graduates to service weapons.

The .22 is not only the most inexpensive of all accurate ammunition, but because it produces no recoil, it eliminates flinching and enables instructors to ground a novice in sound shooting practices without developing a fear of his gun—the greatest single obstacle to marksmanship.

Here is the legend of the .22. One December, many years ago one of the armed services awarded the Western Cartridge Company a minor contract for \$10,000 worth of .22 ammunition, scheduled for delivery the following month. While the contract was so small it barely warranted setting up separate production facilities, the specifications were too exacting to go unchallenged. No one had ever asked an ammunition manufacturer to produce a .22 cartridge to deliver such a high degree of accuracy.

When January passed, the officials in Washington were puzzled that the order had not been delivered. As months rolled by, their puzzlement increased. Finally in September after an expenditure of

\$37,000 in experimentation, the \$10,000 lot of .22's was finished.

Then came the firing tests of the super-accurate new .22's. Everyone who had worked on the meticulous job grinned with pleasure as the eyes of the officials bugged out to see the bullets make a smaller and more compact group than any .22's ever had made before.

Suddenly, to everyone's consternation, the contracting officer demanded to see the specification. When it was produced and read, one of the officials nodded his head.

"Someone made a mistake," he said cheerfully. "This calls for ammunition just about three times better than we wanted." He smiled broadly, "But we're glad we made the mistake."

The original specification had required that the ammunition have a certain accuracy at one hundred yards. It should have read "feet."

Almost overnight all ammunition had to be manufactured to tighter specifications and the Ordnance Department spurred the private companies on by holding annual competitions for the caliber .30 ammunition used at the Camp Perry matches. This token order—it seldom exceeded 150,000 rounds—was always handled at a loss even by the winning company, but it was the most sought after prize in the industry and was one of the greatest single factors in raising the standards of all American ammunition, commercial as well as military.

## Sight It In

Lady Luck sometimes performs miracles. This war is full of almost impossible experiences—flyers have fallen from their planes and landed safely without the use of a chute—a sailor is blown in the air, and lands fifty feet from his battle station and not a hair on his head is harmed. Such things have happened, but do not count on a similar break when you go hunting. Sight that rifle in and know where the bullet is going. Your chance of catching up on red points rises in direct proportion to your diligent practice.

Bill Casto, dean of government hunters in Arizona, was really poison with his Winchester. He rode his trapline 365 days in the year and brought the most wily wolves in the Southwest to bag. Seldom did he leave camp without taking two or three sighting in shots with his rifle. His reputation as a fine shot, and the wolf pelts produced, were direct evidence that it pays to know where the bullet is striking.

Ammunition cost is but a fraction of the expenditures that need be made when one invades the big game fields. An extra box or two of cartridges fired into a clay bank, or some safe backstop will do much to give a hunter confidence. He will find where the bullet is hitting and learn the simple mechanics of shooting. Trigger squeeze, sight align-

ment and the proper handling of the arm is not difficult, but such takes some practice. Also, it is fun.

But one properly placed bullet is necessary to assure one of his trophy. The whole success of an expedition might depend upon that split second when the shot is made. When one may travel for days to reach the back-country, sacrifice time, money and energy to bring home his game, the simplest insurance of success is a bit of practice beforehand.



We remember after the last World War, the military ammunition that got into the big game fields. Here is hoping the same thing does not happen after this one. The shooting of hard point ammunition at anything other than Japs or targets should not be attempted.

During the past 25 years, we have observed hunters attempting to knock down noble game animals with stuff designed for paper targets, or made to disable a Hun. It was not nice to see. A white-tailed deer took 31 of these slugs to our knowledge and ran almost a mile. Anything short of a brain or a heart shot failed miserably, and almost invariably a disgruntled hunter and a wounded animal was the result.

Some of the hunters, in order to make their cartridges of the dum-dum or expanding type, used a jeweler's saw to cut through the jacket of the bullet. An "X" design was sawed through the point of the projectile, down to the core beneath. Sometimes the point was simply filed off, exposing the core beneath the jacket. In either event a certain degree of expansion was attained, but one never knew how much. There was no uniformity to the stuff, and the hazards were many. Such mutilation often resulted in the lead core of the bullet being shot through the jacket, and the jacket remaining lodged in the bore—to burst the rifle when another cartridge was fired behind it.

