

Documents Department

MAR 21 1960

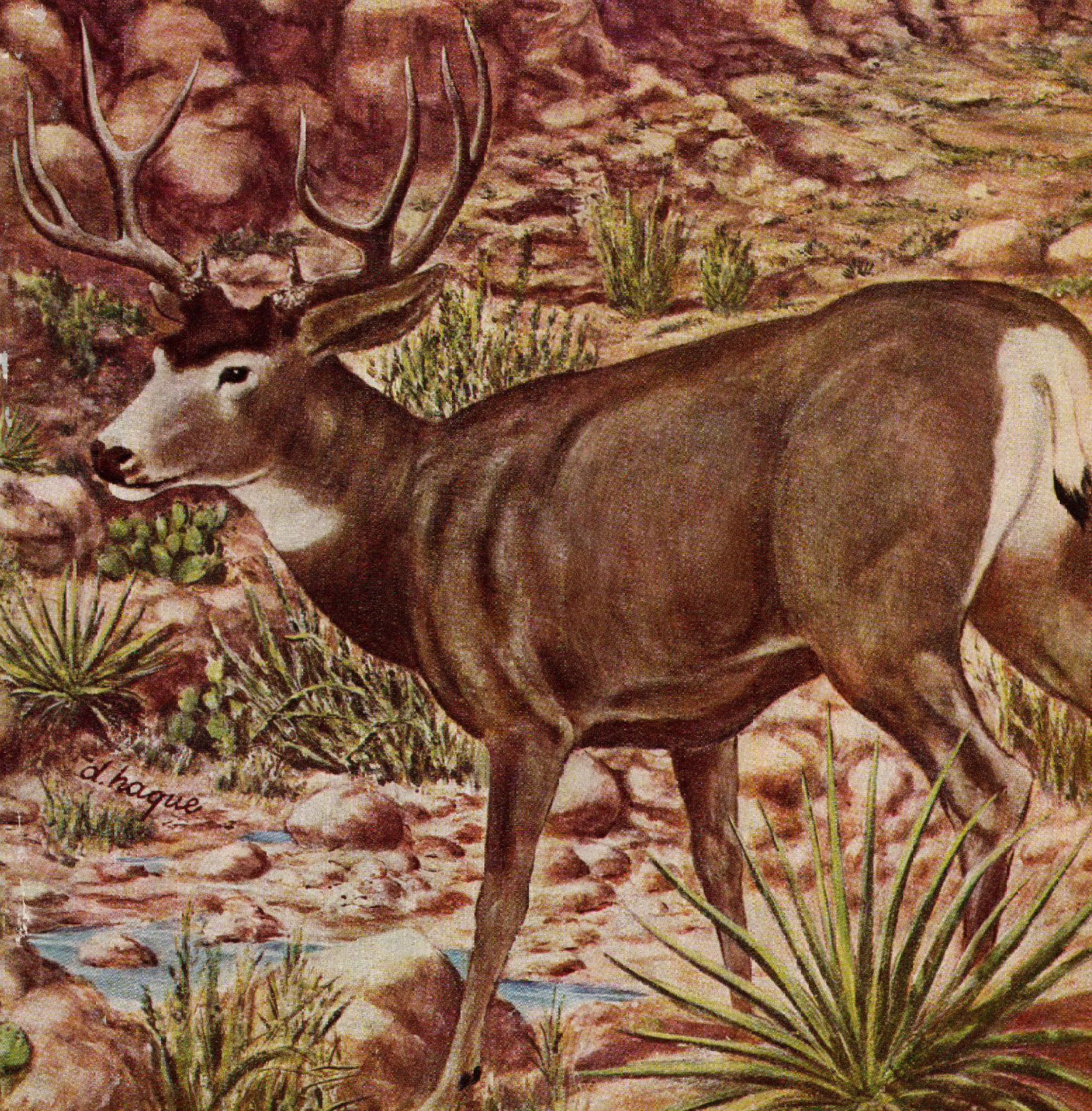
Public Library

# Texas Game and Fish

NOVEMBER

1959

20 CENTS



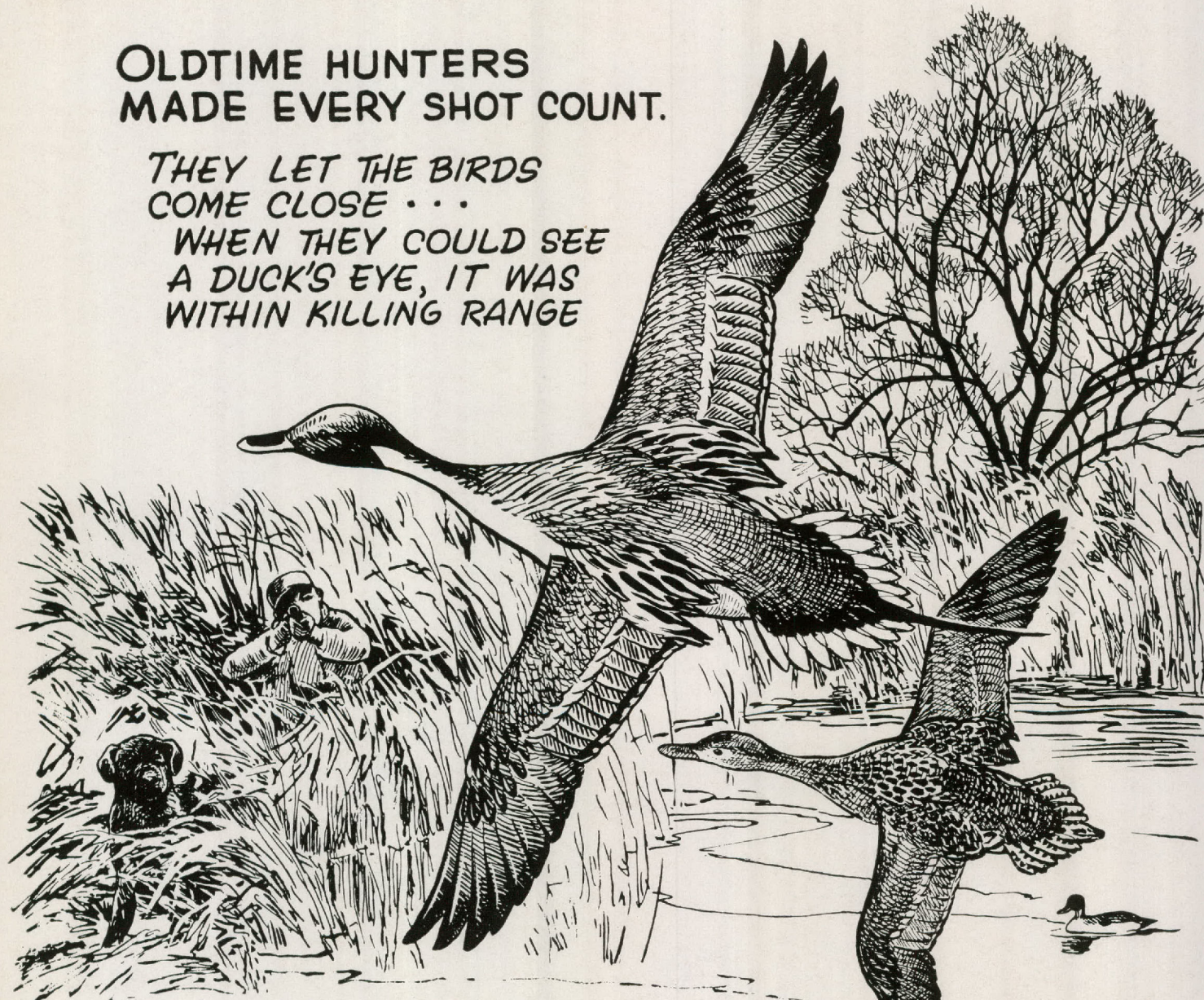
d. haque

MINUTE MEN AND OLDTIME HUNTERS HAD SOMETHING IN COMMON~  
*NEITHER FIRED 'TIL THE EYES WERE VISIBLE!*

**OLDTIME HUNTERS  
MADE EVERY SHOT COUNT.**

*THEY LET THE BIRDS  
COME CLOSE . . .*

*WHEN THEY COULD SEE  
A DUCK'S EYE, IT WAS  
WITHIN KILLING RANGE*



*Let 'em Come in Close  
THEN YOU KILL CLEAN  
OR YOU MISS CLEAN*



THE FISH AND WILDLIFE SERVICE  
U.S. DEPARTMENT OF THE INTERIOR

# Texas Game and Fish

THE OFFICIAL MAGAZINE OF THE GAME AND FISH COMMISSION DEDICATED TO THE PROTECTION AND CONSERVATION OF OUR NATURAL RESOURCES; AND TO THE IMPROVEMENT OF HUNTING AND FISHING IN TEXAS.

November, 1959

Vol. XVII, No. 11

L. A. WILKE.....Editor  
 JANEY BELL.....Associate Editor  
 CURTIS CARPENTER,Assistant Editor  
 BILL HAYDEN.....Circulation  
 JOAN PEARSALL..Editorial Secretary

## ★ In This Issue ★

TEXAS GAME AND FISH is published monthly by the Texas Game and Fish Commission. Subscription price \$2 per year. Single copies of current issue 20 cents each.

Subscriptions to TEXAS GAME AND FISH are available from the Austin offices, and branch offices. Checks and money orders should be made payable to STATE GAME AND FISH COMMISSION, Editorial and Advertising Offices, Walton Building, Austin, Texas. Entered as second-class matter May 19, 1943, at the post office at Austin, Texas, under the act of March 3, 1879.

Postmaster: If undeliverable, please notify TEXAS GAME AND FISH on form 3578-P at the Walton Building, Austin, Texas.

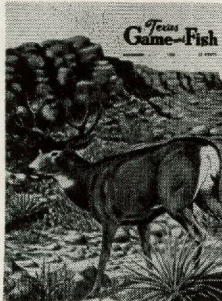
TEXAS GAME AND FISH invites republication of material provided proper credit is given, since the articles and other data comprise factual reports on wildlife and other phases of conservation.

Produced by

INFORMATION AND EDUCATION DIVISION

E. T. DAWSON.....Director  
 T. D. CARROLL.....Ass't. Director  
 L. A. WILKE.....Ass't. Director  
 LON FITZGERALD....Chief Photographer  
 TOM DILTZ.....Ass't. Photographer  
 LOUISE KREIDEL.....Business Assistant

## The Cover



The majestic mule deer, with a curiosity that often costs its life, roams the open foothills west of the Pecos River and is valued highly. (See related story on page 4.) Unlike the whitetail, which is off and away when alarmed, the mule deer runs a short distance then stops to see what frightened it. Distinguishing marks are its antlers which fork equally, rising from a single beam; its large ears; narrow tail with a black bushy tip, and the patch of white on its rump. Cover painting by Don V. Hague.

Sportsmen's Purse .....	3
by HOWARD D. DODGEN	
Million Dollar Mule Deer .....	5
by TOM MOORE	
West Texas evaluates its game.	
Reconnaissance of a Reef .....	6
by DICK WEHR	
Divers take a first-hand look at sunken car bodies.	
The Gaudy Boarder Stays .....	8
by SANDRA FOUNDS	
An oyster crab makes itself at home.	
Peppy Import .....	9
by JAY VESSELS	
Texas gains a new breed of hunting dogs—jagdterriers.	
New Light on an Old Secret .....	10
by FRED A. FALMER	
The modern age looks at bird migration.	
Slow Motion Hunt .....	12
by CURTIS CARPENTER	
Patience is the mark of a good squirrel hunter.	
How to Clean a Squirrel .....	14
by CURTIS CARPENTER	
Seven simple steps from skinning to skillet.	
Net Profits .....	15
by JOE BREUER	
Shrimp trawls depend on the machine age.	
Ducks and Deductions .....	16
by HAROLD IRBY	
Tale of the waterfowl's needs and the coming hunt.	
Double Endeavor .....	18
by L. A. WILKE	
New land use program plans to produce livestock and game.	
Danger Ignored .....	20
by JUANITA MAHAFFEY	
Pollution threat grows as communities turn their backs.	
Green Light on Doves .....	22
by L. A. WILKE	
Hunters flock to the Lower Rio Grande Valley.	
Oak Creek Bonus .....	24
by L. A. WILKE	
Outdoor writers fish on a West Texas Lake.	
Sportsmen's Guide .....	25
Guns and Shooting .....	26
Poachers Pay High .....	27
Junior Sportsmen .....	Inside Back Cover
It Happened This Way .....	27
Peterson's Bird Book .....	32

Price Daniel, Governor of Texas

TEXAS GAME AND FISH COMMISSION

Herbert J. Frensley, Chairman

Howard D. Dodgen, Executive Secretary

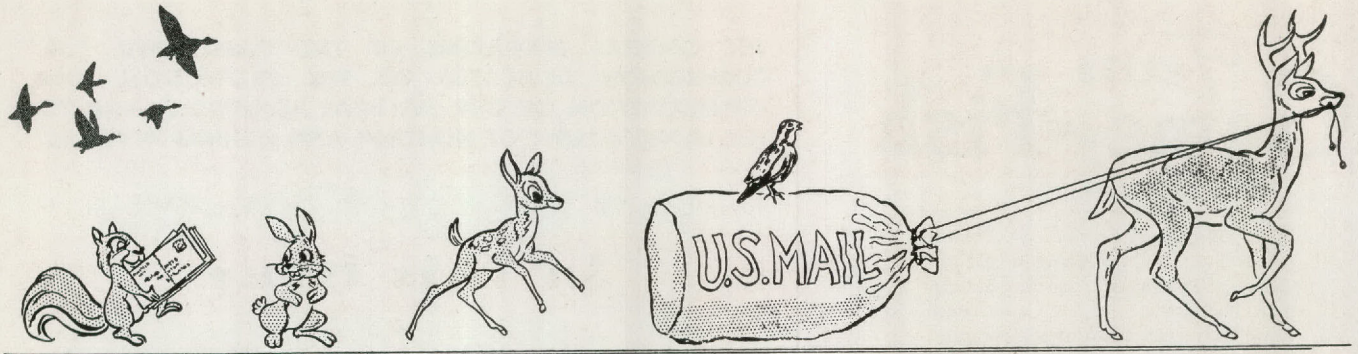
W. J. Cutbirth, Jr., Assistant Executive Secretary

Commission Members

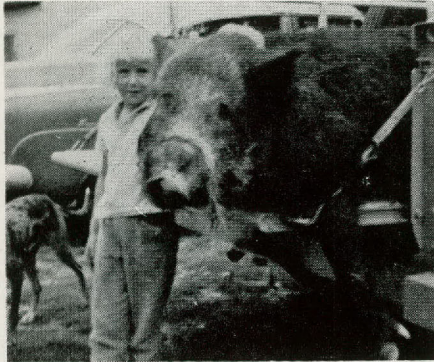
Howard Carney, Atlanta	Ben F. Vaughan, Jr., Corpus Christi
Hal Peterson, Kerrville	Henry LeBlanc, Port Arthur
Robert G. Carr, San Angelo	Henry Coffield, Marfa
Frank Wood, Wichita Falls	

Division Directors

Marion Toole, Austin, Inland Fisheries	Howard T. Lee, Rockport, Coastal Fisheries
Eugene A. Walker, Austin, Wildlife Restoration	Earl Sprott, Austin, Law Enforcement
B. M. Collie, Austin, Sand, Shell and Gravel	C. L. Friou, Austin, Fiscal Director
	Joe Marks, Austin, Engineering



## Import or Native?



Editor:

This picture is of a so-called Russian boar. He had been killing sheep and goats on the ranch of my daughter, Mrs. Donald McClure, which is located seven miles north of Leakey, Texas, in Real County.

His weight was 235 pounds and he was over five feet long. He was shot at the ranch on July 21st, 1959, by Mr. Le Roy Nichols.

Are these hogs numerous in the State? Where are they located, and how did they get here? Is this a Russian boar, or is it just a wild hog? Thanks.

R. L. Garrett  
Corpus Christi

(It is difficult to make a positive identification from pictures alone. We do know that European wild boars have been imported into a number of sites in Texas as well as in other states. It is my understanding that European boars were imported by the Powderhorn Ranch in Calhoun County, and we have had reports of kills from the Hill Country.

(In many instances, these European boars were imported by landowners and were released with feral hogs in hope of creating a more desirable game animal.

(Feral or wild hogs are not uniform in color and sizes. They range in appearance from razorback to a scrubby domestic hog. The snout is generally long and males frequently develop long sharp canine teeth. If there is any European boar blood in a herd, it would be very difficult to distinguish after several generations.—J. R. Singleton, Assistant Director, Division of Wildlife Restoration.)

## Landowner's Budget

Editor:

A letter to TEXAS GAME AND FISH, from Mr. McLarran of Cameron, Texas, complains of landowners charging too much to permit people to hunt on their land. It is a dandy. Your reply only partially answers him. If I ever heard of anyone who wants something for nothing, he is that one.

Mr. McLarran and nine of his friends (10 in all) hunt in Llano County for seven days a year and pay the landowner \$60 for this privilege. This is about 85¢ per day each. This year they all got their limit of two bucks each. The landowner got \$6 from each hunter. Mr. McLarran thinks this is a sufficient amount.

