

Texas Game and Fish

DECEMBER

1949

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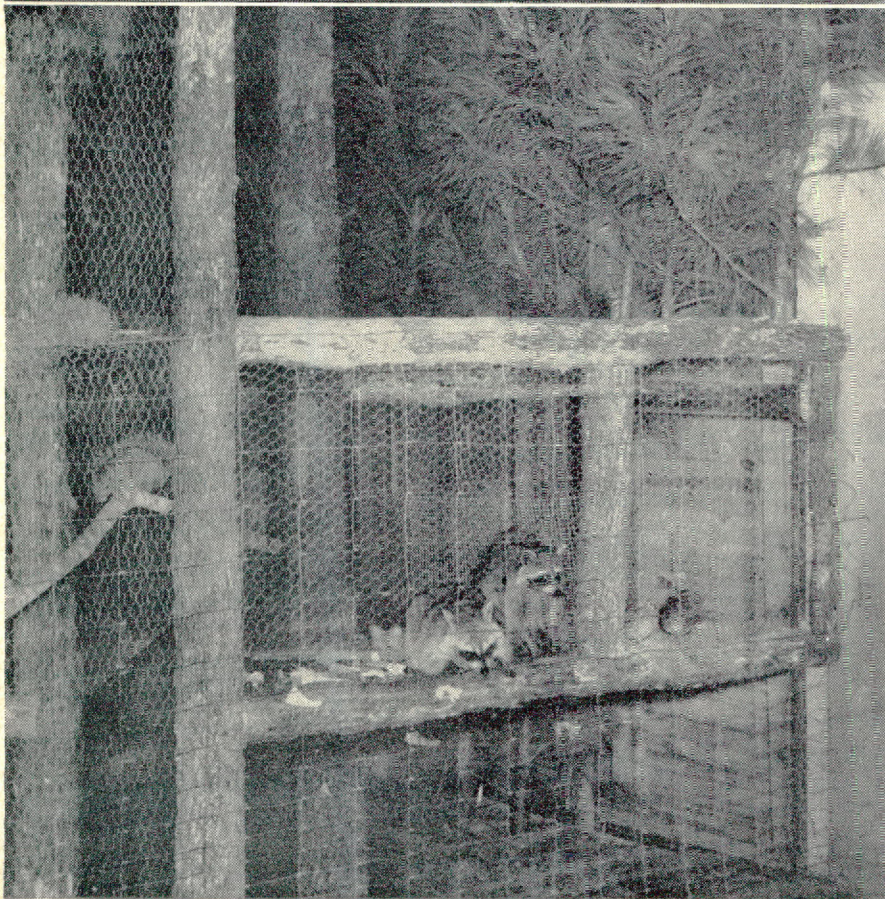


Exhibit "Steals"

The joint exhibit of the Texas Forest Service and the Texas Game, Fish and Oyster Commission literally "stole" the show at the annual Forest Festival at Lufkin.

The exhibit was one of the largest in the Festival. It occupied one end of an exhibit building. It consisted of a display of Texas forest products, two huge cypress tanks which held the live fish exhibit, and a number of cages containing specimens of wild animals found in East Texas. Also included in the exhibit was an automatic motion picture projector which showed wildlife films produced by the Game Department. A wall mural depicting an East Texas forest scene made an appropriate background for the unusual and eye-catching exhibit.

The exhibit was thronged with spectators throughout the Festival and officials of the fair said there was more comment about the joint forest, game and fish exhibit than any other exhibit on the grounds.

Texas Game and Fish

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

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

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COVER—By Orville O. Rice

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ROGER M. BUSFIELD
Editor

The Cover



This Christmas be thankful and happy for the gift Dame Nature has bestowed upon every Texan; a priceless endowment that careless handling can destroy. It is an irreplaceable gift to be cherished as a heritage of past and future generations. Orville Rice has created a facsimile of Nature's Christmas package on the cover. It contains all Texas wildlife. The gift is yours to conserve or destroy! Make a Christmas wish for an abundant existence of our wildlife resources. Imagine man's life without the thrill of the chase in crisp autumn air or angling for bass in spring; a lighted campfire and smell of cooking game; the companionship and weary contentment. Then resolve on New Year's Day to give Texas wildlife an even break during 1950. Merry Christmas and a Happy New Year!

Bound by TEXAS BOOK BINDERY, Inc., DALLAS, TEXAS Date.....