California had a plague of brush fires in coastal areas where deer hunters used incendiary bullets. The reaction of this type of stuff on the bore of a rifle is not good. Tracer ammunition will knock out rifle barrels as surely as ball-bearings will ruin the tube of a shotgun.

Some of the "furrin" cartridges of military design are infiltrating our lines. They may look like they fit your rifle, but be very cagey about using them. If they do "mike up" to the right dimensions, they may have pressures not designed for your gun. Check carefully before shooting them, and even if you do not value your rifle or yourself, give the game a break and use only sporting ammunition in your hunting.

## Velocity

★ Continued from page 6

per-recording sleeve. Ballisticians call this rod and sleeve the long "bob."

Suspended from the second magnet is

the short "bob" which is a second "falling body." This is a tube  $\frac{3}{4}$  of an inch in diameter, but only  $4\frac{3}{4}$  inches in length. Where the long bob is connected electrically with the thin wire near the gun muzzle, the short bob is connected electrically with the metal target at the other end of the test range.

In making a test, Robinson first receives a telephone call from the chronograph operator advising she has "hung" the long and short bobs and is prepared to make a recording. Robinson then loads the test gun, leaves the test range, closes a heavily insulated door behind him and fires the gun with a lanyard that extends outside through a small porthole.

Here's what happens behind the closed door when Robinson pulls the lanyard. The projectile leaves the muzzle and snips the wire stretched across the gun muzzle. Breaking the wire halts the flow of electric current to the magnet holding the long bob and it starts to fall.

At the end of the range when the projectile hits the metal target, it interrupts the flow of current to the magnet on the chronograph from which the second, or short bob is suspended. This bob immediately starts to fall.

Both bobs are now falling.

As the shorter bob falls a distance of only  $4\frac{1}{4}$  inches into a metal cup, it reaches the end of its journey while the long bob is still falling. The instant the short bob strikes the platform in the metal cup, a trigger releases a knife blade which springs out into the path of the still-falling long bob and nicks the copper recording-sleeve in which it is encased. It has all happened in the twinkling of an eye.

The distance between the nick on the long bob and the zero point near the end of that bob is the distance the long bob has fallen while the bullet or shot load has traveled from the gun muzzle to the target. The chronograph operator measures this indicated distance with a ruler equipped with a vernier for super-accuracy.

By consulting a table of figures, which compensates for the chronograph's operating time of fifteen-hundredths of a second, she can convert the distance the bob has fallen into the feet-per-second the bullet or shot load has traveled.

As a sample of how the operator's conversion table translates distance-of-falling into velocity, a reading of 357 millimeters (nine inches) for shotshells indicates a velocity of 1,000 feet-per-second and a reading of 227 millimeters (four inches) for "center-fire" bullets indicates a velocity of 2,300 feet-per-second.

Bullet velocities range from 1,030 feet-per-second for the .22 caliber short Leader, to 4,140 feet-per-second for the .220 caliber Swift. The velocity of the pellets in various shotshells ranges from 775 to 1,045 feet-per-second. If Newton hadn't figured out why apples fall to the ground, measuring velocity would be a far more difficult job than it is.

# Your No. 1 Problem

## AN EDITORIAL

**I**NTELLIGENT UTILIZATION of our natural resources is of the same importance as an Army and Navy in the future welfare of the U.S.A. Our problem is not attempting to establish fish and game by some short-cut method. Rather, it is the creation and perpetuation of an environment wherein our wildlife will thrive.

Basically, behind all wildlife, or our own existence for that matter, is soil. You can't by-pass that for it is the banquet table of all living organisms. Wildlife is but a by-product of proper land use, as are human beings, national forests and the yarn for the Ladies Aid Society.