For each buck taken there are at least four doe, three fawn and from one to two spike buck. This makes about 10 deer (including the buck killed) that the landowner must feed for 365 days a year. The \$6 the landowner got from Mr. McLarran won't begin to feed even one buck for one year. Sometimes the landowner feeds the deer grain, but sometimes all they get in addition to the grass and other forage they eat, is a substantial part of the crops the landowner grows to feed his stock. But this is not the hunter's worry. It's the farmer's.

A deer will eat as much food as a goat or a sheep, from which the Hill Country ranchman makes his living. So while these 200 deer are living off the ranchman's land, it will carry just 200 less sheep or goats. This reduces the income of the landowner by the amount he would have made from these 200 sheep or goats, but this overhead is not reduced any because he must reduce the amount of stock he can feed, nor are his taxes reduced any. The farmer can protect his crops against sheep or goats, but it is a real job to protect them against deer. To build an 8- or 10-foot high fence and maintain it is an expense, and it takes that to fence out the deer.

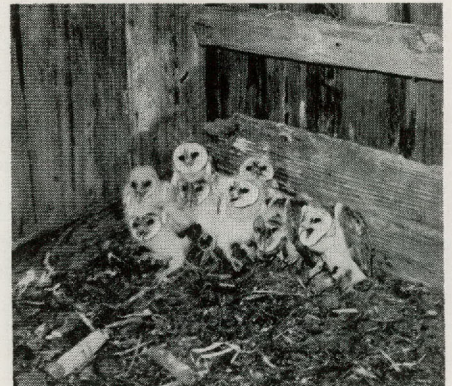
Mr. McLarran needs to buy himself a tract of land where deer can range free and he can hunt free all he wants to. But, Mr. McLarran, you can't do it for \$60 nor for \$600. Try it and see how far you get with an investment of \$6,000. It won't take you very long to change your mind as to who ought to furnish free hunting at very low cost, for whom and when.

Fortunately, most hunters make no objection whatever to paying as much as \$10 or even \$25 per day. A large part of the hunters are even glad to furnish grain almost the year around for the landowner to feed the deer and turkey, as it makes better hunting.

There is a lot to be said in favor of the landowner. What Mr. McLarran's group pays the Llano County landowner won't pay for more than the salt for the 200 deer. You know, the landowner has nothing to say about whether or not he feeds these 200 deer. No wonder that landowner plans to raise his price.

Robert A. Sone  
Corpus Christi

## Barn Owl Blessing



This is a snapshot of a group of young monkey-faced owls which hatched in my barn this spring. The owl hatched eight out of nine eggs laid on a bare floor in one corner of the old barn. There were at least ten days' difference in the hatching dates of the eggs, as is evidenced by the fact that some of the young are completely feathered and others are still in down. Presumably the same owls raised five birds from seven eggs in the spring of 1958 and for good measure raised two which we found almost completely feathered in January of 1959.

Considering the number of rats in Karnes County, these owls are most welcome tenants of the barn, despite the fact that they sometimes catch skunks and feed them to the young.

D. E. Moore  
Karnes City

# *Sportsmen's Purse*

HOWARD D. DODGEN

Executive Secretary Game and Fish Commission

**I**N THE BEGINNING, THE CREATION OF OFFICIAL WILDLIFE conservation agencies within the states was brought about by a few far-sighted leaders who were able to see the necessity of protection and management of our wild resources if they were to be perpetuated in desirable numbers. To establish an agency of government for such purpose seemed unnecessary to many others. At best they thought it to be a government frill (as indeed some do today), without benefit to more than a small minority.

It was necessary, therefore, to find a way to leave all pocketbooks undisturbed, save those who were directly concerned. Even among these, liberal exemptions were allowed, as many hunters and fishermen rebelled against license fees and restrictive regulations.

The common attitude of legislatures was to reluctantly agree to establish the venture only if it would be self supporting. Therefore, the decision was made to place the money derived from the sale of licenses in a special fund and appropriate it for the special purpose, so as to clearly show that no general tax money was being given over to such purpose.

Over the succeeding years, some marked improvements have been made in the increased per cent of outdoorsmen who pay as they enter. Here we find that only 70% make a financial contribution through the purchase of a license.

Some chief executives, legislators, and budget makers object to the existence of special funds and earmarked monies. There are some advantages to an appropriated budget coming from general sources. Assuming that sufficient funds could, and would, be appropriated for a realistic program, the necessity for the license buyer to foot the bill for all segments of the public which benefit from wildlife programs would be obviated. There would be improved relations between budget authorities, administrators, and legislatures that are now often strained as a result of earmarked funds. But the basic advantage is that budgets could be pegged to resource management needs, rather than to the income produced only from license sales.

On the other hand, dedicated funds, we believe, are of greatest advantage. By this method the contributors have pride in their independence. The program developed with their license dollar is visible and direct. The flow of money into the resource management effort is steady and much less subject to fluctuations due to administrative and legislative changes.

The present growth of the population in the United States is about 225,000 per month. We learn from the

1955 economic survey that approximately 20% of the present population fish or hunt. According to these estimates 7,500 hunters or fishermen are born every day; this is five per minute, or five times faster than Barnum thought suckers were born. In the United States there are 11.5 acres of land per person and .18 acre of water per person. The rapid increase in the number of citizens constantly whittles away the average available land and water areas. When these facts are reduced to their effect on wildlife resources, it simply means that intensive management practices must be consistently improved and applied.

Additional participants in the harvest, will, of course, bring along more pressure upon the resources, and greater expense in maintenance and improvement. The new recruits to the army of hunters and fishermen will also add revenue to the conservation funds. This should be no less than their share of the added cost.

While the total cost of renewable resource conservation continues to rise, so do other costs rise proportionately. If then the conservation revenues increase in relation to conservation costs, still it remains a small part of public spending. To mix the outdoorsman's license dollar with the total would invite the law of the jungle to be applied to game and fish conservation financing. The result seems obvious.

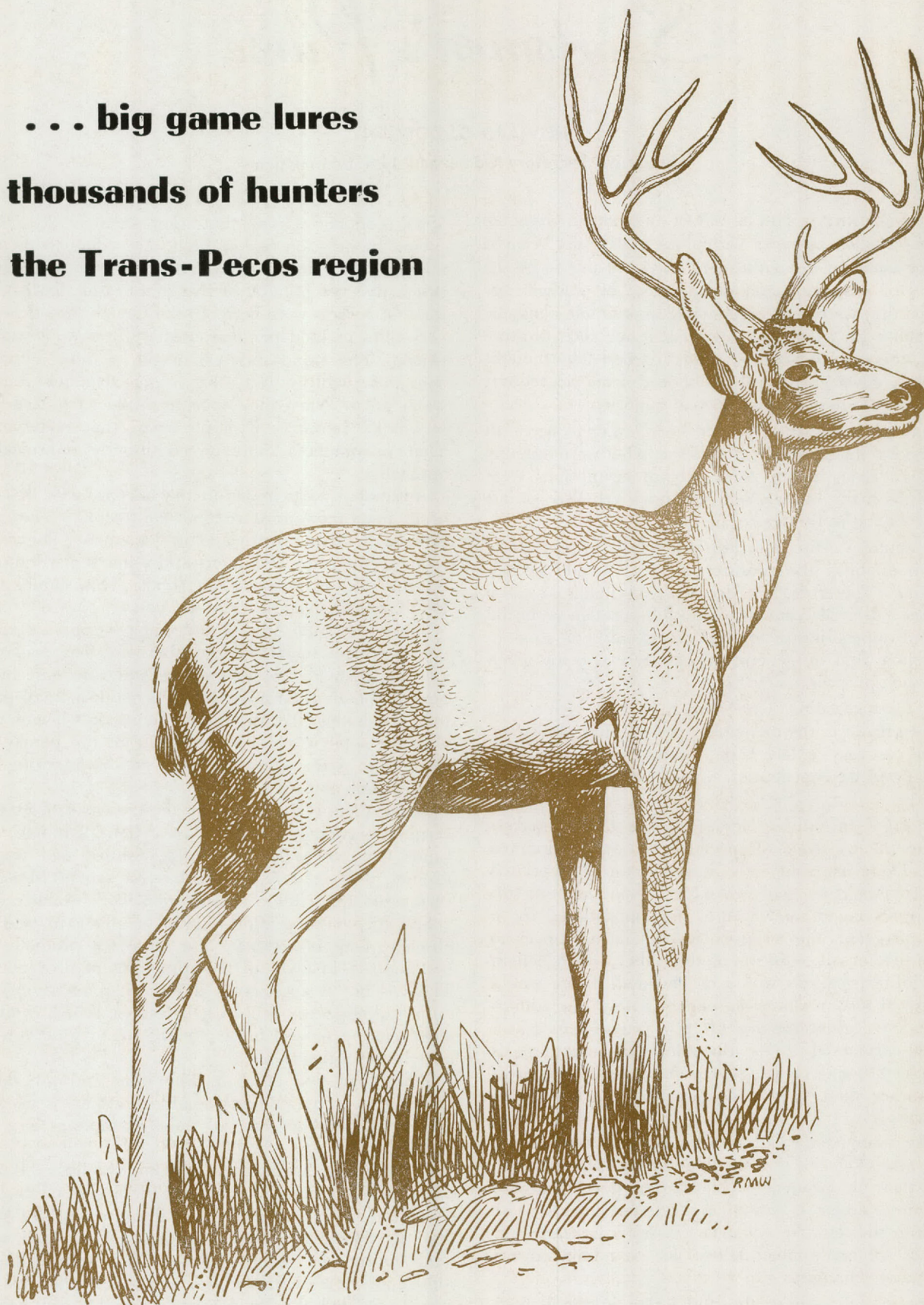
What, then, is the answer to the present problems concerning adequate wildlife conservation planning? First, funds from the sale of hunting, fishing, and trapping licenses, and related wildlife harvest sources should be earmarked for wildlife conservation work exclusively.

Second, constant effort should be made to weed out obsolete items of expense, and those not producing the best returns, in favor of new programs of proven value. There is not a single work day when some savings and improved efficiency could not be accomplished. Money so saved can be plowed back into the sound programs that have been waiting in need.

Thirty per cent of those who hunt and fish do not now buy a license. Wherever added revenue is needed a look at eliminating some of these exemptions is recommended.

Finally, after savings and exemptions have been accomplished it cannot be said that the license purchaser is paying all that he should or is willing to pay. He knows that the license fee he pays is only a small part of his total hunting or fishing expense. He stands willing to contribute more when he sees good returns on his past investment and the need for a reasonable increase in license fees to pay for more of the same.

**. . . big game lures  
thousands of hunters  
to the Trans-Pecos region**



# Million Dollar Mule Deer

by TOM MOORE

wildlife biologist

**A**S THE TRADITIONAL DEER SEASON west of the Pecos River draws near; over 8,000 hunters will begin to make final plans for another mule deer hunt. This region is the principal area in Texas where this species of deer is found and rough estimates place their number between 40- and 50,000. If economy to the area is considered the mule deer rates first in importance.

This big game animal has become a million dollar asset in only the past 20 years. For example, 178 shooting preserves taking 4,487 paid hunters were operated in 1958. This compares to 23 preserves operated in 1937. These 23 preserves brought the landowner only \$15,000 whereas in 1958, landowners collected approximately \$500,000 for their leases. An estimated half million was also spent by the hunter in this area on lodging, meals, travel, equipment, and incidentals. The gain is quite impressive, even in these days of astronomical figures.

Past records of hunter numbers and their success reflect trends vital to the hunter, landowner, and to the communities which accommodate the hunter. Compare the change through the years:

Year	No. of deer killed
1937	437
1938	403
1939	348
1940	342
1952	1,875
1953	2,090
1954	2,339
1955	2,703
1956	3,094
1957	2,655
1958	5,107

A number of reasons can be given for the increase in hunters to this region. Basically, however, it is be-

cause today there are more deer available and many times more hunters. The landowner offers his deer greater protection, and more important, grazing consideration. He knows, or should know, that deer can either be an asset or a liability. Nowadays if he can offer good hunting then he can virtually be assured that each mature buck on his property will bring him \$100. For the eight-day season he can get even more money should he provide such extras as lodging, guide or pack service. Day hunting here is practically non-existent since most of the better places are arranged for by the season. The going rate by the day is about \$25 when it can be found.

Biologists of the Commission, whose business is to create more and better hunting, have collected data through the years on deer. Files on this animal exceed all other wildlife species put together. The basic story which the biologist tries to sell is that the food supply on any range will determine how many deer that range will support. But the landowner usually wants more deer than his range can carry; he follows this by under hunting. If a stockman does not make allowance for the deer on his range by determining their needs then the forage they take will deprive the livestock. The deer will be there regardless of drought or what may come. They become a liability unless properly harvested. The landowner sometimes sells all or 75% of his livestock but only 5% of his deer herd.

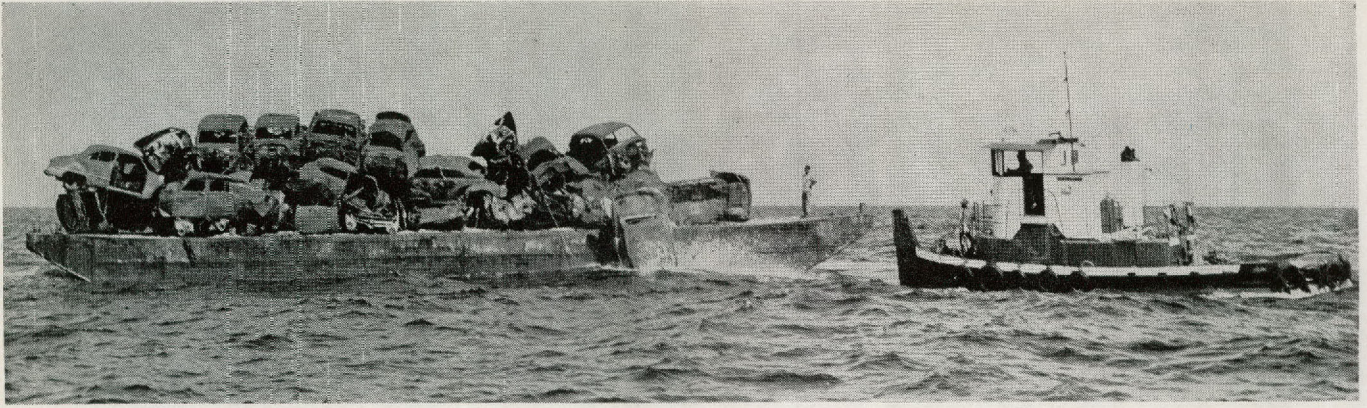
Each year the deer herd should be harvested and removed by hunting in line with the population present. If not handled this way, deer will die from old age, starvation, and disease. This waste has happened so many times in the past.

In addition to what the landowner will permit to be harvested the setting of the season and bag limit is an important factor in influencing the hunter success.

It is believed that the later season held December 1-8 is responsible for the increased kill in 1958. In 1955 the season was held November 20-26 (6-days) at which time 2,703 deer were killed. In 1956 the season was changed to a later date which was December 8-13 (6 days), and 3,094 buck deer were bagged. When in 1957 the season was moved back to November 20-28, the 8-day kill was only 2,655—less than the 6-day season in 1956 by 439 deer. The most productive season ever held was the past 8-day season held December 1-8 when 5,107 mule deer were harvested. This year the season will be the same with a bag limit of one buck deer.

Two wildlife management areas are located in the Trans-Pecos region, the Black Gap Wildlife Management Area in Brewster County and the Sierra Wildlife Management Area in Culberson County. Last year a public hunt was held on these areas. Another hunt will again be held to coincide with the regular deer season. In 1958 hunters bagged 133 deer out of 313 hunters reporting on the Black Gap Area for a success of 42%. On the Sierra Diablo Area 66 hunters bagged 33 deer of both sexes for a success of 50%.

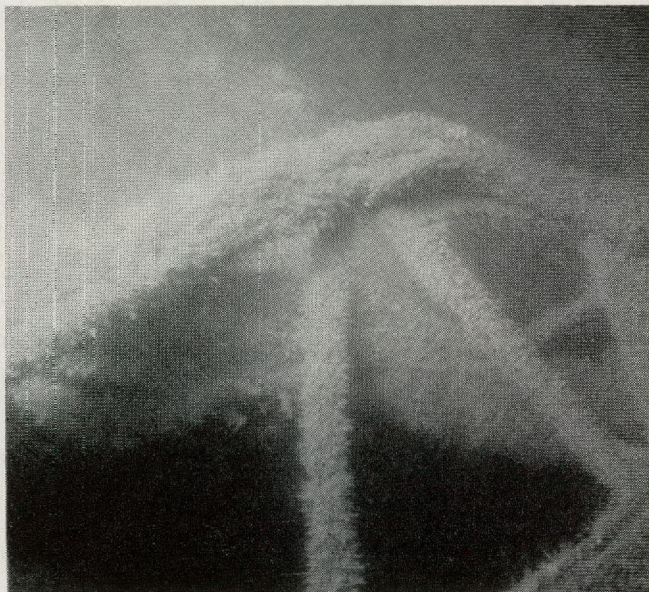
Main reason for the increased kill is that the December season found the bucks in the rutting stage, thus made them easier to kill. Also, colder weather usually prevails with a later season in December. This is of particular importance along the Rio Grande River where mild temperatures prevail. \* \*



# Reconnaissance of a Reef

... close up view of life  
around the sunken car bodies

Coats of bryozoans and barnacles cover the submerged automobile bodies. These growths attract crustaceans and small fish, first step in the cycle of big game fishing.