GETTING GEESE

The hard way



Goose hunting in the rice fields in the Eagle Lake area is not for arm chair hunters or those who like to do their waterfowling from the warm interior of a heated blind. Slogging through heavy semi-marshland is not easy going and creeping along the cold muck when nearing the area where the geese are feeding is not recommended for those with rheumatism. But the rewards of "getting geese the hard way" are worth the effort. The sportsman above, Pete Gertson of Lissie, Texas, although soaked to the skin, has his bag limit of big geese. At the right Gertson is loading his shotgun with anticipation of "good hunting" just ahead.





In single file and crouching low these three goose hunters creep through the marsh to where the geese are feeding. Extreme caution is vital because the slightest noise will send the honkers into the air. But the patience of the hunters is amply rewarded when they rise from their crouching position and send the geese, honking, into the air. Shotguns then begin to roar.





In the upper right photo Bob Harrison, of Houston, triumphantly tramps out of the marsh with two fat geese. A flock of geese is shown in the upper right photo. In the center photo A. D. Pace, of Houston, and Pete Gertson, of Lissie, have their limit of geese as does the hunter in the lower photo who is retrieving a goose where it had fallen into dense brush.





"It is only when these amusements are followed so unceasingly as to rob us of that time, wealth and energy which were given us for other purposes that the pursuit of them can be censured."

The Philosophy of Field Sports

(Editor's Note: From *An Encyclopaedia of Rural Sports*, by Delabere P. Blaine, published in London in 1852.)

BECAUSE the beasts of the field being put under the especial control of man, it became his duty as well as his interest to make use of them. In the exercise of this duty originated field sports, which thus sanctioned are moral in principle and philosophic in effect. The animals we follow, even to their destruction, become thereby objects to our attention. We examine their forms; we inquire into their habits; and an accumulation of useful knowledge is the consequence.

Although toil and sorrow have been entailed upon the bulk of mankind as a considerable portion of their inheritance, we read not of any canon that prohibits a temporary alleviation of these by means of sports, pastimes

and amusements. These, indeed, may be said to form a necessary portion of our nature. The constitution of the human mind and body unfits them for incessant occupation, and imperatively dictates occasional diversions as an indispensable condition of their healthy exercise.

In this enlightened age it would appear almost scandalous to assert that fanaticism still influences the mind of some persons to a conviction that there is even great moral turpitude in the pursuit of field sports. If these be not great in number, there are many who think every hour thus spent is an entire waste of time. By a candid examination of the matter we should not despair of convincing both parties that they are in error.

That the practice of field sporting is both innocent and useful we presume

may be made evident. And it is only when these rural amusements are followed so unceasingly as to rob us of that time, wealth and energy which were given us for other purposes, that the pursuit of them can be censured.

It is also an abuse of the principles of humanity when the sensibilities are so morbidly directed as to blame all field sports because they tend to the destruction of animal life. These mistaken philanthropists would spare the fox, although he nightly preys on the innocent poultry of the industrious farmer. With such the hare and the rabbit might ravish the crop and the winged game be spared until their super-abundance endangered us and destroyed themselves.

Field sports have been objected to as unfitting the mind for the study and practice of religion. But let the well meaning though mistaken fellow assure himself that a moderate pursuit of rural amusement would dim none of the ardor of his reverence for his maker or his search after heaven. On the contrary, he might learn in the woods and field to contemplate God in His works as effectively as he studies Him at home in His word. Should he doubt this assertion, we would strongly recommend Walton's "Angler," in which unfeigned piety, benevolence, and all the Christian virtues shine ambiguous throughout.



"The constitution of the human mind and body unfits them for incessant occupation and imperatively dictates occasional diversions as an indispensable condition of their healthy exercise."

The writings of Walton and the habits of his life were of the same stamp. The piety he paints and the virtues he commends he practiced in an eminent degree.

Field sports by some who do not engage in them are said to beget a habit of cruelty and tend to harden the mind against suffering of animals. But such a supposition can only be formed by superficial observers. We fearlessly assert that sportsmen are

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Roses for Quail

By D. W. Lay, A. S. Jackson and
R. G. Mauermann
Wildlife Biologists



A row of multiflora rose eight months after transplanting on Newton County quail area. — Photo by D. W. Lay.

IN SOME parts of Texas, the lack of suitable cover seems to be a major cause of bobwhite quail scarcities. Fencerows are getting more barren each year, pastures are being cleared of brush and acceptable quail range is shrinking while quail hunting pressure is increasing. Concern with this

problem has led the Game, Fish and Oyster Commission to experiment with many different planting materials and methods of increasing cover. The most promising solution over much of Texas is multiflora rose.