We dig in the sands at the junction of the Tigris and Euphrates Rivers to find the remains of the celebrated Hanging Gardens of Babylon—one of the wonders of the ancient world, noted for a lush growth of plant life. The Egyptians dip pitiful buckets of water from the Nile to nurture the scorched sands, where once foodstuffs grew in such abundance that large armies of workmen built the Pyramids. The Roman Empire cracked up because of their unwise land use policy.

In this war Hitler, Hirohito, and Mussolini attempted mass murder on all their neighbors, just because they needed more of the products of the land. Our largest cities are no more than clearing houses for the distribution of the products of the soil. To push our pet product—wildlife—is noble, but our cause is not one of interest to the sportsman alone. It reaches into every home in America, for the very existence of our people is dependent upon land use.

Whether we prosper as a nation, or drop behind into poverty and degeneration is entirely dependent upon the wise use of our natural resources.

In our present world-wide war, we have had to go all out. Our resources have been scattered to the seven seas. As an example, we have pumped oil through every conceivable kind of internal combustion engine in every land. It took millions of years to produce that oil. It has joined the atmosphere as gasses, returned to the earth as carbon, or dissolved in the waters of the sea. But it is gone, lost forever to the future prosperity of our country.

An interesting side light is the case of Russia. They have retained beneath their soil the greater part of their oil reserves. They realize that their future in the world picture is dependent upon the natural resources they control.

Our pioneers left a trail of soil destruction from the Atlantic seaboard, where they entered the New World, westward. The old idea was to farm the land for all it contained, skim it to the subsoil, then move on and skim another area. We have crossed the continent now, and there are no more wildernesses left to conquer and destroy. It is time to retrench, improve our battle positions wherever we happen to be dug in, and live or die within these bastions. Thus our future is not more fish and game—it is proper land use—proper water use—maybe even proper use of the air.

“Breathes there a man with soul so dead, who never to himself has said, this is my own, my native land.”

# The Long and Short of Animal Life

The age limits of animals, birds, fishes and insects have always provided an interesting subject for students of natural history. The may-fly, according to a Remington Arms Company researcher, is said to have the shortest span of life. This common *Ephemera vulgata* emerges from the water in thousands for a wedding dance of an afternoon, lay their eggs, and die.

"But these performances," he said, "occur only in the final phase of a comparatively long life-history. The may-fly hatches as a small wingless larva with six legs and three tails and dwells in the stream from one to three years before emerging in his final adult form.

"Animals which are really long-lived are comparatively few," he continued. "Here are some of the figures estimated by competent authorities:

Giant Tortoise	.....200 years
Carp	.....150 years
Vulture	.....118 years
Eagle	.....104 years

Whale	.....100 years
Salmon	.....100 years
Crow	.....100 years
Parrot	.....100 years
Raven	.....100 years
Man	.....100 years
Shark	.....100 years
Eider Duck	.....100 years

"In the strong, active carnivores, 25 years is seldom exceeded. The tiger may live to be 25 and possibly 35; bear up to 25 and 40; sea lion 17; cat 9 to 10 and sometimes much older; dog 10 to 15 and, rarely, up to 35; hyena, jackal and fox 14; badger 12. The horse may live 25 to 40 years; cow 25; deer about 20; antelope, goat and sheep about 15. Some animals live much longer in captivity than in native environment. This is due to the elimination of many of their natural hazards. Others, which cannot successfully adapt themselves to the conditions imposed by captivity, live comparatively short lives.

## An Antelope Doe

★ Continued from page 7

some return on his investment in the range occupied by the antelope.

Camping will be permitted only on ranches that are far from population centers—all ranches on Hunt III and the Mrs. W. E. Love ranch on Hunt II. If you are assigned to any other ranch, plan to make reservations for staying in the nearest town. We will be glad to give you any information as to the location of the ranch to which you are assigned. Whether you camp or not, be prepared for cool weather. Plan to arrive the day before your opening hunt date, as shown on your license. Wardens will meet you and be ready to put you on the range when the season opens. There will be no need to survey your hunting ground before the opening day.

Bring along field glasses, if possible. They will be of great help in selecting the best animal. From a trophy standpoint, you will want to take the buck with the longest horns. Also, you will want to avoid confusing young bucks

with does. Remember, does have horns shorter than their ears. A buck worth shooting will have horns much longer than his ears. The cuts on page 7 of doe and buck will show the difference.