**A**FTER THE THIRD ARTIFICIAL CAR REEF of the Texas Game and Fish Commission had been in the coastal water off Port Isabel about a month, biologist Joe Breuer, myself, and two other experienced divers attempted to locate it. From our research boat TANG, we dragged three grapple hooks over the bottom, twice hooking into the soft mud. Finally the reef was found. Then we took a first-hand look.

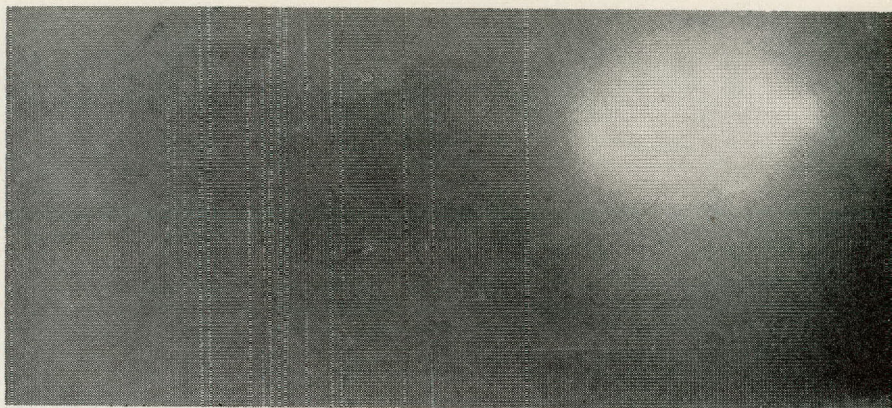
Upon entering the water, we found the visibility to be about 75 feet, and the temperature 28° Fahrenheit. No fish appeared at this time, probably because of the splashing of the divers and the bubbles from our air regulators. Moving on down the anchor line toward the bottom, we encountered clear water down to 35 feet. At that point, a marked change occurred in the water—a cloudy layer continued to the bottom, where visibility was cut to 5 or 7 feet, and the temperature dropped 10 degrees C.

Reaching the car bodies, the first thing I saw was a 300-pound jewfish (*Promicrops itaiara*). Proceeding then along the reef, we noticed that almost all the bodies in the area we explored were either upside down or on their sides. Five bodies are chained together with a 250-pound block of cement, and generally in a more or less straight line. While there are 600 car bodies laid in the form of a spoke, covering one quarter square mile, our report includes only a small area.

The bottom is a fairly hard sand into which the cars have sunk very little. In some cases the sand has washed away from the cars, leaving a depression around them. The growth



by DICK WEHR  
seasonal biologist



Moon fish reflects the brilliant flash of the camera in the eery underwater dimness.

on the bodies consists, as far as we can determine, of two types of bryozoans and many small barnacles (*Balanus sp.*) A large number of fish were seen, although the poor visibility prevented an accurate count. Red snappers (*Lutianus blackfordia*) of the 5- to 10-pound class were seen in and close to the car bodies. Many small reef fish such as blennies, butterfly fish, and moonfish were observed in and around the cars. In the clear water over the reef, Spanish and king mackerel (*Scomberomorus maculatus* and *S. Cavalla*) were seen in schools of 200 to 300. One wahoo (*Acanthocybium solandri*), which is closely related to the barracuda, was seen at about 25 feet.

In the waters around this area (within a mile or so) were seen one black-tip shark (*Eulamia maculipinnis*), many remoras (*Echeneis naucrates*), and quite a number of cobia (*Rachycentron canadus*).

A second dive was made two weeks later, August 23, 1959, on the Port Isabel artificial car reef to determine whether any more fish had moved into the area since the first dive, to obtain water and plankton samples and temperatures, and to take photographs of the reef.

The water was murky from the surface all the way to the bottom although the visibility on the bottom was better than before. The water temperature was fairly constant: 20 feet from the surface, 28°C.; 40 feet, 27°C.; 60 feet, 26.5°C.

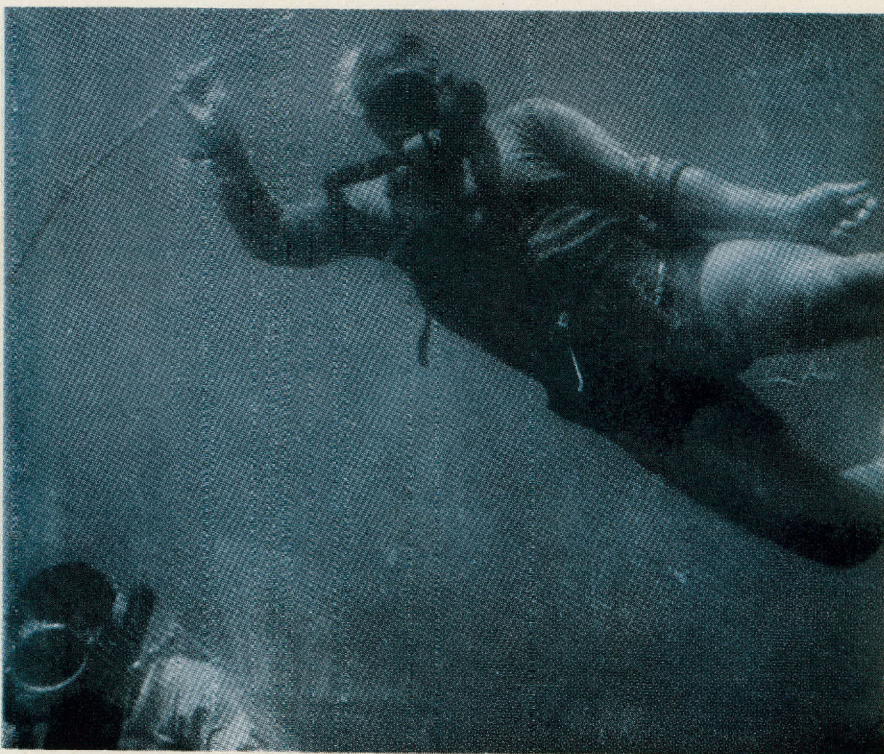
About the same number and species of fish were seen, with exception of the jewfish. A mangrove snapper that

weighed 15 pounds and was 3 feet in length was speared by one of the divers. No mackerel were seen, but a school of birds were working an area approximately 500 yards from the boat, indicating a school of mackerel in the general area.

More sand had washed out from around the car bodies, indicating that they were sinking slowly into the sand-bottom.

Purpose of the dives was exploratory. As soon as possible, more dives will be made to enable the Commission biologists to obtain a clearer picture of the reef and its associated organisms. \* \*

The reef off Port Isabel, which was placed in June, is located in 60 feet of water on the 10 fathom curve. The magnetic compass bearing is one mile on a 350° NNW bearing from the Whistling Buoy. The reef location is 2½ miles from the end of the north jetty. The first two artificial reefs placed by the Game and Fish Commission about 1½ years ago are located near Freeport and Port Aransas. Another was sunk near Freeport in May. Maps of these locations are available on request to the Game and Fish Commission's Marine Laboratory at Rockport.



Four divers inspect the sunken artificial reef, and the life growing on and near it.

# The Gaudy Boarder Stays

. . . but the host may pay the bill!

by SANDRA POUNDS



**C**ONGENIAL CO-EXISTENCE IS AN ADMIRABLE THING, but in some cases it could prove to be the undoing of one or the other of the participants. Such is the case with the oyster when he plays host to the tiny crab *Pinnotheres ostreum*, sometimes called oyster crab or pea crab.

In one of its early life stages, the pea crab finds his way into the shell of an oyster and lodges between the gills and the palps, where he lives on food provided by the oyster for its entire natural life. Usually no harm is done by this arrangement, but occasionally the crab becomes a bit over zealous and begins to attack the gills of the oyster, often resulting in the death of the oyster. What happens to the crab when the oyster dies, we cannot say for certain but it is presumed that he must either die or seek out another willing host. More than one crab may reside in a single oyster, but usually not over two or three. They are free to move about in the oyster, but they seldom travel far from their original lodging.

When the crabs are small, they are called "lice" by oystermen. When they

reach the adult stage they are called oyster crabs.

In Texas they are rare and localized, though they have been found in increasing numbers lately in concentrated areas. They have been located in Laguna Madre, and just recently on an experimental reef in Matagorda Bay. They are found in great numbers in states such as Maryland, especially in the Chesapeake Bay area. The crabs are edible, and when found in great quantities, they are canned separately by the oyster houses.

We do not find them so often in Texas oysters, but since we receive a large amount of Chesapeake oysters in our Texas restaurants, we are very apt to run across the little creatures "on the half shell." They are often eaten raw with the oyster.

The crab is a bright orange with fragile, delicate legs and deeply set eyes. He reaches  $\frac{1}{4}$  inch across the oval shaped body at maturity.

The oyster crab has less tolerance for low salinity water than the oyster, which may account in part for his rarity in Texas Bays. \*\*



Nestled securely inside the oyster shell is the small, orange crab, an untroubled guest.

# Peppy Import

by JAY VESSELS

**A**N AUSTIN NURSE WHOSE HOBBY is "giving the dogs a break" has brought a new breed of pooches to Texas. Her name is Mrs. D. M. Knutson. The dogs are German Jagdterrier. And from all appearances the dogs, Mrs. Knutson and Texans fortunate enough to possess one or a pair later are going to be very happy about the arrangement.

Certainly the terriers do not have to apologize for their own qualifications. These canines comprise all the best talents of hunting retrievers and house dogs.

Mrs. Knutson, who is on the staff of an Austin physician, long has handled dogs in a limited way. She says:

"My life is devoted to serving ailing humanity. All day long my routine involves persons with practically every kind of ailment. Sickness, sadness, heartache . . . When I'm finished at night I go home and am always greeted by pleasant, excited puppies. It just makes one feel good."

Mrs. Knutson, known to her husband and intimates as "Engel," a contraction of her maiden name, Engelhardt, is speaking now of Teddi von der Walkmuehle ZB DJT. Nr. 14296 "Fritzie" and Ursel von der Walkmuehle ZB DJT. Nr. 14504 "Mitzie," their new pair of Jagdterriers.

"We have always had hunting dogs," she explained, enthusiastically, "but we are enjoying qualities in Fritzie and Mitzie that we have not had before. They are very intelligent, loyal, neat in appearance, peppy and full of fun."

This breed of dogs was introduced in the United States in 1951 by Max Thiel of St. Louis, Missouri, who immigrated to this country at that time. Thiel's "Kennel von der Walkmuehle" is well known for its fine Jagdterriers. The Jagdterrier Club of America which Thiel helped organize states there are over a hundred dogs of this breed in the country now. Thiel has spent many years hunting and developing his bloodlines, and Mrs. Knutson feels she is very fortunate to have a pair of Jagds from his imported champion stock.

"The German Jagdterrier is a small but ferocious hunting dog as well as a flusher and retriever. The breed originated in Germany 35 years ago . . . The Jagdterrier is in appearance tense, determined, and fearless. In hunting he serves as a fighter, under and above ground; he attacks and retrieves his prey on land and water.

"In size, his shoulder height is from 12 to 16 inches; body length 16 to 19 inches, and weight 15 to 20 pounds.

"In color, predominantly black, the Jagdterrier has tan markings on his head, legs and across the chest. Besides this standard color, tan, reddish-brown and mouse color are accepted.

"Hair texture. His coat is thick and rough; wire-haired, or smooth.

". . . He serves well as a game hunter of pheasants, ducks, rabbits, not as a pointer, but retrieving anything he can carry. (He also is a good fox

hunter.)

"Ferocious on duty, he is a gentle and loving house pet, good to children, and quick to learn tricks.

"This dog was bred from the old fox terrier and the old English black and tan wirehaired terrier, from which he derives his keenness. The standard indicates graceful lines like those of larger hunting breeds."

Somebody was having raccoon trouble at his lake place and suggested that Mrs. Knutson share her Jagds to route the varmints. "That would never work," she explained. "Jagdterriers are such hunters. They would challenge all the raccoons in the county."

For the moment, there will be no coon fighting for Fritzie and Mitzie. They will be busy rearing a family that other Texans may benefit from this new hunting lap dog. \*\*



Fritzie and Mitzie with their master. Jagdterriers may have either kinky or straight hair.

# New Light on an Old Secret

... *Bird migration poses ancient questions*

by FRED A. PALMER

**P**RACTICALLY EVERYONE HAS FELT A STRANGE SENSATION while watching flocks of migrating birds move toward their destination each spring and fall. Questions of where they are going and why have plagued man for many centuries.

Theories from ancient philosophers like Homer and Aristotle to those of highly trained specialists have been submitted to answer the age-old questions concerning this annual habit. Few have offered feasible explanations. However, recent studies have improved upon many of these vague theories.

Types of migration, migratory routes used, and distances traveled during migration are questions that have been answered. Much has also been learned about the speed of birds, flight lanes, and direction-finding.

Although bird migration movements are regular and predictable, their basic causes and principles are not fully known. No theory explaining the cause of the annual movement to and from breeding and wintering grounds has been fully accepted by all authorities in the field of ornithology.

According to one theory, birds of North America were at one time non-migratory and were generously supplied the two main avian requirements, a year-long food supply and suitable breeding conditions. Then as the glaciers moved southward, the birds migrated southward to the tropical regions to maintain their two es-

sential requirements. When the ice cap retreated many years later, the birds endeavored to return each spring to their original range. Each winter the birds would again return to the tropics.

The most concrete and commonly accepted explanation of migration is the theory of "photoperiodism." Based on the living behavior of the bird, not on historical factors, it contends that day length and quantity of light trigger the seasonal movement. Food supply, temperature, and other environmental factors also indirectly influence bird migration.

The phenomenal habit takes place at night as well as during the day, referred to as nocturnal and diurnal migration. As a rule, the smaller and weak-flying birds migrate at night and feed during all the daylight hours. Darkness affords the weak fliers protection from speedy and agile enemies. Strong fliers that normally live in the open and capture their food on the wing benefit from diurnal migration.

For years experts have conducted studies of routes taken during migration, and have found that these routes differ as much as do the wintering and breeding ranges. Some species may use one particular route throughout their migratory flight, while others may use four or five routes. A few species are even known to move eastward or westward before going south.

Five main routes are commonly used. A few shore birds move from

the eastern coast of Canada and Maine southward across the Atlantic Ocean to the northeastern coast of South America. Many small islands from Florida to South America, by way of Puerto Rico and Haiti, supply some birds desirable stop-overs. From Florida southward over Cuba and Jamaica across 400 miles of the Caribbean Sea to South America is also frequented by birds from the eastern section of the United States. Another route frequently used by birds from eastern United States and Canada extends from the Gulf states to southern Mexico. The majority of birds from the western part of the United States and Canada fly through Texas, New Mexico, Arizona and California to northern Mexico.

A confined study was made of the migratory routes used by ducks and geese. It was found that they use four main courses, each overlapping to some extent: the Atlantic Flyway, the Mississippi Flyway, the Central Flyway, and the Pacific Flyway. The geographic location of each of the flyways is self explanatory. These specific birds are inclined to follow the same route year after year, returning to areas where food, water, and cover is plentiful.

Studies of the distances traveled by birds have revealed astonishing facts. While some birds range only a mile or two from their birthplace, such as the bobwhite quail, others move several thousand miles. Whereas most



long flying birds remain in the northern part of South America, a few species move on southward. The spectacular Arctic tern is known to fly 11,000 miles between its breeding grounds in the Arctic to its wintering grounds which are located in Antarctica.

It is known that certain species favor or are influenced by certain topographical features which run in a north-south direction. Some species follow coastlines and bodies of water; a great many fly along valleys and peninsulas, or travel from one island to another in larger bodies of water. At times, the topography causes the course of flight to be narrowed or expanded. These flight lanes must be thought of as favored passageways, not narrow paths that are purposely sought.

How migrating birds find their direction when moving over unfamiliar areas through darkness and turbulent weather remains one of the most mysterious phenomena of bird migration. "Instinct" is the usual answer, but that merely names the phenomenon.

It does not explain it.

Many believe that birds follow familiar landmarks, but there seems to be sufficient evidence to disprove this theory. For example, the old birds experienced in migration begin the long flight before the young birds are ready; still the youngsters start their pilgrimage and unerringly follow the traditional route. This fact is hard to correlate with the landmark theory.

Speed of flight of birds has always been a subject of interest, but one of much controversy. Widespread misconceptions exist concerning the speed that birds can obtain and the speed at which they normally fly.

One must keep in mind that the bird cannot maintain a record or near record speed in its long migratory journey. Seldom is top speed exerted unless the bird is in pursuit or is being pursued.

A snow goose, being chased by an airplane, was clocked at 50 miles per hour, and a mallard was able to maintain a speed of 65 m.p.h. for 10 miles. Most amazing of all was the speed of 265 m.p.h. reached by a frigate-bird.