Although further trials are needed,

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Long row of multiflora rose in creek bottom on Wise County Quail Area. Picture was made just prior to outbreak of grasshopper depredation. — Photo by A. S. Jackson.

Four-H Clubs Training Conservationists

An amazing total of 10 million boys and girls, parents, and local leaders have participated in one or more conservation projects on their home farms since the 4-H Club conservation program, in cooperation with the Agricultural Extension Service, was introduced 16 years ago.

More than 5,000 boys and girls each year are awarded scholarships to state conservation camps by Mr. Charles L. Horn of Minneapolis. These young people are chosen on the basis of their participation in conservation projects in their own communities. The camps afford many advantages over the usual classroom, where teaching of conservation is apt to become abstract and verbal, by giving the youth an opportunity to get practical experience on actual projects under trained supervision.

One of the many gratifying results which have emanated from this sponsorship by Mr. Horn is the surprising number of young men and women who have attended these camps in the past and who now are occupying positions as county agents or home demonstration agents. Several have entered the fields of forestry and game management. Mr. Horn and his field representatives, Mr. George McCullough, frequently hear those so engaged say, in effect: "I got the inspiration to enter college and prepare for the position I now occupy while attending a 4-H conservation camp while I was still in high school."

There are now several thousand district and county 4-H Club camps in the United States and some phase of conservation now is being presented at all of them.

Conservation Pays

One of America's most valuable and rarest furbearers, the fisher, has staged such a comeback within recent years that the New York Conservation Department has declared a month-long trapping season.

This is the first time since 1936, when the "black cat" of the north country appeared on the way toward extermination, that the animal has been off the protected list. The season is restricted to eight counties and a limit of three pelts per trapper has been imposed. All furs taken must be tagged by a game protector. No open season has been declared on the marten, which still remains on the danger list.

Oklahoma Club Gets Things Done, and Fast

Oklahomans have a way of getting things done in a hurry when they set their minds to a task. The Okfuskee County Sportsmen's Club of Okemah recently made plans for a new lake. No public announcement of plans was made, but on Saturday, September 17, one of the members discussed the project with a local businessman who donated fifty dollars to help it along. From that point on, something of a record for club activity was set.

On Sunday, spurred by the donation, the club committee met and made final plans for the impoundment, presenting them on Monday to the city council. The plans were approved before nightfall. By Tuesday evening, the overflow and outlet pipes were in place. Wednesday, a bulldozer was working to close the gap in the old railroad bed that was to serve as a dam. On September 29, nine days after the first donation was received, the project was completed. The lake will have an area of 35 acres and will add materially to the city's recreational facilities. When it has filled, it will be turned over to the city for management, and facilities for boating, fishing, and swimming will be made available to the public without cost. Expenses was raised entirely by private donation and the total cost was \$1,200.

This is not the only project which this progressive group has tackled. A series of low-water dams are planned for a stream near Okemah, and the first already has been completed at a cost from the club treasury of \$165. It has worked actively with 4-H Clubs and Future Farmers and is preparing to sponsor a contest in bobwhite habitat improvement for these boys. It is giving excellent support to an intensive bobwhite research work being carried on by George Wint and Meredith Morris, research fellows of the Oklahoma Cooperative Wildlife Research Unit.

A Grouse Methuselah

Something of a Methuselah among grouse is the big and spectacular capercaillie of northern Europe. In the Bjorhvorks Sanctuary in Central Sweden a 13-year old cock mated with a 12-year old hen and produced 13 fertile eggs. Some of the progeny of this long-lived pair have been introduced in experimental plantings in Wisconsin, according to Dr. Gardiner Bump, biologist of the U. S. Fish and Wildlife Service who is in charge of this project.

Bicolor for Quail

By D. W. Lay, A. S. Jackson and
R. G. Mauermann
Wildlife Biologists



First year bicolor lespedeza growth along fence row, near Carthage, Panola County. Planting was sponsored by the Panola County Quail Club. Shown in the picture are W. H. Clabaugh and Mark Osborne, club members. — Photo by D. W. Lay.