Your rifle should be sighted in and tested before you arrive. The extra shots resulting from using untested sights disturb the antelope unnecessarily. As to caliber of rifle, every man has his own preference. The rifles used last year, in order of preference, were: 300 S, 30-06, 30-30, 35 and a few each of many other sizes. No ordinary .22 caliber rifles should be used.

If you have heard reports about antelope shooting being as simple as shooting a calf and are doubtful about getting enough sport to satisfy yourself, may I suggest you get out of your car and hunt afoot? Antelope are not much disturbed by an approaching car, and if they do start running they will try to cross in front of the moving car. But a hunter afoot must use all his talents as well as his "hind" legs. He will find that antelope have definite travel patterns, often with well-marked trails. A stand along one of these trails or a cautious climb over a ridge recently crossed by a band of antelope, will usually give him some shots.

After receiving your license you may find it impossible to make the trip. May we suggest that you notify the Game, Fish and Oyster Commission so that we can send someone else in your place? Last year 74 hunters failed to go and did not ask us to send others in their places. This year we are drawing a list of alternates in readiness for any last-minute notices that you cannot go. Of course we cannot transfer or refund your license; but we can accommodate other hunters and also assure the

rancher of removing the surplus antelope scheduled to be taken from his range.

## Nature Wins

★ Continued from page 17

Point Penascal (where fish were being caught) and others northward toward Bird Islands, while still others went to the Padre Island shore. In that area of the island there are easily 30 square miles of sand flats. It is claimed that one can dig down two or three feet in the flats and obtain fresh water. With a rainfall of some twenty-five inches annually the flats become a reservoir of fresh water which is bled off gradually into the Laguna, relieving to some extent the high salinity, and thus tending to attract fishes. If you have ever seen a bunch of minnows concentrated at a small trickle of clean water along the shore of a polluted stream, you can more easily understand what is meant.

The bleeding off of this fresh water becomes a real factor when the tide rises and covers the flats. As the tide recedes it has been greatly diluted by the fresh water and the shore water is correspondingly improved. Tests made at the Point of Rocks tend to prove this. With Baffin Bay and the water to the north both high in salt, the intermediate station at Point of Rocks is often of lower salinity. For example, on the 19th of July Bird Islands and Baffin Bay water was around 83,000 parts per million while Point of Rocks, just across from the sand flats, had a salinity of 70,960 p.p.m.

But the most striking and conclusive proof is contained in an experience at Point of Rocks on the night of September 11, 1930, when, in a sail boat, we anchored at the Padre Island shore just off the sand flats. At 6 p.m. the hydrometer test showed 84,600 p.p.m. During the night the tide rose and flooded the flats for several hundred yards. Someone awoke, discovered that the shore line had disappeared and the conclusion was that the anchor had pulled loose, leaving the boat to drift. "We're afloat! we're afloat!" was shouted and everyone was astir in a moment. Examination proved that the anchor was holding, so, after some griping and sailor profanity at having their rest broken, all turned in and slept until daylight.

At dawn I made another hydrometer test at the shore line and found the salinity had dropped down to 60,000 p.p.m. as compared to 84,600 of the previous evening. Such a discovery was a bit puzzling, so another test was made to convince me that I was right. But I could not understand it until we pushed off from shore a few hundred yards and made another test. There the salinity had jumped back up to 84,000 p.p.m. This made it clear that one could dig down in the sand and get fresh water, and that was what the tide had been doing.

As the drifting sands from the dunes along Padre continue to enlarge the area

## Sportsman's Dream

New, modern Lodge built on elevated location overlooking Guadalupe River. Good fishing. Hunting lease available nearby. All weather road. Approximately 6 acres, one-half in cultivation. Must be seen to be appreciated. Price \$5,000.00 (five thousand). Full details write Box 26, Route 2, Comfort, Texas.



of the sand flats by advancing in the direction of Baffin Bay, the area of the fresh water reservoir will naturally increase and may have a long range tendency to reduce generally the salinity of the Laguna. While there are occasional bad years, with great loss of fish, indications are that conditions are not growing worse since the summer of 1927 when the salinity at Murdoch Landing was 104,000 p.p.m., Baffin Bay 105,200 p.p.m., Pita Island 69,100 p.p.m. Dead fish then were everywhere. This may not have been a record for high salinity, as no continual check since then has been made, but no other such high figures have come to my attention.