Disaster is a constant threat during migration. Weather, predators, and aerial obstructions are all perilous and are responsible for tremendous destruction of bird life. Sudden changes of weather force many birds into bodies of water or into unsafe places where hungry birds, mammals and reptiles take their toll. Attack by predatory birds during flight also has a direct influence upon the number that reach their destination. Towers, bridges, monuments, and other structures, especially lighted ones, increase the mortality rate considerably. Eternal vigilance is necessary for the migrants to complete their journey safely.

Bird migration had its origin in times so remote that it is now completely obscured. It can now be interpreted only in terms of present conditions.

Although many gaps still remain in the knowledge of the subject, much has been learned, and future studies will clear away many of the existing uncertainties. \* \*



**T**HE TEST OF A REAL SQUIRREL HUNTER does not lie in the number of head shots he can inflict.

The challenge of squirrel hunting is getting the animal into a position for a clean shot. If you can see the little darter, with reasonable luck and a dependable weapon, you can usually plunk a hunk of lead into him. Always try for a head shot. A hit in the body could damage the meat.

Long before heading for pecan row, you may profit greatly by sitting down and rehearsing in your mind the hunt ahead.

First, remember that the best spot to hunt the small nut-eaters is under or near pecan trees loaded with their favorite food. If the trees are near the woods, all the better. Most squirrels will hide in the woods and travel to the pecan trees during the day for a tasty meal.

The best time to hunt is in the morning. In fact, if you want to do it right, get beneath that tree long before the sun peeps over the horizon. Find a place to hide and get settled.

One secret to getting a limit is to remain silent and motionless. So before you sit down to await the arrival of the squirrels, rub some insect repellent on exposed areas and around the neck, sleeves, waist, and legs of your clothing. Otherwise, you'll find yourself an insect haven in short order, and, you'll find it pretty difficult to sit still while a swarm of mosquitos feasts on your face, hands, and neck.

Don't forget, squirrels are easily spooked. Wear clothing to blend in with the background, preferably a camouflage suit.

Once you are settled, keep both eyes on the woods and the top and extending branches of the trees. Soon after the sun rises, you'll hear a rustling of leaves and branches and the sound of bark being scraped. Out of the corner of your eye you may glimpse a brown streak racing down a dead and fallen tree near the edge of the woods.

You may be startled by the thump of a nut as it hits in the grass nearby, or you may be sprinkled with leaves circling and twisting gracefully from above. In any case, this activity is your signal that the bushtails have arrived.

When you finally spot one in the open, move slowly as you line him up

the sights. Once you have him zeroed, squeeze the trigger. If you miss, remain motionless. He may scamper up the limb and dart behind it. The trick is to outwait him. In about five minutes, if you remain very still, he probably will peek over the limb.

Actually, this is where a squirrel call can be a very handy little tool. Some squirrel calls, such as the one manufactured by the Burnham Brothers of Marble Falls, barks more like a squirrel than the squirrel itself.

With just a thump of the finger or thumb, the call produces a realistic barking sound. Most squirrels respond quickly by poking their heads over the limb to see where the noise is coming from. When this happens, blast him.

Retrieve the fallen squirrels after the hunt unless one happens to fall within reach or if you plan to hunt longer than a couple of hours. Be certain to mark the fallen squirrel with a bush or other object.

Later in the morning, when the squirrels are in the pecan trees, it may be safe to move around. Use your own judgement. For instance, if you spot several squirrels up a tree, by racing to the trunk of the tree you might trap them before they can abandon the tree and retreat to the woods. Wait them out and pick them off as they show. Use your call. If you don't have a call, toss a rock or limb to the opposite side from where you stand. This may cause them to scurry around the limb to your side. Watch closely because they will stick to the limb like a piece of bark.

If you go to an area where large numbers of squirrels have concentrated such as the Marble Falls area, you shouldn't have any trouble getting your limit of 10 or at least enough for a meal or two.

Remember also, to clean the insides out as quickly as possible after the hunt. If left dead and uncleaned too long, unwanted flavors will seep into the meat and ruin its original delicious taste.

Hunting squirrels during the early morning hours is a very exciting sport. It also is a perfect way to brush up on your riflanship. The little barkers don't stay put too long for anyone. If you get six out of 10 head shots you're ready for deer, bear, or antelope. Hunters who fail to zero in their

**For a frisky fox squirrel . . .**

# **SLOW**

# **MOTION**

# **HUNT**

by **CURTIS CARPENTER**

rifles before going hunting will find it difficult to hit a squirrel anywhere.

If you will keep this list of "squirrel hunting requirements" in mind, you shouldn't have any trouble bagging your limit in a morning. (1) Be certain your rifle is zeroed in. (2) Smear yourself with insect repellent. (3) Get to the hunting spot before the sun rises. (4) Once you are set, remain silent and motionless. (5) If you move, even to spot a squirrel, move slowly; except when trapping several bush-tails in a tree. (6) Wear clothing to blend with the background, preferably a camouflage suit. (7) Use a

squirrel call if possible. (8) Leave your kills until after the hunt.

Don't ever use anything larger than a 22 calibre rifle for hunting squirrels. Any size shot gun is satisfactory. But if you insist on using a scatter gun, the 410 is the ideal size.

If you have never been squirrel hunting before, you'll discover a new challenge when you do. If you're an old timer you already know the exciting thrills of a squirrel hunt.

But, it's when the hunt is over and the meat has been dropped in deep fat, that the hunter really realizes why he went hunting in the first place.\*\*



On the ground lies full evidence of a successful and busy day of squirrel hunting.

# How to Clean a Squirrel

by CURTIS CARPENTER



Slit tail at its base to the skin.

**S**OME HUNTERS CAN SKIN AND CLEAN A SQUIRREL in less than 45 seconds. Although this speed is rare, the average squirrel hunter can save both time and labor if he follows about seven major steps.

First, hold the squirrel by the tail, and bend the tail toward the squirrel's back. With the knife in your other hand slit the tail at its base, through the joint to—not through—the skin.

Place the tail under your foot and pull up slowly on the hind legs. This movement will cause the skin to slide inside out, like a sweater pulled over the head.

Continue to pull up until the skin is rolled back over the neck and front

legs. Keep the skin down to prevent hair from getting on the meat.

Next, catch the remaining skin on the belly near the hind legs and pull up on it. The skin will roll back over the hind legs.

Now you're ready to chop the legs and neck off. Hold onto one rear leg while breaking and cutting off the remaining three. Only break the last one. Cut the neck and head off just behind the skin. Then cut the one remaining leg.

Remove the insides in the same way you remove those of other animals, such as rabbit or chicken. Wash the cleaned squirrel, and it's ready for the deep fat and the table.



Slide skin over legs, front then hind.



With knife, cut legs and neck off.



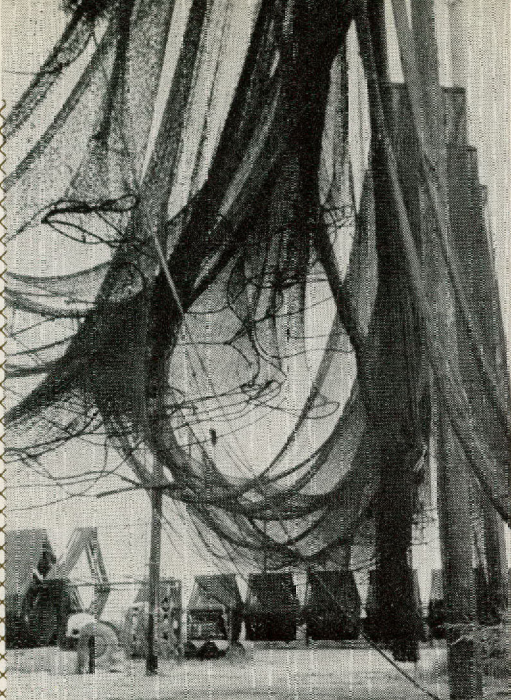
Clean and quarter it and you're through.



Shrimp trawls and . . .

# Net Profits

by JOE BREUER  
marine biologist



**A**NYONE TRAVELING EAST ON STATE HIGHWAY 100, will pass through the quiet town of Laguna Heights, formerly Bayside, just a few miles from Port Isabel. With a scutherly breeze blowing, you might get a whiff of tar or creosote, and a glance upwind would show you row upon row of large drying spools containing glistening black nets.

This is the home of the Bayside Net and Twine Company, operated by Ted Nelson, a long-time advocate of marine conservation, especially concerning commercial shrimp. Since the company is located in the middle of the number one shrimp landing port on the Texas Coast, its shrimp nets and trawls play a vital part in the shrimp industry.

It is the only net making company on the Texas Coast and one of only two on the entire Gulf Coast.

The two-story white concrete block building which houses the industry is not an imposing structure. On entering the building, you note a strange noise coming from the second floor. After ascending the stairs to the source of the noise, it takes time to get adjusted to what you see, hear, and feel.

The entire room is occupied by three monstrous net making machines. The noise they make is something akin to a sound a wounded elephant in a sheet metal shop might make. The whole second floor of the building rocks and sways as if caught in a perpetual earthquake.

After a few minutes to get adjusted to the noise and motion, you become fascinated by the operation of the machines. Immense in size, they appear to be a maze of spools of twine, shuttles, bobbins, levers, cams, and gears.

The first impression is that these machines couldn't possibly tie knots and even the closest observation does nothing to change your mind. But they do—200 knots at a time!

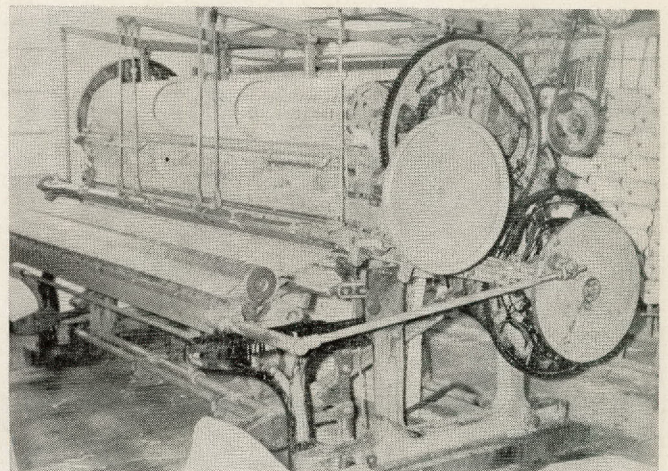
"Such a marvel of ingenuity and engineering could only have been invented by us Americans," you think. Not so, however. These machines are English-built copies of a French invention of some 85 years ago. Two other

kinds of net making machines are now available, one for making gill nets and another for making shrimp nets using a different motion. These devices were invented by the Germans and are now copied by the Japanese.

Two of the three machines at Laguna Heights make the netting that is used for the body of the shrimp trawl. The machines weave netting 200 meshes wide of #15 or #18 medium laid cotton twine. The meshes are 2 inches or 2¼ inches stretched mesh or 1 inch or 1½ inch between knots. The third machine makes the netting for the bag of the trawl, 120 meshes wide, using the heavier #36 or #42 cotton twine of 1¾ inch or 2 inch mesh. In eight hours of operation, the two body making machines can produce 3,200 meshes of netting while the bag machine will make 1,000 meshes a day.

The knot tied, called an English knot, is simply a bowline tied with two strings. The machine leaves the knots loose. After the netting is made, it passes through a slot in the floor to a bin on the first floor of the building. The netting is then hung on a rack where it is inspected for

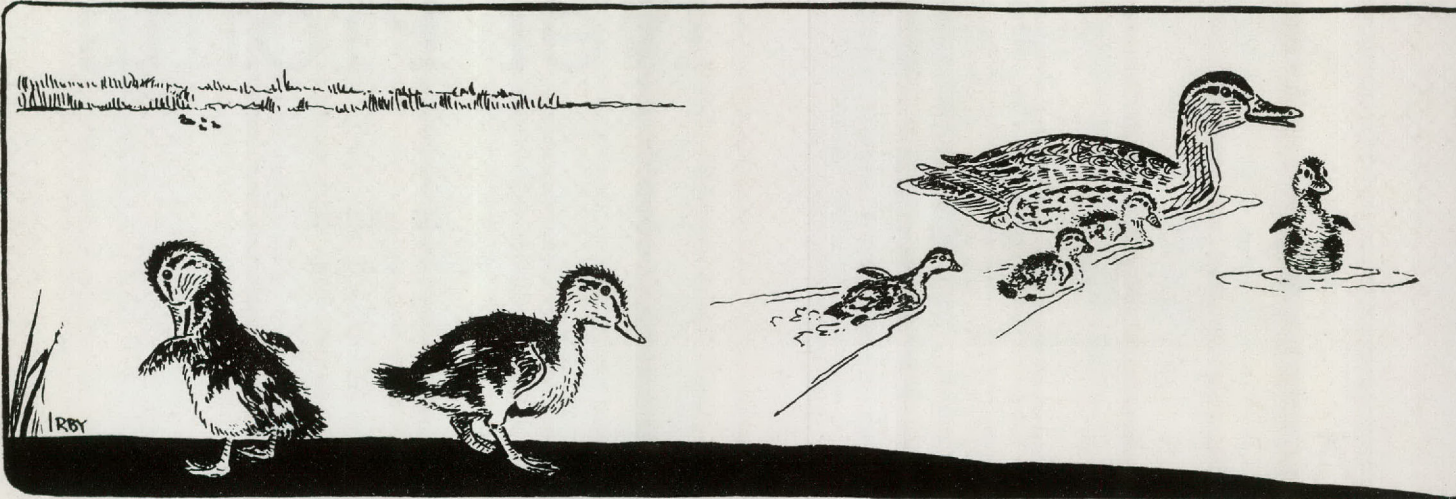
• continued on page 28



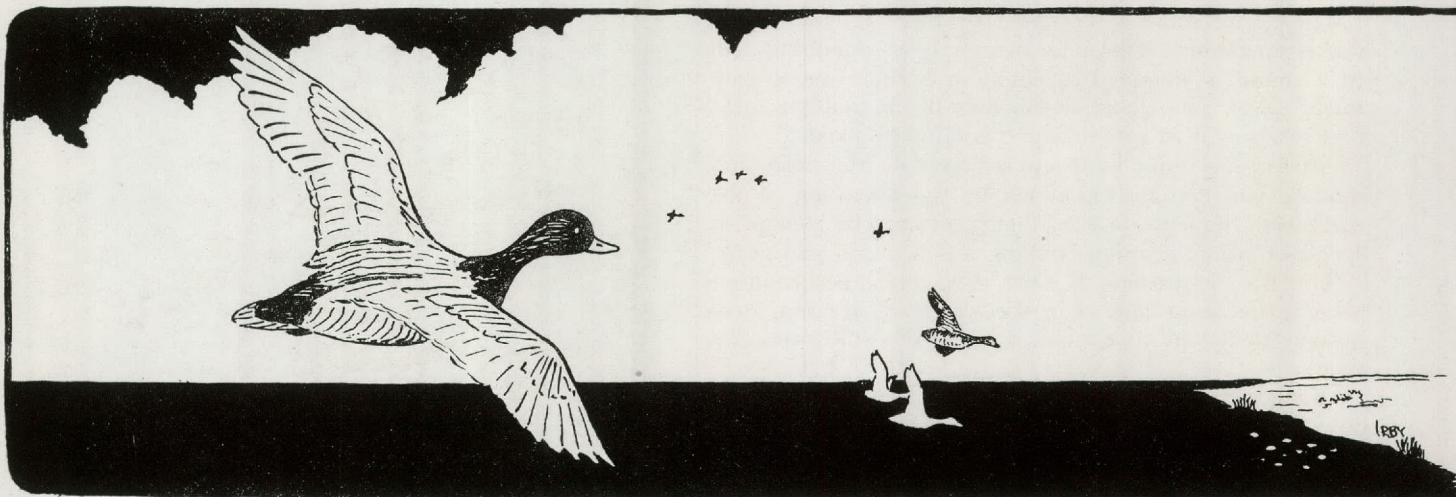
The shrimp netting machine ties an amazing 200 knots simultaneously.