ALTHOUGH little has been reported on efforts of the Game, Fish and Oyster Commission to increase bobwhite quail, the species has not been neglected. Intensive investigations in

Wise, Wilson and Newton counties have been in progress for three years, and results are expected to be published next year. Quail and quail

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One season's growth of bicolor lespedeza transplanted on the Newton County quail area, Buna, Texas. — Photo by D. W. Lay.

The Swimming of Fishes

By James Nelson Gowanloch

ARDENT fishermen and violent arguments are inescapably tangled. Fortunately, disagreements never diminish the ardor and in the end, usually, net even feelings get hurt. Controversies regarding the speed at which fish swim developed at a recent Tarpon Rodeo and led to a request that the writer prepare a television broadcast, devised in an attempt to answer some of these questions.

The interest aroused led to the request that some of these pertinent scientific facts be here presented, since there does exist the most surprising lack of knowledge on the part of many fishermen, concerning the speed of fishes, the source of motive power of fishes, the extraordinary diversity and range of their abilities.

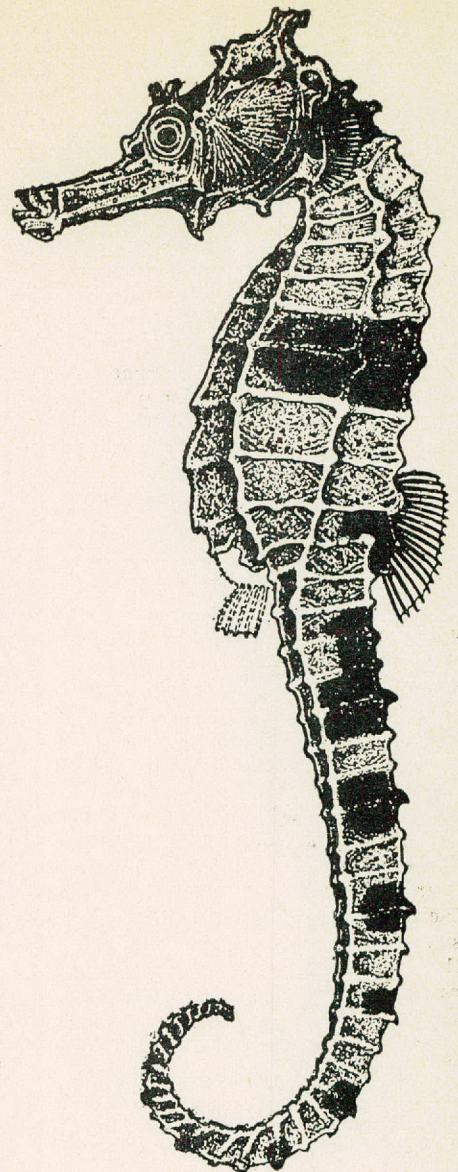
If you wish to please some Olympic champion by saying she can swim like a fish, you had better be careful to explain what fish she swims like, otherwise, if she is a good Zoologist, you will be in profound trouble.

A good starting point to begin the study of the swimming of fishes is, as a matter of fact, to contemplate the anatomy of either of female Olympic swimming champion or an equally pulchritudinous Hollywood starlet.