The question is frequently asked as to why the water of the Laguna and Baffin Bay becomes reddish when the salt concentration is high. The answer is that the color does not come from the salt but from iron hydroxide. This hydroxide forms on the sea bottom in the presence of decayed organisms. (U. S. Geol. Survey Bulletin 770 Clarke.) Its color is reddish or reddish brown. It lies on or near the bottom, because it is heavier than the water above it, until the salt concentration of the water above reaches a higher specific gravity than that of the iron hydroxide. Then the colored water rises to the surface and all the water is uniformly reddish.

The presence of iron was confirmed by a sample of the water from Viola Beach which, when analyzed, showed 20 p.p.m. of total iron. The specific gravity of the water was 1.056; that of the hydroxide a little lower.

## 206 Beavers Trapped

A survey of the streams in Kimble County reveals a great reduction in the population (beaver) due to trapping during the last three years. Trap records obtained by Game Warden J. T. Swanson show that 206 beavers were trapped and sold during the 1942-43 trapping season, 67 were taken in the 1943-44 season, and about 25 were taken during the 1944-45 season. The maximum price received for large pelts was \$25 and the average price was about \$18 per pelt.

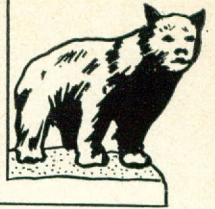
## Oh, Yeah?

An A.P. story gives W. R. York, an aircraft worker of Wichita, Kansas, the Champion Liar title of the Southwest. Here's the yarn about his faithful quail dog.

"While hunting quail in some thick brush in western Kansas he lost his dog and finally gave up trying to find her and went home. He trained another dog and the next year went hunting in the same locality. Beating out some heavy cover he found the skeleton of the dog he had lost still standing on point. This itself was not so unusual, but she had given birth to seven puppies and they, too—now seven little skeletons—were standing, honoring the point of their mother."



# BOOKS



**COOKING WILD GAME**—by Frank G. Ashbrook and Edna N. Sater. 300 pages. 92 illustrations. Published by Orange Judd Publishing Co., Inc., 15 East 26th Street, New York 10, N. Y. Price \$4.00.

This book tells the sportsman how to bring his game home in proper condition and the housewife how to prepare it so that the resulting meal is a gourmet's delight. **COOKING WILD GAME** appeals to hunters and anglers and conservationists. As "first aid in the kitchen" for the bewildered sportsman's wife who may find herself entirely at sea when the man of the house returns from a hunting trip and presents her with a brace of ducks, a wild turkey, a deer, or even an armadillo, this book will give her specific information on such points as how to overcome wild or gamey flavor in "fishy ducks"; how to quick-pluck feathered game with paraffin; how to remove musk or scent glands in small game; the use of marinades and brines to tenderize game meat and enhance its

flavor; purpose of stuffing in fowl; methods of cooking wild game meat and time required; and how to can wild meats, and how to prepare game meat for home freezing. In addition, the housewife has the choice of 432 recipes for the pre-pan preparation and cooking of wild rabbit, squirrel, opossum, raccoon, muskrat, skunk, armadillo, deer, antelope, boar, wild turkey, quail, prairie chicken, wild duck, goose, coot, rail birds, pigeon, dove; unfamiliar varieties of fish, and domestic rabbit. As "first aid in the field" for the hunter, this book explains how to field dress deer and other big game animals, how to remove internal organs, how to cut up the carcass (illustrated), and the correct method of handling the hide from which gloves or a hunting jacket or vest can be made. It discusses the evisceration and skinning of small game animals and the time required for the seasoning, or aging, of game. A copy of this book should be in the library of every hunter and fisherman.