# Ducks and Deductions

by HAROLD IRBY  
Wildlife Biologist



MIGRATION ... IN THE FALL, ONCE THE WATERFOWL HAVE LEFT THEIR NESTING GROUNDS FOR MORE FAVORABLE CLIMES TO THE SOUTH, THEIR BASIC REQUIREMENTS ARE MUCH THE SAME — SAFE RESTING PLACES AND GOOD FOOD SUPPLIES WITHIN EASY CRUISING DISTANCE. THE AREAS WHICH BEST MEET THESE REQUIREMENTS ARE THE ONES WHICH ATTRACT THE BIRDS. THE BUILDING OF LARGE WATER RESERVOIRS AND THE INTENSIFICATION OF GRAIN FARMING, PLUS MILD WEATHER, OFTEN TIMES ALLOWS MANY WATERFOWL TO SPEND MOST OF THE WINTER NORTH OF THEIR ANCESTRAL WINTERING GROUNDS

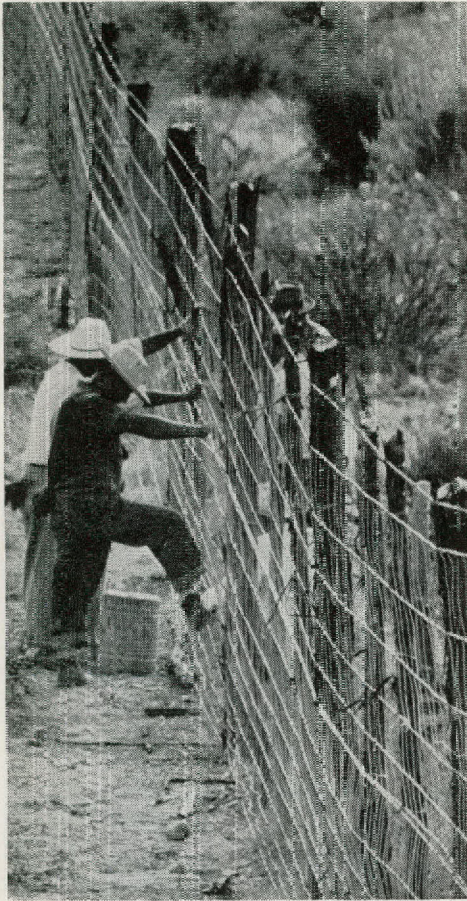


# ... the problems of water fowl and hunters

**NESTING** ... THE PRINCIPAL NESTING GROUNDS FOR DUCKS COMING DOWN THE CENTRAL FLYWAY TO TEXAS ARE THE PRAIRIE PROVINCES OF CANADA AND THE NORTH-CENTRAL PRAIRIE STATES. UNDOUBTEDLY THE GREATEST SINGLE FACTOR WHICH MAY AFFECT THE WATERFOWL NESTING GROUNDS IN ANY SINGLE YEAR IS THE INFLUENCE OF WEATHER. DROUGHT ON THE PRAIRIES THIS YEAR FORCED MANY DUCKS INTO MORE NORTHERN PARTS OF CANADA WHERE THEIR PRODUCTION POTENTIAL WAS DECREASED. THIS MEANS THAT THERE WILL BE FEWER DUCKS COMING OUT OF THE BIG DUCK FACTORY.



**WINTERING GROUNDS** ... TEXAS IS A VITAL WINTERING AREA FOR THE VAST NUMBERS OF WATERFOWL FUNNELING DOWN THE CENTRAL FLYWAY. WEATHER CONTINUES TO BE EXTREMELY IMPORTANT, FOR IF RAINFALL HAS BEEN ADEQUATE, MANY OF THE BIRDS WILL STOP ON THE HIGH PLAINS OF NORTH TEXAS AND IN OTHER INLAND AREAS OF THE STATE. IF RAINFALL HAS BEEN SCANT MOST OF THE BIRDS WILL CONTINUE ON TO THE COAST. AND FROM THERE THE FLIGHTS WILL CONTINUE SOUTH INTO MEXICO IF CONDITIONS DO NOT MEET THEIR BASIC REQUIREMENTS — SAFE RESTING AREAS AND GOOD FOOD SUPPLIES. THIS YEAR IN TEXAS WE ARE BLESSED WITH THE SECOND REQUIREMENT. IT WILL BE UP TO THE HUNTING PUBLIC TO PROVIDE THE FIRST.



Deer proof fencing lines 23 miles.

# Double Endeavor

by L. A. WILKE

**Both livestock and game  
as productive crops . . .**

**A** NEW LAND USE PROGRAM is under way in South Texas with the deer proof fencing of 10,829 acres in the rolling sand and gravel hills of Webb County.

This dual program produces wildlife and livestock as a natural range crop. The project is being developed by Val Lehman, wildlife management director of the King Ranch, and Ted Scibienski, Corpus Christi businessman.

The area, known as the Dolores Ranch, is the site of the old Darwin mines of the Cannel Coal Company. Although only the 10,829 acres are under deer-proof

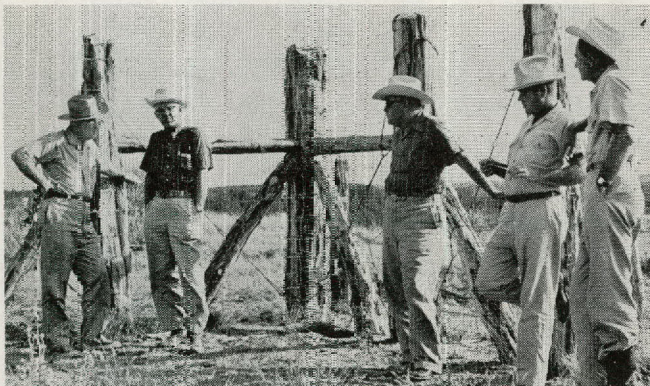
fence, the remainder of the acreage extends to the banks of the Rio Grande, and covers excellent deer and livestock range with native grasses including curly mesquite, buffalo and grama, with mesquite, blackbrush, cactus, catsclaw, huajillo, huisache, and similar vegetation. A large portion of the range received brush control in 1951. From 1957 until it was taken over by the present owners in 1959, practically no livestock lived on the area. Brush made a rapid comeback, providing cover for considerable game.

Now, a number of tanks for water storage are being built, and a portion of Santa Ysabella Creek is being dammed to impound a lake covering approximately 100 acres. Another location probably will be dammed later.

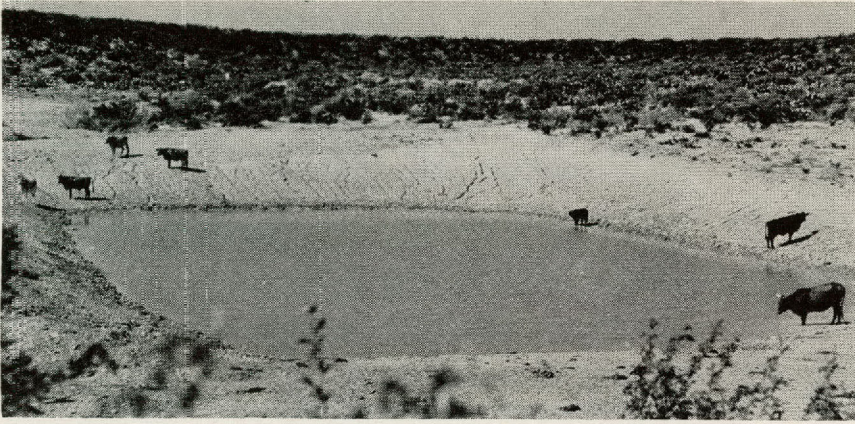
Each of the tanks on the area is being fenced to provide a stock-proof "trap" of 25 to 100 acres in size. The bottom wires of the fence and the bottom wires of all hedger cross fences are barbless, a feature which will reduce injury and infection in game and cattle. The new tanks, in addition to providing water for wildlife and livestock, will be attractive to waterfowl and permit some fish production.

Several small tanks are being set aside exclusively for the use of the wild game.

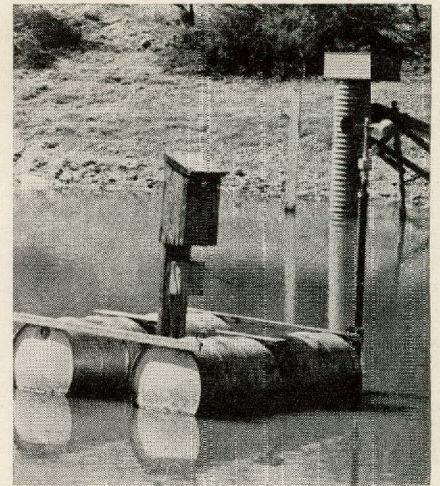
Water evaporation studies are being carried out on some of the tanks. Experiments are being made with chemicals to deter evaporation, without affecting the



Inspecting the heavy construction of the fence corners are H. D. Dodgen, Ted Scibienski, George Jambers, Garner Fuller, and Val Lehmann.



At water tanks for stock and game, left, studies are underway on deterring evaporation with chemicals (equipment at right) without affecting fish, plants, or water potability.



fish or plant life in the tank or the potability of the water.

Efforts will be made on the ranch to manage brush and cactus as well as grass. Granjeno, blackbrush, Mexican persimmon, and many other main species are eaten by both cattle and game, and, compared with grasses, brush is far more drouth-resistant. Both mechanical and chemical practices will be used to correct undesirable side effects of previous brush control. Future brush control will be on a "spot" basis, with careful regard to existing vegetation, land capability, erosion dangers, and real need.

Already some 80 deer have been trapped and released on the property. It is planned to release approximately 420 additional deer from the King Ranch within the next few months. These deer will be used for restocking purposes. Later javelina, North American antelope, black-buck antelope, Mountain sheep, Aoudad sheep, and other species may be brought in. The success of the introduc-

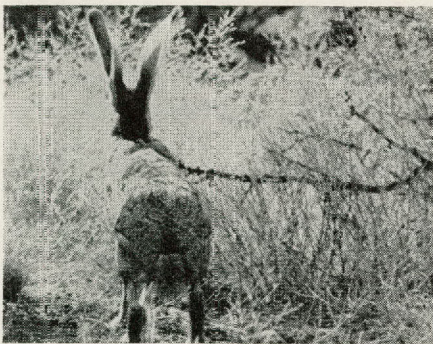
tion of these species will depend somewhat on predator control.

Much wildlife abounds naturally in the area. Quail live there, both bobwhites and blues. Jack rabbits and paisano birds (road runners) are also abundant. Mourning doves, white-winged doves, javelina, fox squirrels, and white-tailed deer can be found there. Waterfowl usually find their way to the wetlands of the area, especially in winter.

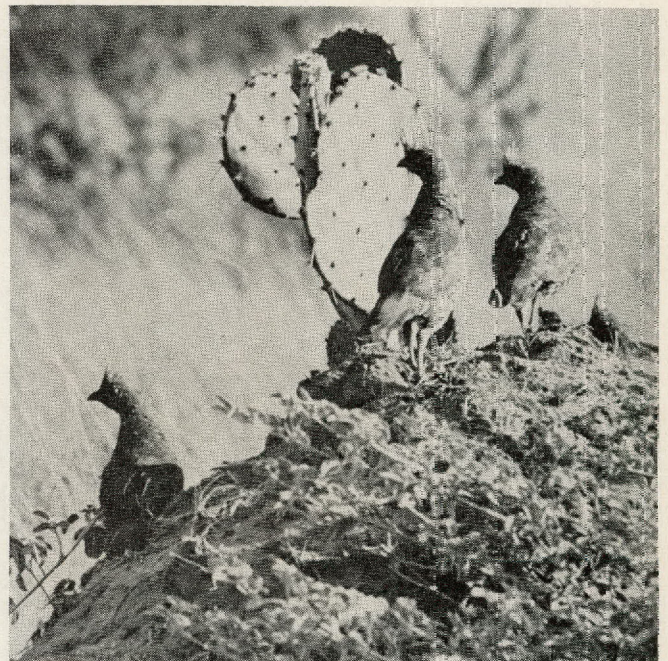
On completion of this combination project, the owners hope to permit shooting of both animals and birds on a per diem basis, when the wildlife population has reached the point where there will be a surplus.

The ranch itself is a picturesque property some 20 miles northwest of Laredo. There are many old Indian camping grounds on the area, as well as three ancient cemeteries. These spots are being preserved for future studies.

\* =



Wildlife abounding on the area include jack rabbits, left, road runners, below, blue quail, right, and bobwhites, mourning and white-winged doves, javelina, whitetails, fox squirrels, and waterfowl.



# Danger Ignored

by JUANITA MAHAFFEY

U. S. Department of Health

**B**LACKEST VILLAIN ON THE LAW-ABIDING SPORTSMEN'S LIST is the poacher—the out-of-season killer or the culprit who exceeds legal bag limits. The first game laws were established to put the unethical game hog out of business.

It's anybody's guess how much our country's wildlife diminished solely because of uncontrolled killing. Game and fisheries management today is based on maintenance of a healthy natural environment for the species.

In this light, there is now a poacher

in our midst whose destruction of fish and wildlife far outstrips that of the early-day market gunner or fish dynamiter—pollution. This menace destroys or retards fish and wildlife in quantities to cancel much of the \$125 million invested by hunters and fishermen.

Commissioner A. J. Suomela of the U. S. Fish and Wildlife Service puts it this way: "Pollution of the rivers of the United States continues to be one of the most critical problems affecting the production of game and food fishes. Moreover, with the rapidly growing human population attended by intensification of agriculture and industry, the utilization of streams for various purposes—including removal of waste materials—will continue to be a problem of greatest importance.

"Although complete statistics are not available, it is considered that the amount of fish and wildlife habitat rendered unproductive each year is greater than that created by public agencies carrying out programs of fish and wildlife restoration. Indeed, it appears that the effect of pollution in depressing production and use by valuable fish and wildlife would be to nullify much of the inland fishery and wildlife conservation effort when this is viewed on the national scale . . ."

Most conservation measures developed, unfortunately, like "locking the barn door after the horse was stolen." The tragic dustbowl years of the early 1930's frightened a nation into soil-saving action. At the same time North America's wild duck populations dived to a perilously low figure before breeding-ground restoration was inaugurated. U. S. timber lands were ruthlessly cut and burned over before selective harvest, fire prevention, and replanting combined to save our forests.

But we still abuse and waste a most



Courtesy of New York State Conservation Department

## **Water pollution increases**

**as the public turns its back.**

vital resource, water. Experiments with cloud seeding, salt water conversion, and evaporation control seek to increase available supplies of usable water. Yet we are alarmingly tardy in full implementation of the most economically feasible method to ensure water supplies—treating our wastes to control pollution. As a result, our fish and wildlife are drastically reduced, with an accompanying shrinkage of hunting and fishing areas. With these sports increasing in popularity and occupying prominent places in the over-all recreation needs of a growing population, can we afford lax attitudes toward this waster, pollution?

The country as a whole is 30 years behind with sewage and industrial waste treatment construction as related to existing needs. While progress is being made under the Federal Water Pollution Control Act (Public Law 660 passed by Congress in 1956), the needs continue to pyramid because of new pollution created by the explosive population increase, an unprecedented farm-to-city movement of people, and mushrooming industrial expansion.

The task of collecting, treating, and disposing of both domestic sewage and industrial wastes is heavily overtaxing existing facilities. Nature's stream purification system no longer functions adequately. Yet a big segment of our population must depend upon surface streams for its water supply. Clearly nature needs an assist from man with the water resource similar to the help given with respect to soil, forests, and wildlife.

Indeed, many troublesome contaminants enter surface waters (and sometimes invade the underground waters), resulting from the manufacture and use of new products, most of them originating since World War II. Re-

search is concentrating heavily upon detergents, plastics, insecticides, and various chemicals which do not respond to presently known sewage treatment processes. While danger to human health has not been pinpointed, we cannot afford to ignore these persistent materials whose long-term consequences might prove serious as they build up in our waters.

One example of what pollution does to marine life comes from the director of the Oyster Institute of America: "From knowledge of the industry in various coastal states, we estimate there are at least 100,000 acres of oyster grounds and clam beds which are not now being used because of pollution, a loss of probably \$15 million per year to the industry."

One advance in our water conservation approach is noteworthy. We have learned that all uses and users of water must be considered, whereas in former years pollution was regarded almost wholly as a public health concern.

In the three years since President Eisenhower signed Public Law 660 much has been done to encourage and assist the States in fighting pollution.

Research, a network of stream sampling stations, technical assistance, program grants, enforcement in cases of interstate stream pollution, and construction grants to cities for building sewage treatment plants—all are embraced in the Act. In Texas, game wardens of the Game and Fish Commission are cooperating with the State Department of Health in stream sampling to test pollution.

Despite these important gains, however, much higher levels must be reached if water pollution control is to be brought into balance with new pollution resulting from population

growth and industrial expansion.

Cost of complete sewage treatment in the average city is less than 25¢ per person per month. Yet there is often stout opposition to pollution control laws and programs. Some persons always seek the cheap but short-sighted way out, preferring to dump their wastes into the nearest river rather than pay the cost of treatment.

The problem calls for prevention rather than cure. States seeking new industry, for example, should make sure the incoming industry guarantees to maintain water quality before operating permits are issued. Interagency planning between State health departments, conservation departments, water resources boards, and industrial relations boards can strengthen the State vanguard against polluted waters.

Pollution is an ugly, creeping danger which often does not make itself immediately evident. Biological changes resulting from this invader in lake, stream, or estuary may be a long time developing. But once a stream or other surface water dies, an equally long time may be required to restore natural beauty and productivity, even after waste treatment gets under way. The waste treatment itself entails much preliminary planning, paper work, and surveying.

You, the fisherman and hunter, invest \$125 million a year in fish and game. At the same time you sacrifice to pollution game bags and fish creels potentially much larger than your present field and stream "take home pay." Industrial and city, State, and Federal government leaders need citizen-backing to round out the job of pollution control. Get in the fight for clean waters and, at the same time, help yourself to better fishing and hunting!

\* \*

# Green Light on Doves

by L. A. WILKE

**S**OME 15,000 HUNTERS KILLED 119,000 WHITE-WINGED DOVES in the three-day hunt September 11, 13, and 15, according to wildlife biologists. In addition, they took approximately 27,000 mourning doves. The average kill per hunter per day was 6.9 whitewings and 1.6 mourning doves, for an average of 8.5 birds per hunter per day.

Aerial counts of the hunters were made by flying wardens who patrolled the lower Rio Grande Valley area. It was estimated that the hunters in the 1959 season approximated the same number last year.