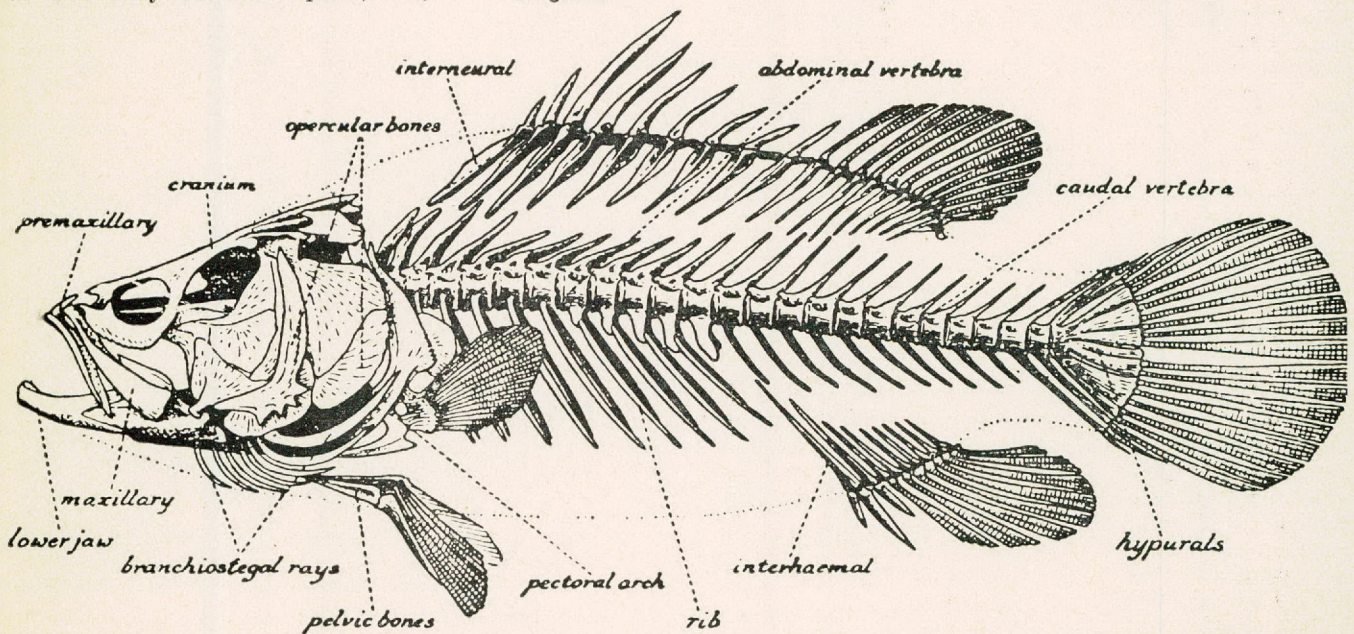
Surprisingly, the swimming starlet and the swimming fish are made up of essentially the same parts, very

differently distributed, with consequent and powerful varying differences in interest. The starlet swims with her valuable legs and less valuable arms, while the fish swims with his body and steers himself with his equivalent of legs and arms, his fins. In terms of comparative anatomy, the body of the fish and the human body are virtually about the ultimately primitive and the ultimately specialized in vertebrate structure. The fish's body is made up of repeated segments, the number and sequence of which is reflected in the successive elements of the backbone and of the structures which are, or correspond to, ribs. In the fish, these muscular segments, which are known technically as myomers, form the major part of the fish's body and constitute the fish "flesh" we eat. Their contraction alternately on one side or the other (or in the case of eels, successive waves of contraction) causes the lateral movement of the fish and provides the power that drives the fish forward.

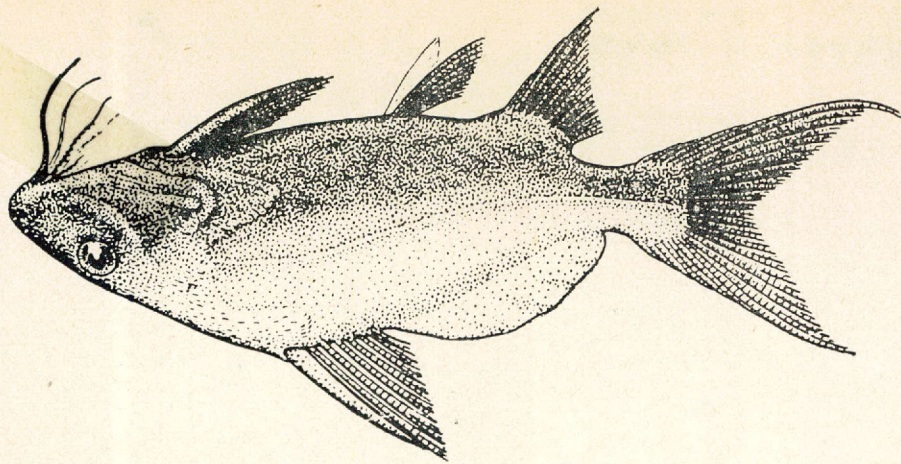
However, in the case of man (embracing woman), these segments have become transformed into intercostal muscles and are used not for the



The Seahorse, another of our fish that always leads an upright swimming life.



The side view of a typical boney fish (teleost) which is characteristic of the structure of our most important game fish.