### Joe's Baked Fish

3 pounds carp, dressed for baking  
 ½ cup flour  
 2 tablespoons salt  
 ½ teaspoon pepper  
 4 slices bacon  
 1½ cups stock

Wipe dressed fish with damp cloth and cut 4 two-inch gashes crosswise across one side of the fish. Dust outside of fish with flour, salt and pepper mixture, and lay fish in shallow baking-pan with gashed side up. Pour stock around fish and baste with stock. Lay bacon across top of fish and bake in a pre-heated oven at 375° F. for 1 hour. When half done, baste fish with stock.

#### Stock:

½ cup celery, stalks and tops cut fine  
 1 tablespoon parsley, cut fine  
 1 small onion, chopped  
 1 tablespoon green pepper, chopped  
 3 cups hot water  
 2 tablespoons bacon fat, or bacon cut in bits  
 1½ teaspoons salt  
 ¼ teaspoon pepper

Simmer above ingredients in a covered

utensil for 40 minutes. Strain and use stock with fish.

#### GRAVY:

½ cup stock  
 Juices from baking pan  
 1 tablespoon fat  
 2 tablespoons flour

Melt fat in shallow pan, and brown flour in fat. Gradually add stock and juices, and cook over heat stirring until thick. The gravy may be poured over fish or eaten with potatoes.

### Baked Stuffed Carp

3 pounds carp, dressed for baking  
 4 slices bacon, salt pork, or fat  
**STUFFING:**  
 4 cups bread crumbs  
 3 tablespoons onion finely chopped  
 ¾ cup celery finely cut (or ½ teaspoon celery salt)  
 6 tablespoons melted butter or fortified margarine  
 ¾ teaspoon salt  
 ⅛ teaspoon pepper  
 1 teaspoon sage

Cook the celery and onion for a few minutes in the butter. Mix the other ingredients and add to butter mixture.

Wipe dressed fish with damp cloth and salt lightly inside and out. Stuff with dressing and sew or tie with string to retain stuffing. Place in a pre-heated oven and bake at 375° F. for 1 hour.

**MOURNING DOVE and WHITE-WINGED DOVE OPEN SEASON for 1945**

**MOURNING DOVES**

OPEN SEASON -- NORTH ZONE:  
Sept. 1 to Oct. 30, both days inclusive. Shooting hours, one-half hour before sunrise to sunset.

SOUTH ZONE: Oct. 20 to Dec. 18, both days inclusive, except in Cameron, Hidalgo, Starr, Zapata, Webb, Maverick, Kinney, Dimmit, LaSalle, Jim Hogg, Brooks, Kenedy, and Willacy counties where mourning doves may be hunted only on Sept. 13, 16, 18, 20 and 23, from 12 o'clock noon to sunset, and from Oct. 20 to Dec. 18, from one-half hour before sunrise to sunset.

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

A hunter may not have more than 10 a day of either or both species (White-wings or mourning doves), in the aggregate.