Cooperating hunters left 16,000 whitewing legs in roadside check stations. From these legs the biologists were able to determine that 52% of the whitewing kill was made up of

young birds. This number is equal to an age ratio of one adult to 1.08 young. The biologists consider such a ratio about normal for white-winged dove production.

During the hunt two birds were killed that had been banded in Mexico by Game and Fish Commission employes in June, 1959. One of these birds was killed north of McAllen and the other was taken 25 miles northeast of Monterrey, Mexico. Both birds were banded at Ciudad Mante, Tamaulipas, Mexico, approximately 250 air miles south of Brownsville.

Squally weather hit the bird hunters for the opening day of the season. Most of the shooters got their limit of whitewings on the first day of the shoot. However, on the two following

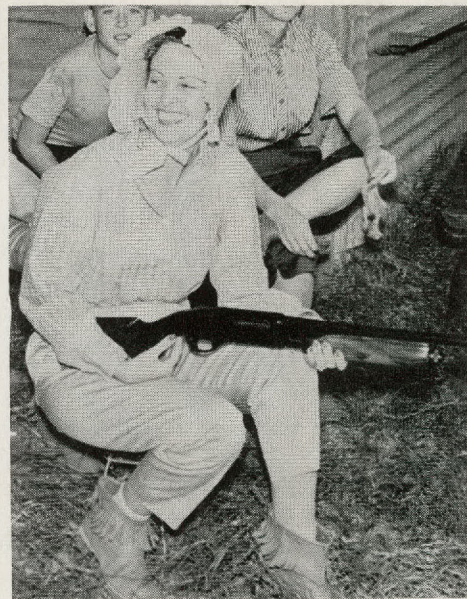
days many had to fill in with mourning doves. There were a few scattered showers on the second and third days of the shoot, as compared with terrific downpours last year.

It was estimated that more than 100 private airplanes were parked on each of the McAllen and Harlingen fields. The shooters also came from all over Texas, and all available hotel and motel accommodations were filled for the hunt.

There were very few violations reported, and no serious hunting accidents. Although there was considerable open hunting, more areas were for lease this year than previously. Efforts were made to eliminate shooting near brush areas, so that crippled birds could be recovered. \* \*



Keeping an eye out for whitewings in both directions are Mrs. T. J. Crockett, left, Harlingen, and Mrs. J. B. Prentiss, Corpus Christi.



Frilled poke bonnet and fringed boots add an unusual touch to the hunting garb.



... and a busy time  
was had by all!



Aiming over the fence, which blocks hunters 100 yards away from Longoria Tract Whitewing Refuge, is Earl Dunning of Harlingen.



Mr. and Mrs. C. M. Hartley, Corpus Christi, shoot near the Longoria Tract.



Both T. H. Murray of Dallas and his small retriever look ready for the hunt, off the floodway near Santa Rosa.



EARNEST IN THEIR TASK of plucking the newly killed white-winged doves are the Bradford, Vernon, and Smith children from Weslaco.

# Oak Creek Bonus

by L. A. WILKE



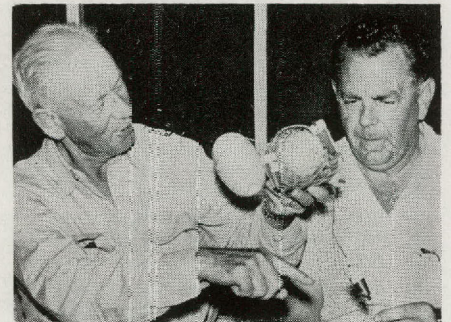
Fishermen, all three! Bill Moore, left, Brownwood; Earl Webb, center, Sweetwater, and S. L. (Cotton) Loyd, Dallas, with a string of blacks.

**O**AK CREEK LAKE, SOUTH OF SWEETWATER, is now providing top fishing for a considerable area in West Texas. A group of writers and fishing tackle representatives were guests at this lake near Blackwell, for the opening of north zone dove season September 1.

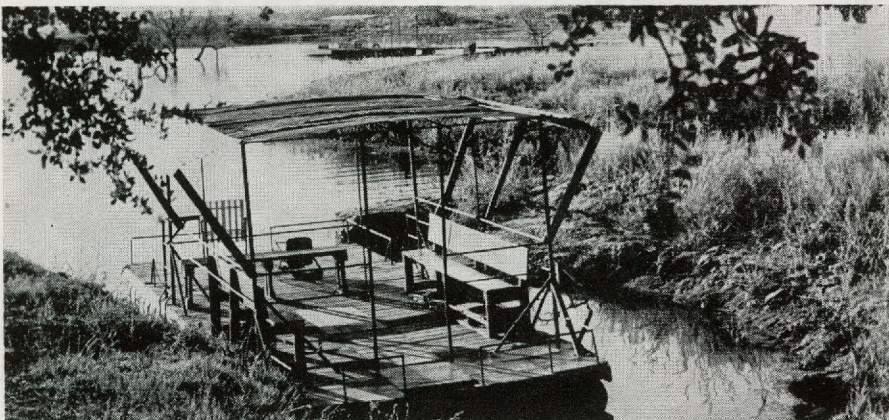
Although the Oak Creek Lake was constructed in 1950, it wasn't open to fishing until 1954. During that period it was stocked under direction of the Game and Fish Commission. The

Oak Creek Lake was built for a municipal water supply for the city of Sweetwater, but its shoreline was developed for recreation. Underbrush was not removed from the beds of streams in the upper reaches of the lake, and these are now hot spots for big bass. The lake also abounds in crappie and catfish.

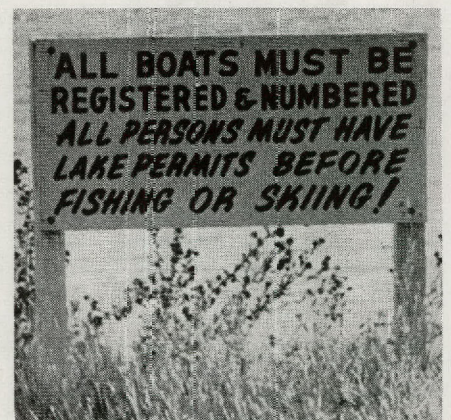
Fish take both lures and minnows, and a number of 4-pound bass have been landed in recent months. \*\*



C. C. English, Dallas, tells writer Leo Healer, Lubbock, how to rig a trotline with lures.



Anchored in many cool spots along Oak Creek are crappie barges of the camp owners.



Fishermen must get permits before going out.

# Sportsman's Guide

## ... summary of hunting seasons

**Ducks and Coots**—November 13 to January 1, both dates inclusive. Shooting hours will be from sunrise to sunset except on opening day, when they will be from noon to sunset. Bag limit 4 with not more than 8 in possession. Only one canvasback, or one redhead, or one ruddy duck may be included in the bag or possession for the whole season. One wood duck and one hooded merganser may be included in the daily duck bag and possession. Daily bag limit on American and red-breasted mergansers is 5, possession limit 10 singly or in aggregate of both. No open season on black-bellied tree ducks.

**Geese**—October 26 to January 8, inclusive, with bag and possession limit of 5 geese. Not more than one white-fronted goose, or 2 Canada geese or its subspecies, or one Canada and one white-fronted goose. Hours from sunrise to sunset.

**Wilson's Snipe**—December 3 to January 1, both days inclusive. Bag and possession limit 8.

**Quail**—**General Law**—December 1 through January 16. **Bag Limit** 12 per day and not more than 36 per week or in possession except in Bexar, Comal, Bandera, Crockett, Edwards, Llano, Mason, Medina, and Sutton, Bell, Coryell, McLennan, Milam, Archer, where there is a 24 bird possession limit. See Game and Fish Laws digest for special quail seasons in Borden, Camp, Cochran, Collin, Delta, Dickens, Franklin, Guadalupe, Hopkins, Hunt, Kaufman, Kenedy, Kleberg, La Salle, Live Oak, McMullen, Rains, Scurry, Upshur, Van Zandt, and Wood Counties. Hours: one-half hour before sunrise to sunset. Limits for counties under regulatory authority in the **Possum Kingdom** and **Panhandle** areas were increased during the last Commission meeting, October 23. A 15-bird bag limit and 45-bird possession limit is now in effect in the following counties: **Possum Kingdom** area: Archer, Baylor, Bosque, Brown, Clay, Comanche, Denton, Ellis, Erath; Hamilton, Hill, Hood, Jack, Johnson, Knox, Montague, Nolan, Palo Pinto, Parker, Somervell, Stephens, Tarrant, Taylor, Wichita, Wise, and Young. **Panhandle**: Armstrong, Bailey, Briscoe, Carson, Castro, Childress, Collingsworth, Cottle, Dallam, Deaf Smith, Donley, Floyd, Gray, Hale, Hall, Hansford, Hartley, Hemphill, Hutchinson, Lamb, Lipscomb, Moore, Motley, Ochiltree, Oldham, Parmer, Potter, Randall, Roberts, Sherman, Swisher, and Wheeler. The season has been increased in counties under regulatory authority in the **Trans-Pecos** area. The season is now from November 3 through December 31 in Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, Pecos, Presidio, Reeves, Terrell, and the portion of Val Verde lying west of the Pecos River. The limits remain

the same, 12 per day and 24 in possession. **Dimmit** and **Zavala** Counties now have a season from November 3 through January 16 with limits, 12 per day and 24 in possession. All counties not under regulatory authority are regulated by General Laws and have had no changes in the limits or seasons.

**Pheasant**—No open season except in counties with special laws.

**Turkey**—**General Law**—November 16 through December 31, with 3 gobblers per season. Check with the Law Digest for special laws on counties not under regulatory authority. No open season in Red River, Titus, Fannin, Bowie, El Paso, Reeves, Jeff Davis, Val Verde (west), Hudspeth, Pecos, Presidio, Culberson, Terrell, Brewster, Nolan, Taylor and Washington Counties. November 16 through December 31 in Freestone, Falls, Limestone, Williamson, Bexar, Comal, Bandera, Crockett, Edwards, Llano, Mason, Medina, Sutton, and Brown Counties. November 16 through 25 in counties in the Panhandle area, November 16 through December 5 in Possum Kingdom area, and November 16 through 30 in Bell, Coryell, McLennan, and Milam. Bag limits: 1 gobbler per season in Brown County, Possum Kingdom area counties, and Trinity-Brazos Counties, 2 gobblers per season in Bexar and Comal Counties, Edwards Plateau area counties, and Panhandle counties.

**Prairie chicken**—No open season in any counties.

### Game Animals

**Elk, Wild Sheep**—No open season on wild sheep. No closed season on elk in Red River, Titus, Fannin, and Bowie Counties. December 1 through 8 in Culberson and Hudspeth Counties in areas designated by Commission under special permit. Bag limit: one elk.

**Buffalo**—Special permit only.

**Javelina**—November 1 through December 31 in the Trans-Pecos hunting area. Bag limit: 2 collared peccary. No closed season in the Edwards Plateau area, Red River, Titus, Fannin, Bowie and Comal Counties. November 16 through December 31 in Bexar County with 2 javelina limit. No open season in counties in the Trinity-Brazos area, Possum Kingdom area counties, Panhandle area counties, and in Brown, Nolan and Taylor Counties.

**Deer**—**General Law**—November 16 through December 31 except in counties with special laws. Bag limit: two buck per season. Hours: one-half hour before sunrise to one-half hour after sunset.

**Special Laws**: Check Law Digest for laws on counties not under regulatory authority. The following list of counties have special seasons and/or bag limits. (All buck deer

must have pronged antlers. Permits are necessary for shooting antlerless or doe deer where seasons are specified.) **Jasper, Newton, Tyler** (except Precinct 4) November 15 through December 15. **Nolan**—November 16 through 30; bag limit, 1 buck. **Hill, Johnson, Washington, McLennan, Taylor**—season closed. **Bosque and Ellis**—regular season for buck, November 16-31. Bag limit is 2 deer of either sex per season. **Bell, Archer, Clay, Coryell, Denton, Erath, Hood, Jack, Milam, Montague, Palo Pinto, Parker, Somervell, Stephens, Wise, Young**—November 16 through December 5 for buck and for antlerless except in **Bell, Coryell, and Milam**, where the antlerless season is November 26 through December 5. Bag limit is one buck and one antlerless or two antlerless deer. **Fannin**—November 16-20, with one buck the bag limit. **Titus**, November 16 through 24, one buck and antlerless with special permit only. **Bowie**, November 16 through 30. Two deer of either sex, except the antlerless deer can be taken with special permit only. **Red River**, November 16 through 30, one buck and antlerless with permit only. All deer in **Bowie** must be checked within 24 hours at GFC checking station. **Bexar, Comal, Dimmit, Zavala**—November 16 through December 31. Bag limit is 2 buck or, in special areas with permits only, 2 antlerless and/or doe deer or aggregate of 2 per season. **Brown**—November 16 through December 31. Bag limit is 1 buck. **Delta, Franklin, Hopkins**—November 21 through 25. **Eastland**—November 16 through 30. **Gregg, Harrison, Rusk, Shelby**—November 15 through 25. **Kenedy** (Precinct 1)—November 15 through December 1. **Lamar**—Precinct 4 closed to rifles, rest of county November 16 through 20. **LaSalle, McMullen**—November 1 through December 15. **Marion**—November 16 through 20. **Val Verde**—east of Pecos River—November 16 through December 15. **Panola**—November 15 through 30. **Sabine**—November 16 through December 30. **Upshur, Wood**—November 21 through 25. **Throckmorton**—November 16 through December 15. **Morris, Shackelford** season closed. **Area Laws**: **Panhandle**—November 16 through 25. Bag limit: One buck per season and in possession. **Trans-Pecos**—December 1 through 8. Bag limit is one buck and one antlerless and/or doe deer by permit in designated areas, and no more than one mule deer in the aggregate. **Edwards Plateau**—November 16 through December 31. Bag limit: 2 buck or antlerless and/or doe deer but no more than 2 deer in the aggregate. **South Central Texas**—November 16 through December 31. Bag limit is 2 buck deer or antlerless and/or doe deer with no more than 2 deer in the aggregate in any one season. **Trinity-Brazos**—November 16 through December 5 except in Falls, Freestone, Brazos, Robertson, Grimes, Limestone, and Williamson Counties which have from November 16 through December 31, with no open season in McLennan or Washington Counties. Open season on antlerless deer is November 26 through December 5 except in Falls, Freestone, and Limestone Counties which have a No-

• Continued on Page 27

# GUNS



## ... and Shooting

by JOHN H. MASTERS

**This Month: How to Choose Bullets**

**E**VERY YEAR HUNDREDS OF HUNTERS take the field with all sorts of rifles. Regardless of the "launcher" employed, the bullet is the ultimate reason for the hunter's success.

Let's get one point clear in the beginning. The bullet is that part of a cartridge that issued forth from the rifle when the trigger was pressed. To many people, the term "bullet" has come to mean the entire object rammed into the rifle chamber, and it seems that nothing gun writers can do will completely eliminate such erroneous terminology. For the purpose of this discussion, please keep in mind that I am referring to the projectile that the rifle sends forth.

Various terms are used to describe bullets. To cut these to a minimum, it may be said that two factors—the shape of the bullet, and its internal construction—largely control the name it bears. Of course, various manufacturers have their own trade names, such as "silvertip" and "corelokt," but fundamentally, all bullets are alike in many respects.

In the days before high velocity cartridges made their appearance, the bullet was simply a properly shaped piece of lead, perhaps alloyed with tin to obtain the proper hardness. With the advent of smokeless powder and elevated velocities, it became necessary to surround the bullet with a jacket of gilding metal, a combination usually of copper and zinc. Essentially, lead with a gilding metal jacket comprises most bullets designed for sporting rifles today.

In one form, the gilding metal jacket extends over the tip of the bullet, enclosing the lead completely except at the base. Such bullets are known as "full jacket" or "full patch," or perhaps "metal clad." The primary purpose of such design is to PREVENT EXPANSION when the bullet strikes the target. Such design is mandatory by

international agreement for warfare—hence all military cartridges are "full patch." The easy availability of cheap military ammunition has led, unfortunately, to its use as sporting ammunition. Personally, I consider its use highly unsportsmanlike, and I might add, I have never found a satisfactory way to alter the military bullet such that it will perform satisfactorily on game.

Far better, choose one of the many excellent bullets available in commercially loaded ammo, or available in bewildering variety to the handloader. The sporting form is a lead core enclosed in a metal jacket that is closed at the base, but open to expose more or less lead at the tip. Normally, the jacket is thinner at the tip. Such bullets expand even on thin skinned and soft fleshed animals, tremendously increasing the chances for a clean kill.

I have long preferred the bullet shape known as the "spitzer," which is simply a sharp point bullet shaped very much like a sharpened pencil tip. Such shape is near perfect ballistically, and a spitzer will retain its velocity perhaps better than any other bullet shape.

The spitzer shape is available in commercially loaded ammo under such trade names as "bronze point," "pointed soft point" and the like; the handloader can have spitzers from virtually any bullet maker.

If the point is rounded a bit, it may be called "semi-point," "semi-spitzer" or "spirepoint" by bullet makers catering to handloaders. In commercially produced ammo, such names as "silvertip" and "corelokt" identify the type.