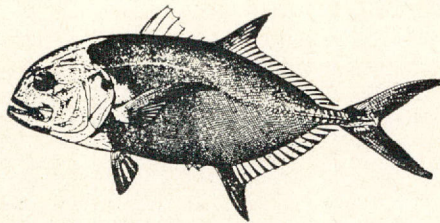
Synodontis, the extraordinary African fish that even the Pharaohs knew swims upside down.

purpose of swimming but largely for the purpose of expanding and contracting the lungs. Failure of their function, as in poliomyelitis, requires the use of the iron lung. A fish's intercostal muscles, on the other hand, have scarcely anything to do with his breathing but everything to do with the power that gets him from here to there. The fish's direction of where he is going, up or down or right or left, is controlled almost entirely by his fins, which serve in much the fashion in the water as do the vertical and horizontal rudders of a plane in the air. The Hollywood starlet steers, at least her aquatic course by the use of her legs and also by the use of her arms, although both, as in her acting, may be her measure of success or failure. The difference of this importance of ribs is well shown by the fact that fishes have a variable number according to the species and they extend throughout the entire body length, whereas the Eve of Eden and the Eve of the Screen (I am informed) both have only twenty-four pairs, twelve on each side.

Fish present terrific navigational engineering problems since the species range in size from the full grown *Mistichthys* of the Philippine Islands, less than one-fourth inch long when full grown, to the Whale Shark (taken at least eight times in the Gulf of Mexico and without doubt the biggest fish in the world) that has been known to reach sixty feet in length and of which a thirty-eight foot specimen, weighed, on the scales and not in the imagination, 26,594 pounds.

Fish use three methods of propulsion. First, and greatly commonest and most powerful, is the already described expansion and contraction of the muscle segments. This is used by such familiar fishes as the Black Bass,

the Tarpon, the Speckled Trout, the Jackfishes and the Shark. Fishes that swim this way use the fins chiefly for steering, not for power. A simple experience performed on an European fish, the Rudd, proves this. Two rudds were taken and the tail fin of one cut off with scissors, an operation that apparently causes the fish no pain. When raced together, these fish arrived at the same time, the tailless



The common Jack fish, another study in streamlining.

fish merely wagging his body faster than the one with the tail.

Goldfish fanciers will recall the extraordinary development of the streaming, drape-like tails of the cultured "Comets." These so much admired structures are useless and actually impede the fish's activities since these

tails are just as much biological monstrosities as the horribly wrecked anatomy of some of the most admired roses of the horticulturist.

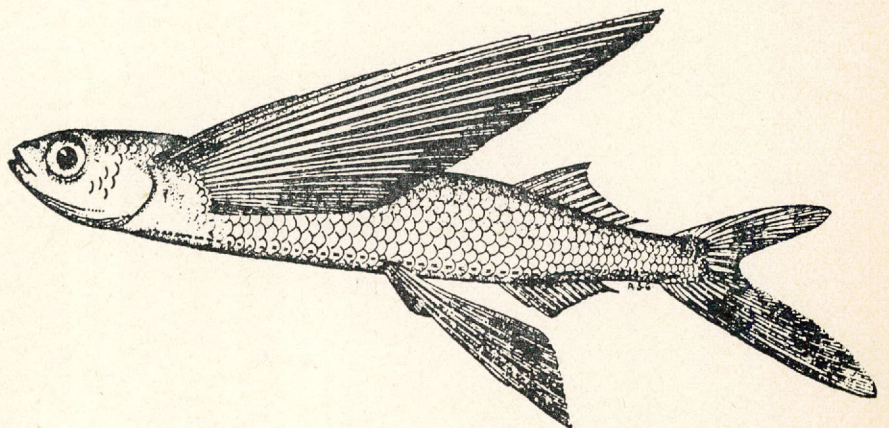
Second, some fish cannot move their bodies at all and, therefore, must swim merely by the use of fins. Such is our common Louisiana Cowfish (one of the Box fishes whose external covering has become coalesced into an immovable frame so that only its fins and eyes are free.) Also, that Louisiana fish, the Seahorse, that looks so much like a chess knight.

The Seahorse, in spite of the fact that he swims vertically, can with equal skill, though as we shall see with little speed, progress equally well forwards or backwards.

The third type of fish swimming, is jet propulsion, whereby the fish in respiration takes the water in through its mouth, closes its mouth and squirts the water backwards through the gill openings. Most fish may, to some degree, use this method and the direction of the gill openings conforms with this interpretation. Fin Swimmers, like the Box fishes and Leatherjackets and Trigger fishes, use this as an accessory source of power, much in the fashion that an airplane uses jet assisted take off (Jato).

Fish swimming is greatly aided, in species that possess it, by the use of the swim bladder, which although apparently in remote times was a lung (and still it used as a "lung" in our Gar, Bowfin (Choupique), Tarpon, and more effectively, a lung in the foreign lung fishes) has become in function a hydrostatic organ by which the fish keeps its specific gravity right and its body trim. When injury or disease affects this function, the fish, as we've all seen, promptly floats belly up. A fish's swim bladder also

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The Atlantic flying fish, a species that actually glides long distances without the aid of a propellor.