**WHITE-WINGED DOVES**

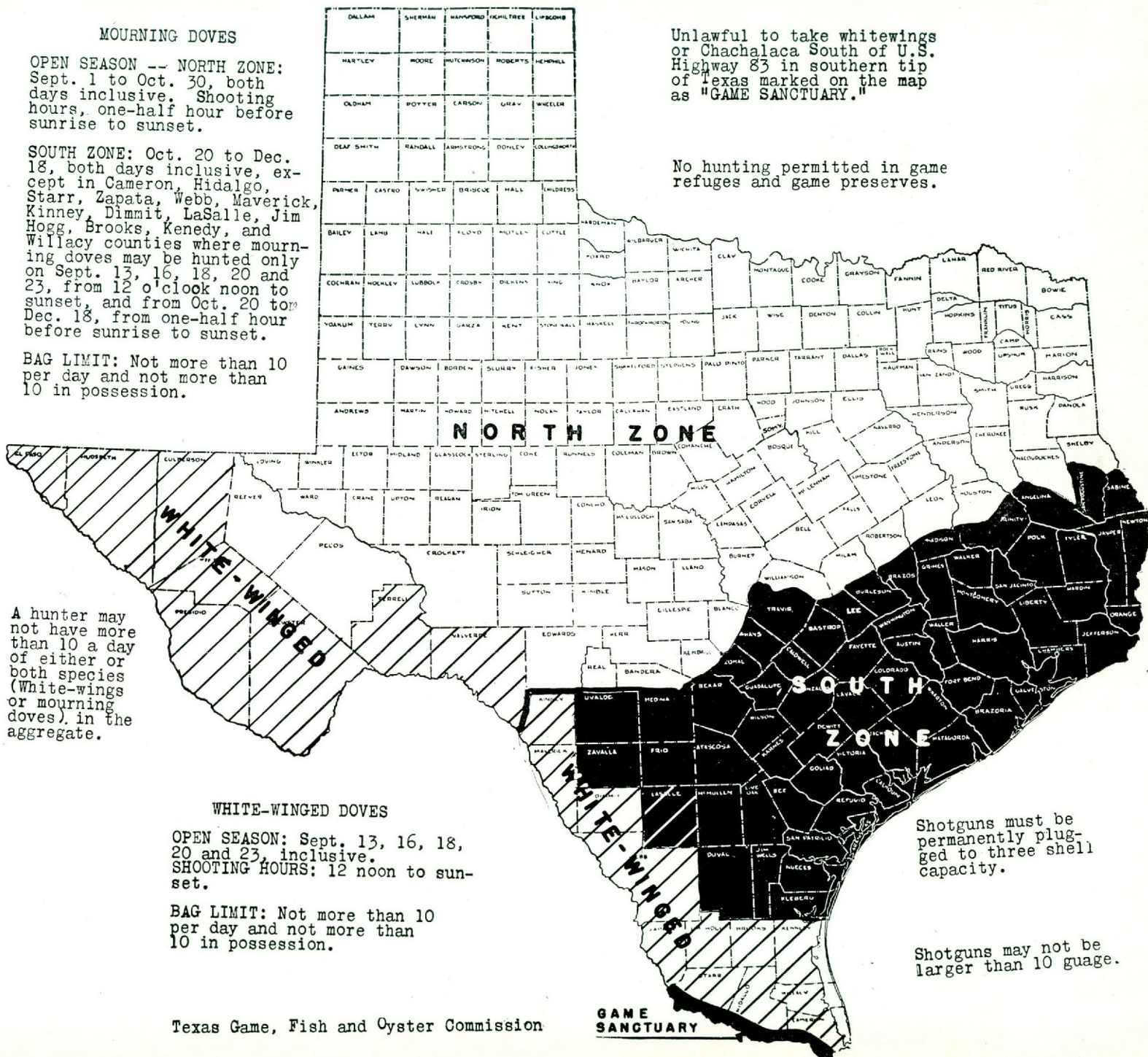
OPEN SEASON: Sept. 13, 16, 18, 20 and 23, inclusive.  
SHOOTING HOURS: 12 noon to sunset.

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 in southern tip of Texas marked on the map as "GAME SANCTUARY."