The true round nose bullet has its share of admirers, and is usually described as such by both ammunition and bullet makers, though it may be called simply "soft nose."

Like any other shooter, I have my

preference, but I hasten to add that I have used bullets made by every manufacturer in my handloading operations, and all sorts of commercial ammo through the years, all with complete satisfaction. The almost unbelievable uniformity necessary to produce bullets that will group into a minute of angle stands as a tribute to the skill and care that goes into their manufacture.

This year, on my planned antelope hunt, I plan to shoot my 250 Curry Magnum. It will be loaded with 100 grain Nosler Partition bullets, spitzer shape, ahead of 59 grains of 4831. My rifle handles this load better than any other, though both Sierra and Speer 100 grain spitzers are very close behind. I chose the Nosler largely because of the red-hot velocities delivered by the cartridge.

In my 8MM-06, when I go after mulies and whitetails, I will be carrying two loads. For the mulies, it will be a 175 grain Sierra spitzer ahead of 62 grains of 4831; for whitetails, it will be a 150 grain Speer spitzer and the same powder charge. Both shoot into less than a minute of angle.

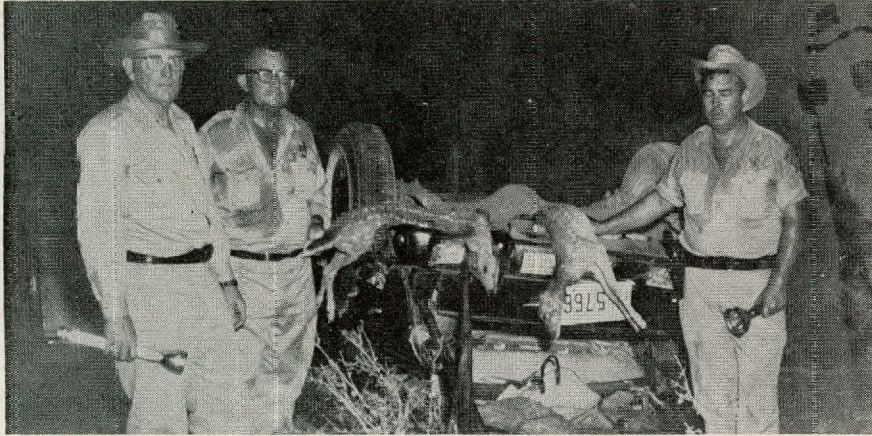
Generally, round nose bullets buck brush better, and will work well over fairly long ranges, though they do shed velocity faster. Such shape is to be preferred in the heavier bullets such as the 220 grain for the 30-06, and the 150 grain in the 270. On really big game such as elk and moose, these heavier bullets get better penetration.

The most important thing about any bullet is WHERE IT IS PLACED by the shooter. Get in a little practice with whichever bullet strikes your fancy. If your buck keeps going after you fire, the chances are prohibitively good that the lack of placement rather than lack of performance is the reason the bullet failed to do its job.

\*\*

# Poachers Pay High Price

## It Happened This Way . . .



Two fawns were in the trunk. From left are wardens Bill Sumbling, Richter, and Turner.

State Game Wardens Martin Richter and Calvin Turner received a call one night from a rancher reporting that he had heard shooting and saw car lights near his ranch house. As they proceeded to an area near New Braunfels to investigate the report, they received another call from another rancher. A car had just turned around in front of his house after its occupants fired several rounds from a high-powered rifle.

Fortunately, the wardens were traveling on the same road and soon encountered the hunters. Identifying themselves with sirens and red light, the wardens blocked the road. However, this did not stop the other car.

It raced around them and down the road. The two state men could see that it was a convertible with the top down. They whirled their car around and began chase.

The pursuit began about 12 miles out of New Braunfels. Now they were only six miles out and eating dust from the hunters' car. Ahead was a sharp curve.

Suddenly, a pair of headlight beams shot skyward just ahead of the wardens' car. When the dust finally cleared, the convertible became visible in the glaring lights. It had missed the curve, leaped into the air, clipped one tree about 14 feet above the ground, and came to rest on another, upside down with the two occupants pinned beneath.

A fire broke out on the car's fuel pump, flickered and spread. Gas poured from the tank in the rear onto

the ground, increasing the danger. A fire extinguisher was grabbed from the warden's car and used to smother the fire.

The wardens attempted to free the two victims. It was impossible. By radio they notified an ambulance to report to the scene. The woman's arm had been pinned under one side of the car and a tree which had given way to the plunging car. A man was trapped on the opposite side. A third victim moaned in the grass not far from the car. He had a high-powered rifle strapped around his chest.

When the ambulance arrived the two wardens with the aid of the two ambulance drivers managed to lift the car and free its victims. They were loaded aboard and taken to the hospital.

The wardens remained behind. When the car's trunk lid was released, two fawns fell to the ground. Both had been shot through their shoulders with a heavy rifle. Three weapons were found in the car, a 303 British rifle, a 22 calibre rifle, and a 32 calibre pistol. All had been fired.

Later, the wardens discovered several more fawns that had been wounded by 22 calibre shots and left to die.

The hospital reported that one victim had received serious injuries, another had less serious cuts and bruises, while the third was merely bruised.

Charges were filed for the three hunters to face as soon as they were released from the hospital.

They had hunted at night and out of season because the deer were a

A FOUR-YEAR-OLD SOUTH TEXAS BOY probably has made his last hunt with his dad. As they were coming out of the Valley after the white-winged dove hunt, game wardens stopped them at a road block.

The father proudly displayed his whitewings to the satisfaction of the wardens. They were about to pass him through when the precocious offspring started talking.

"We have a secret bird, too," he told the wardens.

When the boy's father tried to shush him the wardens decided they might as well search the car. Under the dash in an empty cartridge box they found a blue rock pigeon, on the protected list.

So much for a brief, young hunting career.

### Sportsman's Guide—

• Continued from Page 25

November 16 through December 31 season. Bag limit is 1 buck and 1 antlerless deer except in Falls, Freestone, Brazos, Grimes, and Limestone Counties, where the limit is 2 deer of either sex and in Williamson where only 2 buck deer are the limit. **Possum Kingdom**—November 16 through December 5 except in Bosque County which has a November 16 through December 31 season. Bag limit is 1 buck and 1 antlerless deer, or 2 antlerless deer, except in Bosque where 2 deer of either sex may be taken. **Wildlife Management Areas:** The seasons and number of permits for hunting on Wildlife Management Areas will be as follows: **Kerr Area:** November 16 through 25; November 28 through December 5, 360 permits. **Engeling Area:** November 16 through 25; 150 permits. **Angelina Area:** November 16 through 20; November 30 through December 4; December 14 through 18; 700 permits. **Black Gap Area:** December 1 through 8; 400 permits. **Sierra Diablo Area:** December 1 through 8; 80 permits. A public drawing was held October 30. Those whose names were drawn will receive permits to hunt on these areas.

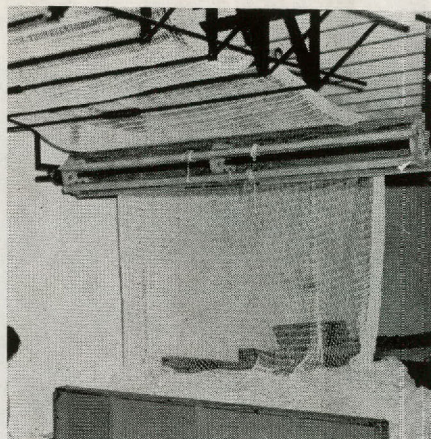
cinch to kill them. They had killed the fawns because "fawn meat is much more tender than that of older deer."

And the price they paid was high for betraying the people of Texas and their game laws.

The horns of young antelopes start to grow when the animal is about 10 months old.

All trout are carnivorous; that is, they feed on the flesh of other fishes or animals.

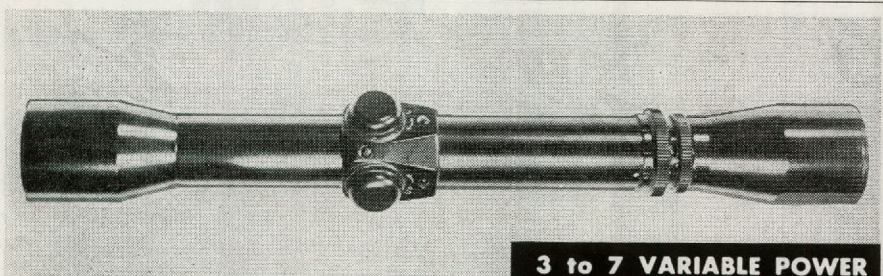
**Net Profits—from page 15**



flaws. It is then stretched tight to set all the knots evenly.

The netting is then treated to prevent rotting in sea water. The dip is made from coal tar refined from Alabama soft coal and heated to 170 to 180 degrees Fahrenheit. The netting is submerged in the dip, drained and wrung, then it is hung outdoors to cure for five to six days. It is then ready to be made into trawls.

Shrimp trawls range in size from a 6-foot trawl costing about \$8 to mammoth 145-foot trawls costing over \$500. At present, most Gulf shrimpers pull two 45-foot trawls in tandem. These trawls cost about \$160 complete. The production of Bayside Net and Twine Company is sufficient to supply about half the entire Port Isabel-Port Brownsville shrimp fleet. The importance of the function of this company in the chain of events which leads ultimately to your table is obvious. One shrimp cocktail—coming up!



**3 to 7 VARIABLE POWER RIFLE SCOPE**  
For the **VERSATILE HUNTER**

Ret. \$79.50  
Less: (Direct Discount) \$39.50  
**Pay Only \$39.95**

**ALSO AVAILABLE** 4 x to 9 x Variable Rifle Scope ..... \$49.95  
4 x Rifle Scope ..... \$29.95  
Send for free brochure.

**THIS SCOPE SIMPLY CANNOT BE MATCHED IN PERFORMANCE OR PRICE**

- Click Adjustments
- Famous cross hair reticle
- Parallax corrected, hard coated lenses. Sharp optics at all powers
- Length 11 3/4" over-all
- Eyepiece adjustment
- Weight 12 oz.
- Tube diameter 1"
- Eye relief 2 3/4". Eyepiece diameter 1 3/8". Objective lens diameter 1 3/8"
- Protective eyepiece covers (leather) included
- Field of view at 100 yds: 3.OX-42 ft.; 4.OX-33 ft.; 5.OX-27 ft. 6.OX-24 ft.; 7.OX-18 ft.

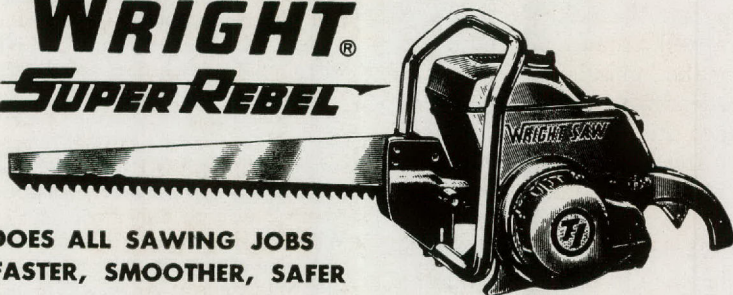
**GUARANTEE:** If not completely satisfied, return for full refund within 30 days.

**GENERAL IMPORT AND BROKERAGE COMPANY**  
Department C  
5431 River Oaks Blvd., Fort Worth, Texas

**NAME** \_\_\_\_\_  
**ADDRESS** \_\_\_\_\_  
Enclosed is  Money Order  Check for \$..... plus 50 cents for postage and insurance. Please rush \_\_\_\_\_ x Rifle Scope to me.

**OUTDOORSMEN! Here's the saw for YOU**

**WRIGHT®**  
**SUPER REBEL**



**DOES ALL SAWING JOBS FASTER, SMOOTHER, SAFER**

Have more fun on outdoor trips and less work at home with the NEW Wright Super Rebel . . . now faster than ever. Ideal for building boat houses, cabins, piers, duck blinds, rafts, bridges and fences. Clears tangled underbrush and fells 20" trees. Does precision cutting leaving smooth mill edge. Only cutting edge is exposed, no dangerous chain, never grabs or kicks. Reciprocating blade delivers 10,000 strokes per minute, cuts in every position and weighs only 25 pounds. Mail coupon below for complete information.

DISTRIBUTED BY **WARE IMPLEMENT CO.**  
BOX 6773 • ALAMO HEIGHTS STATION • SAN ANTONIO 9, TEXAS

**MAIL COUPON FOR FREE LITERATURE**

A Few Dealerships Still Available — Write Today

**WARE IMPLEMENT COMPANY**  
BOX 6773 • ALAMO HEIGHTS STATION • SAN ANTONIO 9, TEXAS  
Please send me complete information about the new WRIGHT Super Rebel and name of my nearest WRIGHT Saw Dealer.

NAME.....  
ADDRESS.....  
CITY..... ZONE..... STATE.....

**Antelope & Axiz deer**

**FROM INDIA**

Now is the time to get an excellent trophy. Pay only for what you kill. Have good cabins, and will furnish guides.

River Bend Lodge

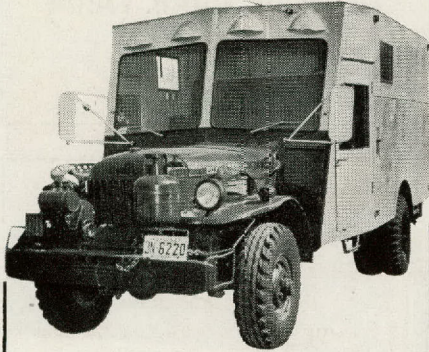
**HUNT, TEXAS**

Phone BE 8-2606

# A Tale of Waterlogged Geese

A farmer near Charleston, Missouri, recently was somewhat surprised to find his flock of geese had sunk to their necks in shallow water of a pond. Upon investigation, he learned the geese had been feeding in a field

sprayed with insecticide from a plane. The chemical contained an agent which dried out oil sacs in skins and feathers of the birds, and they no longer could float on water! *National Wildlife Federation.*



## FOR SALE Deerhunter Special

Take your accommodations with you on your lease:

- 250 HP MOTOR
- 4 WHEEL DRIVE
- BUTANE STOVE
- 75 GALLON FRESH WATER TANK
- ICE BOX
- 110 VOLT LIGHT PLANT
- POWER WINCH
- ALUMINUM BODY

Priced To Sell—Must See To Appreciate

**KELLEY DAVIS**

1404 LEELAND AVENUE  
HOUSTON, TEXAS

Phone: CA 5-5361 or WA 3-1000

## Squirrel Call

Simplest thing on market  
and surprisingly effective

Price \$1

Send your order to

*Burnham Brothers*

*Marble Falls, Texas*

## Red Wigglers—Breeders—Bait

250—\$2.00; 500—\$3.25; 1000—\$5.00

**J. B. GRAHAM**

209 N. E. 36th, Grand Prairie, Texas

## Subscribe Now!

To **TEXAS GAME AND FISH Magazine**

Walton State Bldg., Austin 14, Texas

I enclose  \$5 for 5 years  \$3 for 2 years  \$2 for 1 year

Please send Texas Game & Fish Magazine to:

Name \_\_\_\_\_

(Please print in ink)

Street or Box \_\_\_\_\_

City \_\_\_\_\_

Zone \_\_\_\_\_

State \_\_\_\_\_

New \_\_\_\_\_

Renewal \_\_\_\_\_

Sent in by \_\_\_\_\_

This is a Gift Subscription. Please send one of your special gift announcement cards with my compliments. Sign gift card \_\_\_\_\_

**NOTE—You may expect to receive your first copy of the magazine approximately six weeks after sending in remittance.**

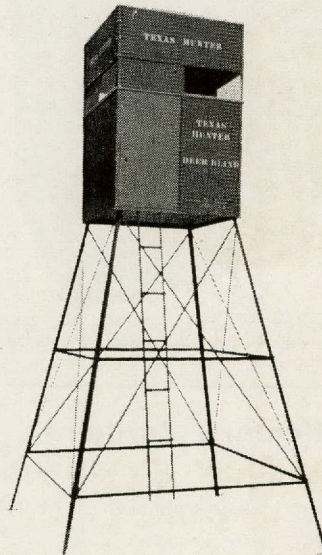
## "TEXAS HUNTER" PORTABLE ALL WEATHER DEER BLIND

4' x 4' x 6'

on

## ALL-STEEL TOWER

10' HIGH



- Galvanized Metal Top
- Weather Proof Sides
- 3/4" Exterior Plywood Floor
- All Steel Framework
- Sliding Entrance Door
- Sliding Glass Shooting Ports
- Rust Inhibitive Olive Green Paint
- Easy To Assemble With Plated Bolts

Shipped K.D. with assembly Instructions

Wt. of Blind 200 Lbs.  
Wt. of Tower 123 Lbs.

Complete With Tower.....\$119.90  
Blind Only—Less Tower.....\$ 74.95

Prices F.O.B. San Antonio

Manufactured by



**WIRE & METAL PRODUCTS, INC.**

P. O. Box 5087 1310 W. Laurel St.  
SAN ANTONIO 1, TEXAS

# Oddities

Buckskin is of a higher grade in summer than in winter. Since winter hair is coarser, winter leather is not fine grained.