First Game Laws Passed in 1879

By J. G. Burr

CHAPTER VI

AWAKENING OF THE LAW MAKERS (1879)

AFTER surveying the game fields and the failing supply of game, the reader will wonder what the Legislature was doing in the way of offering some protection. A checking of the laws back to 1879, when the first general game laws were enacted, reveals that some laws were passed or amended in nearly every session since that date. The progress was not always upward, for sometimes laws were repealed exempting many counties from their application. If game was on the decline it had not begun to worry large constituencies of the state. This first law gave protection to song birds and forbade the killing of doves and quails during the breeding season, and this was met with protest and the exemption of 85 counties.

A tightening of the laws in 1881 with a closed season of five months on prairie chickens; and on both bucks and does, and a three and a half months closed season on turkeys, appears to have overdone the matter, with the result that when the legislature met 1883 there were exempted 130 counties from all game and bird laws; but twelve additional counties tolerated the protection of one or more of certain species. The tide turned in 1887 when fewer counties claimed exemptions, and by 1895 exemptions to certain sections of the law were claimed by only 77 counties with the exception of Burnet county which still claimed full exemption from all fish and game laws; though it had tried some of the laws, and was not among the original bolters of the game ticket.

Important and far-reaching laws were passed in 1903 which marked an awakening from the 20-year Rip Van Winkle sleep on vital game legislation. There was enacted a five years closed season on antelope, mountain sheep and pheasants, and forbidding the sale of these animals, and of deer or parts thereof. The Audubon Societies had been working for the protection of birds and their plumage,

so the Texas legislature also put on a five years closed season in the traffic of non-game birds and their plumage.

Killing a doe or spotted fawn was made unlawful and the open season on bucks was reduced to two months, November and December, with six as a bag limit; and headlighting was outlawed. The killing of turkey, prairie chickens, quail and doves was restricted to the months of November, December and January with a bag limit of 25 of all species combined.

Legislation for the 25 years prior to 1903 was little more than amendments putting in or taking out counties which were partial or hostile to existing laws; but in 1907 the limit on bucks was cut down to three and also the limit on turkeys was cut to three without respect to sex, and the netting or trapping of birds was forbidden; but the robin was classed as a game bird. This proved that it was getting hard to find something to shoot at.

GAME DEPARTMENT CREATED

It was in 1907 that a wavering step forward in the protection of game was taken by the creation of a Game Department. In 1879 a Fish Commissioner was appointed; in 1895 a department of Fish and Oysters had been created and now the law was amended, enlarging the scope of the incumbent to that of Game, Fish and Oyster Commissioner; and his aides were called Deputies.

The Governor, Tom Campbell, who consented to the new bureau, specified that no additional money was to be appropriated, and he allowed the measure to become a law without his signature. With no money to hire a law enforcement officer or to pay for printing hunting licenses, what then could be done? An enterprising chief deputy told the writer, years afterward, that he managed to get licenses printed. But printers had to wait for the money until he could get out, as peddler, and sell enough to pay for the licenses, and take care of other emergencies. The earliest available record of the selling of hunting licenses is in 1910, following the enactment of a hunting license law in 1909. The law allowed hunting without license in the

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It's Lucky There Was Only One Old Law

OLD LOU was a quail dog that wasn't easy to forget. She belonged to my Uncle Chester when he lived up on the Brazos River bottoms. The first time I ever saw the dog was when me and my pop and a doctor by the name of R. B. Alexander went up there on a bird hunt.

This Dr. Alexander is a real sport from way back. He had a trailer full of Tennessee champions that could hunt the hide off any batch of dogs this side of the mason-Dixon line. He is the kind of man that likes to get the birds when he goes after them.

We pulled up in front of Uncle Chester's house a little after dinner of the opening day. As Dr. R. B. was letting the dogs out of the trailer, Uncle Chester came out of the house and told him to let them be for awhile. He said that he had found a little pup that he wanted us to try out. We walked out to the oat patch while he went to fetch the dog up.

Pretty soon he came back with a cur dog that looked like she was part everything but groundhog. The doctor figured that was a good joke and started back to the trailer.