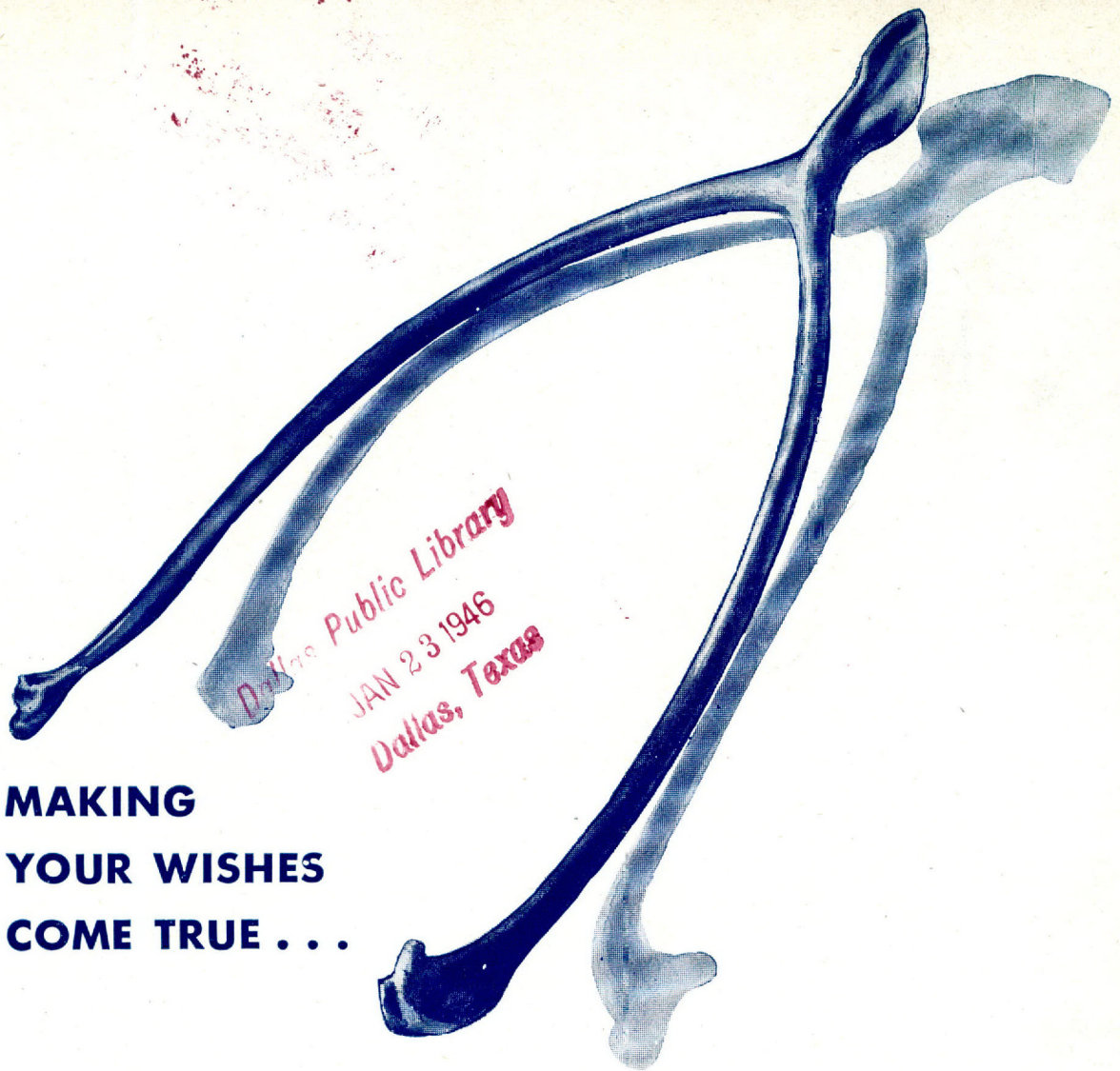
No hunting permitted in game refuges and game preserves.



GAME SANCTUARY

Shotguns must be permanently plugged to three shell capacity.

Shotguns may not be larger than 10 guage.



## **MAKING YOUR WISHES COME TRUE . . .**

One wish has been fulfilled. Won by 3½ years of deadly struggle. With God's help, we have prevailed.

Now we have a chance to make another wish come true. For most of us, the outlook is a bright one. If we will simply use the brains, the will, the energy, the enterprise . . . the materials and resources . . . with which we won our war, we can't fail

to win the peace and to make this the richest, happiest land the world has known.

Your wishes have been wrapped in that bright outlook. Your wish for a cottage by a lake. For your boy's college education. For a trip you long to take. For a "cushion" against emergencies and unforeseen needs.

You can make those wishes come

true by buying bonds today . . . buying them regularly . . . and holding on to them in spite of all temptation.

There's no safer, surer investment in the world. You can count on getting back \$4 for every \$3 you put in —as surely as you can count on being a day older tomorrow.

So why not be patriotic and smart at the same time?

**FULLILL YOUR WISH—BUY EXTRA BONDS  
IN THE GREAT VICTORY LOAN!**

# **Texas Game and Fish**