Coyote pups can, if necessary, get along without water until they are several months old.

Rabbits belong to one of the most ancient species of living mammals on the North American continent.

### QUAIL DOG - DUCK DOG - SQUIRREL DOG

4-year-old Weimaraner Male  
\$250.00

C. A. POUNDS

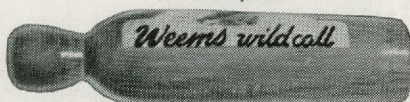
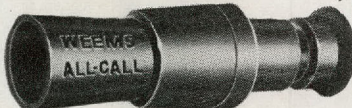
Anahuac, Texas — Phone 4585 or 4974

## WEEMS WILD CALL now offers the MOST COMPLETE LINE OF VARMINT AND PREDATOR CALLS

ALL-CALL \$4.00 with 2 voices

(4 interchangeable voices)

- 1—Long range jack rabbit squealer.
- 2—Cotton tail rabbit squealer.
- 3—Close range call—rat or bird distress cry—the squeaker.
- 4—Coon squaller



Weems Wild Call \$3.00

Beautiful Walnut

This FAMOUS CALL used by contestants to win all places in 1957-1958-1959 World's Championship Varmint Callers Contest. Calls FOX, WOLVES, COYOTES, CATS, etc. Have you tried the WEEMS CHATTER BOX SQUIRREL CALL, Only \$1.00.

—See Your Dealer—Direct if he does not stock  
WEEMS WILD CALL, P. O. Box 7261, Fort Worth 11, Tex.

## Quail & Chuckars

for sale

Live and Frozen Birds

For Further Information Write:

### LAKESIDE QUAIL FARM

P. O. BOX 656

EAGLE LAKE, TEXAS

DEER HUNTER—old or new  
this Hunter's Bible is a must for you.



HUNTING THE  
WHITE-TAILED DEER  
IN TEXAS

By Dr. Frederick H. Weston  
Only \$4.95  
Postage Paid

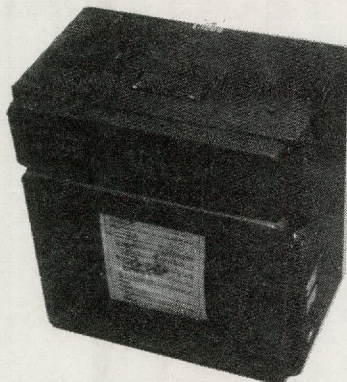
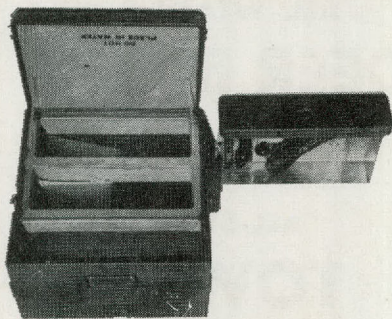
ORDER NOW!

Send Check or Money Order

Weston Outdoor Publications

604-5 Maverick Bldg.  
San Antonio 5, Tex.

At Stud—Son of Paladin—the best of 8 generations pointer blood lines, a proven sire of big going bird dogs that owners are proud of in fast company. Early breaking, snappy, stylish and intelligent, with excellent nose and know how to use it. Ask the man who owns one. By appointment only. E. P. Reagan, 721 E. 12th—Texarkana, Texas. \$75.00.



## Electric Food Warmers New - 1/4 of Govt. Cost - New

Have a hot lunch in your deer blind or while travelling. Handy on picnics. Use at home for a bread warmer. Just plug into 115 V. A.C. or 24 V. D.C. power source and heat—disconnect and take it with you. Keeps food hot for hours. Manufactured by Tappan Stove Co. These surplus warmers cost the Govt. \$102.00. Complete with cords, six spoons, salt and pepper shakers. Top drawer has plenty of room for other utensils.

Postpaid Anywhere  
in Texas

\$24<sup>95</sup>

COMPACT: Complete unit measures only 17½ x 12 x 18½ when closed. Weighs 20 pounds.

### Hunter's Bargains

- Reprocessed Jeep cans . . . \$ 3.95
- Heavy leather scabbards . . 3.95
- Heavy leather scabbards  
for scope rifles . . . . . 7.50
- New 1000 watt AC light  
plants . . . . . 162.50
- Army surplus trucks—all sizes

## Braubach Equipment Co.

Box 4542

Phone PE 6-1659

San Antonio, Texas

Phone PE 6-1659

## Don't Guess . . . KNOW!



Field  
Care  
Of  
Trophies

how to care for  
trophies in the  
field.

Thousands are ruined each  
year by improper field care.

Here at last . . .

is a manual which explains everything the sportsman must know from the moment the trophy is killed or caught until delivery to the taxidermist.

★ Fully illustrated instructions cover skinning and care for every type mount. ★

Don't Be Sorry Later . . .  
Be Sure Today! . . . Send \$1.00

CASH, CHECK OR MONEY ORDER TO:

**BOB BREWER**

P.O. BOX 487  
NASH, TEXAS



## Season Open Now



**\$3** **\$2**  
 C-3 Long Range DeLuxe  
 S-2 Close Range Fox Call

You can  
**Call**  
**FOX..CAT**  
**COYOTES**  
 Day or Night  
 It's Easy

**SPECIAL OFFER: Both Fox Calls Plus \$2 Instruction Record (78 or 45 rpm) ONLY \$5**

Surefire unbreakable BURNHAM calls featured in Aug. '56 TRUE "The CRITTERS Come When CALLED." Burnham calls lured up 121 Fox, 33 Raccoons, 156 Coyotes, 11 Bobcat, and hundreds of Hawks and Eagles on their dry run. Thousands of these calls in use everywhere. Letters tell us of amazing results—"Very first time I used your call I called up 5 Coyotes"—P.T.C., New Mexico. BURNHAM calls must give you close shot at above mentioned game or your money back!

**ORDER TODAY!**

FREE Calling Stories and best instructions 50 years of calling experience can produce.

POSTAGE PREPAID

**BURNHAM BROTHERS**

P. O. BOX 1-9 MARBLE FALLS, TEXAS

## CONTROL ENGLISH SPARROWS



**FOOLPROOF NEW TRAP**

Now you can control English Sparrows when too numerous

around your premises with guaranteed "elevator-type" Havahart Trap. Factory built. No resetting, bait lasts for weeks. Rustproof. Humane. Songbirds released unharmed. Low price. MONEY-BACK TRIAL OFFER. Send today for free new 40-page booklet on trapping secrets illustrated by Carl Burger.

**HAVAHART, 149N Water St., Ossining, N. Y.**

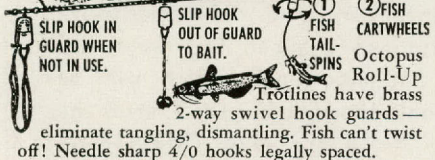
Please send me FREE new 40-page booklet and price list.

Name \_\_\_\_\_

Address \_\_\_\_\_

## SET OR TAKE UP Trotline in 5 Minutes

Let Santa Help Him Catch More Fish



Slip hook in guard when NOT IN USE.  
 Slip hook out of guard to bait.  
 Fish Tail-Spins  
 Octopus Roll-Up  
 Trotlines have brass 2-way swivel hook guards—eliminate tangling, dismantling. Fish can't twist off! Needle sharp 4/0 hooks legally spaced.

FULLY ASSEMBLED—READY TO BAIT  
 Cotton Seine Cord 155-Lb. TEST  
 ALL NYLON 420-Lb. TEST  
 80 ft. TROTLINE on winder, 16 assemblies . . . \$3.95 \$5.75  
 100 ft. TROTLINE on winder, 20 assemblies . . . 5.50 6.95  
 150 ft. TROTLINE on winder, 24 assemblies . . . 6.95 8.95  
 Extras if desired: Roll-up Reel \$1.00; Hook Guard \$1.20 doz.; Brass U-shaped Brad (2 for each guard) 15c doz. Trotlines guaranteed. Ppd.

FREE WITH ORDER: 22-page illustrated booklet tells how, when, where to set trotline, etc.  
 NOTE: Mailed FREE at your request . . . this Valuable Booklet and Full Information!

F. LAWRENZ MFG. CO. DEPT. C, 319 N. BISHOP AVE., DALLAS, TEX.

## BUCK SCENT

Kills human scent. Game unafraid to come close. Tested and proved. Satisfaction guaranteed. \$2.50 postpaid anywhere in Texas. J. W. E., 459 Drake, San Antonio 4, Texas; or purchase in San Antonio at: CRITES CO., SEARS, PURE ICE CO., LOVECE PHARMACY, FOURTH ST. LBR. CO., LANDRUM HDWE., HAUSLER SPTG. GDS., or ROOSEVELT VARIETY.

# HUNTING FOR COMFORT?



**Healthknit**

*an arctic fabric idea to keep you warm . . . even at sub-zero temperature!*

## THERMAL KING UNDERWEAR

Here's an amazing fabric containing thousands of tiny knit pockets to trap and hold body heat, actually seal out cold air—give you *extra warmth without bulk!* Full-cut throughout for long-wearing, lasting comfort. Won't bind and won't scratch. Two-thread collarette. Shrink-resistant and completely moth-proof. Extra high absorbency assures comfort indoors as well as out.

Shirts available

in sizes  
 S, M, L, XL

**\$2.98**

Drawers

sizes  
 S, M, L, XL

**\$2.98**

WRITE FOR FREE OUTDOOR CLOTHING CATALOG

*Kaufman's*

100 S. FLORES  
 SAN ANTONIO, TEXAS

Please send the following

Shirts \_\_\_\_\_ Size \_\_\_\_\_ at \$2.98 ea.

Drawers \_\_\_\_\_ Size \_\_\_\_\_ at \$2.98 ea.

Postage prepaid if order is accompanied with check or money order.

**PLEASE NO C.O.D.s**

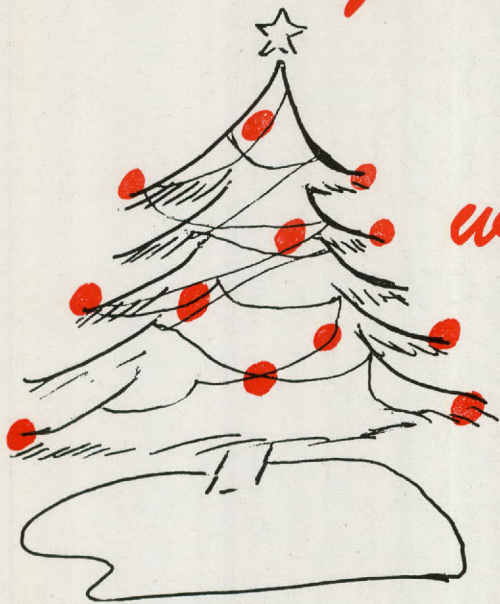
Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_

*Just what the bird lover*

*wants for Christmas...*



Roger Tory Peterson's

## Field Guide to the Birds of Texas

a GEM for Your Tree!

Published by Houghton Mifflin especially for the Game and Fish Commission, it will be the most outstanding volume ever produced on Texas bird life.

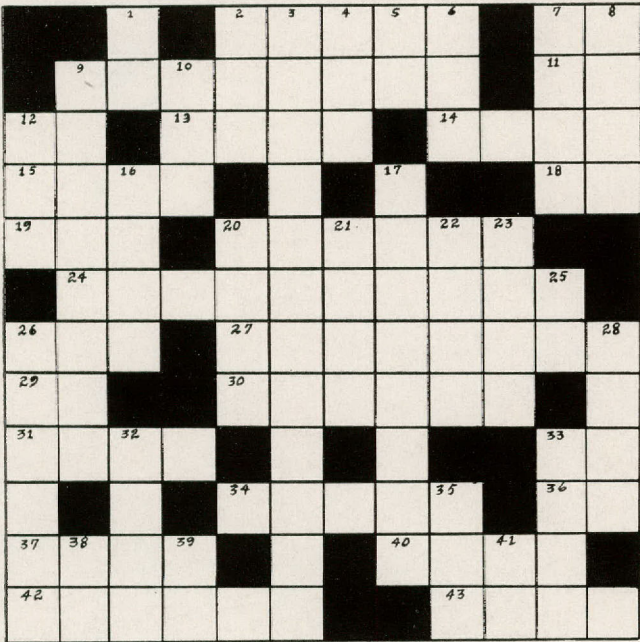
Beautiful art, color, and authoritative descriptions enhance this wonderful new 350-page book, which will be available shortly after the first of the year. An attractive CHRISTMAS GIFT CERTIFICATE has been prepared for those who want to give this book as a Christmas present.

FIELD GUIDE TO THE BIRDS OF TEXAS provides an outstanding reference for your favorite outdoorsman. It is invaluable to the bird lover and teacher, and it opens the whole world of bird life to anyone who enjoys nature.

Send in your check for \$3 today with the name of the person who is to receive the book to Game and Fish Commission, Walton State Building, Austin, Texas. The gift certificate will be

mailed immediately, and the book delivered as soon as it is off the press. Be sure that names, addresses, and zone numbers are included and clearly written.

# Junior Sportsmen



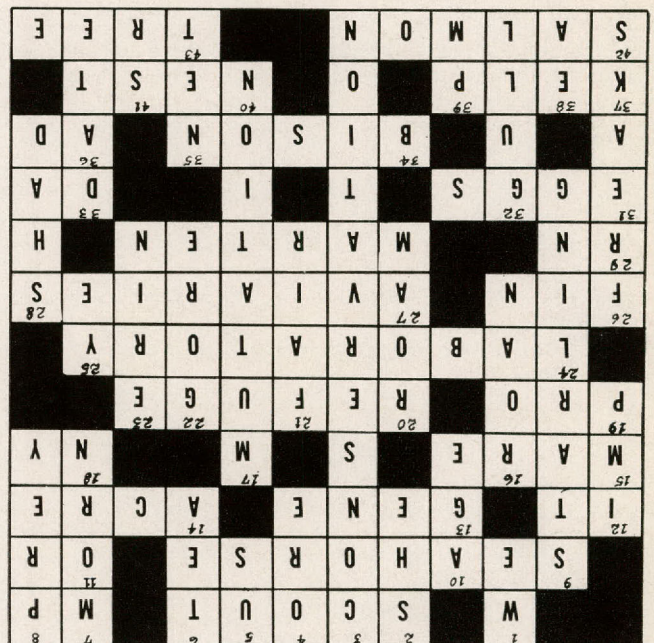
J. P.

## ACROSS

2. A lookout, or one who reconnoiters. Indians were good ones.
7. Military Police.
9. Small salt water fish with a head like an animal.
11. Either ——. (Conjunction denoting choice.)
12. Animals are usually referred to with this pronoun.
13. Plays a big part in heredity
14. Measurement of land.
15. Female horse.
18. New York.
19. Someone not amateur. (Abbreviation)
20. A haven for wildlife.
24. Where scientific work is done. There is one at Rockport, where marine life is studied.
26. Part of a fish that helps it swim.
27. Places where birds are kept.
29. Registered nurse. (Abbreviation)
30. A small animal of the weasel family.
31. Birds and some reptiles lay these.
33. District Attorney.
34. Famous American animals, now almost extinct.
36. Anno Domini (Year of Our Lord).
37. A large brown seaweed, a source of iodine.
40. A bird's home.
42. A northern fish which ascends rivers to lay its eggs.
43. A large woody plant, in which birds make their homes.

## DOWN

1. All of us.
2. Female. (Pronoun)
3. Care and preservation of natural resources.
4. A metal-bearing mineral or rock.
5. United States.
6. A shrub whose leaves are used for a popular beverage.
7. Early part of the day.
8. Food for predators.
9. A dark-plumaged bird imported from Europe.
10. Period of time.
12. A mischievous hobgoblin.
16. Horse of a mixed color.
17. A sudden physical change in a species.
20. Animals like to be free to do this.
21. An outdoor social event, often where farm products are exhibited.
22. A bull will do this if he gets mad.
23. Name of a country in southern Ireland.
25. Old-fashioned way of saying "you," usually plural.
26. Oddities which occur in nature.
28. Fish of the herring family.
32. A web-footed sea bird.
33. A desert fruit.
35. Device often used to catch fish.
38. Each. (Abbreviation)
39. Afternoon.
41. Senior. (Abbreviation)



# Raccoon



Coon hunting begins anew with the cool weather. During December and January the animal may be taken for fur. When hunted, the wily bandit ambles along slowly until pressed by the hounds, then either takes to water or retires to a tree. The raccoon prefers to den in hollow trees or rock bluffs, but it is readily adaptable to the habitat in its particular region. Being a tree climber, the coon is more sensitive to vibration than to noise.

Raccoon's sense of touch shows in its eating habits. It examines its meal curiously with its dexterous and delicate fingers. Occasionally it may swish its food or even its empty hand through water, giving the impression of "washing" it. A greedy eater, the coon consumes frogs, fish, and crayfish mainly, but also eats insects, berries, and nuts. The raccoon makes itself unpopular with the farmer by gorging on corn, poultry, and fruit, but it rates in the top six furbearers to the Texas trapper.



Texas Game & Fish

To:

Published monthly by  
The Texas Game and Fish Commission

Walton State Building  
Austin 14, Texas

POSTMASTER: If undeliverable,  
please notify at above address on  
form 3579.