About that time Lou lit out in a fast run down the fence line. When she got to the corner, she turned to make a circle of the field. Right quick like, she was back to us and started on second circle, smaller than the first. We thought that maybe she was crazy, but decided to stick around to see what happened. When her circles brought her to the center of the field, she stopped, flat-footed.

Uncle Chester told us to go make a circle around her. When we got into position, Uncle Chester yelled, "flush." Lou lifted her left front foot, and a quail flew. Dad bagged it. The process was repeated. Everytime she heard the command, "flush," she would lift her left front foot, and a quail would fly.

In no time at all, we all had our limit. We walked over to Lou to find out what kind of Mumbo-Jumbo she was putting on the birds. We came to find out that she had run two coveys of quail down a gopher hole and had her foot over the top. Everytime she heard the command "flush," she lifted her foot and let one out.



ARMS AND AMMUNITION

By ADAM WILSON III
Gun Editor

Fast Guns and Results

DID ya' ever wonder what a stream of machine gun bullets or a blast of cannon missiles would do to an animal?

True, we usually think of that type of ammunition and firearms as being used on targets of the undesirable sort — ships, airplanes, buildings, or personal not representing the right; however, I think any genuine ammo and gun crank who has experimented with many different loads and calibers of guns on all available targets has wondered sometime or other, at least for a moment, just what effect some of our military fighting equipment would have on a four-legged target.

I got a report recently from a pilot I know who likes his shootin' irons whether they are fired from a shoulder, touched off by a button on an airplane control stick, or put into action by a yank on a string. During the war he was a fighter pilot, and sat in the cockpit of some of our hottest and heaviest armed planes. He still flies regularly to keep in shape, and warms gun barrels periodically in the wings and noses of fighter aircraft.

A few months ago, after a target run, he was returning to his base with some extra rounds of .50 caliber ammunition still left in the belts when he spotted a couple of coyotes trotting along over a Texas plain. Banking the P-47 Thunderbolt around with its nose slanting earthward, the prairie wolves were soon centered in his sights. Pressing of a red trigger-button set eight .50 caliber machine guns to hammering — releasing the 711-grain and 681-grain (tracer) slugs at the rate of 6,400 per minute.

At first, sand spurted a few feet behind the trailing coyote — then fur, slabs of skin, and legs jumped in all directions. A slight bank to one side brought the other now speeding animal to bear in the sights. Another short

burst from the "fifties" made a "good dog" out of him.

"I doubt if some parts of that rascal had fallen back to the ground as I swept over the remains in a climbing turn," commented the pilot.

Since our regular .50 caliber machine gun bullets leave the muzzle



Your gun editor is shown test firing the German Schmeisser 9 mm. (.35 caliber) submachine gun. This gun is capable of an extremely high rate of fire — the reason it is often referred to as a "burp gun". The submachine gun is a most vicious "toy".

of the gun at 2,935 to 3,400 feet per second (according to type and weight), it isn't difficult to understand the destructiveness of the slugs, even though they were designed primarily to give deep penetration and long range hits. Even a short burst from eight machine guns puts a lot of lead in the air, and when aimed accurately — in the target.

The same gunner told me about turning loose four 20 m-m cannons from the wings of a P-51 Mustang on the little wolves. When the pernicious H. E. (high explosive) shells found

their mark, the targets simply bursted into a bloody and furry mist.

In the language of a rifleman, those aircraft 20 m-m's toss slugs which are .78 caliber, weigh roughly 2,500 grains, and are backed by approximately 500 grains of powder. Muzzle velocity ranges from 2,700 to 3,000 feet per second. Yes sir, that is a pretty heavy dose for an animal the size of a coyote.

A supersensitive fuse screwed into the nose of the H.E. shells detonates the powder filled projectile upon contact with a very light object. Rain drops have been known to explode them when fired into a heavy rain. Sensitive? Indeed. Destructive? Well, it takes only one of 'em to knock out a bomber engine.

There were a great many incidents which occurred during the war which we did not approve of, but nevertheless, we read and listened to such things with interest, for one reason or another — maybe just plain curiosity. Among the occurrences which caused game conservationists and sportsmen to wrinkle their brows was the machine-gunning of big game in Alaska and other northern territories by fighter pilots. It probably did not enter the minds of these boys that they were taking part in helping cut down on our decreasing game supply — a moose, grizzly bear, caribou, or deer was just another target on which to whet up a trigger finger. However, through this outrageous slaughtering, questions were answered in regard to

• Continued on Page 25

DEER AND TURKEY HUNTING

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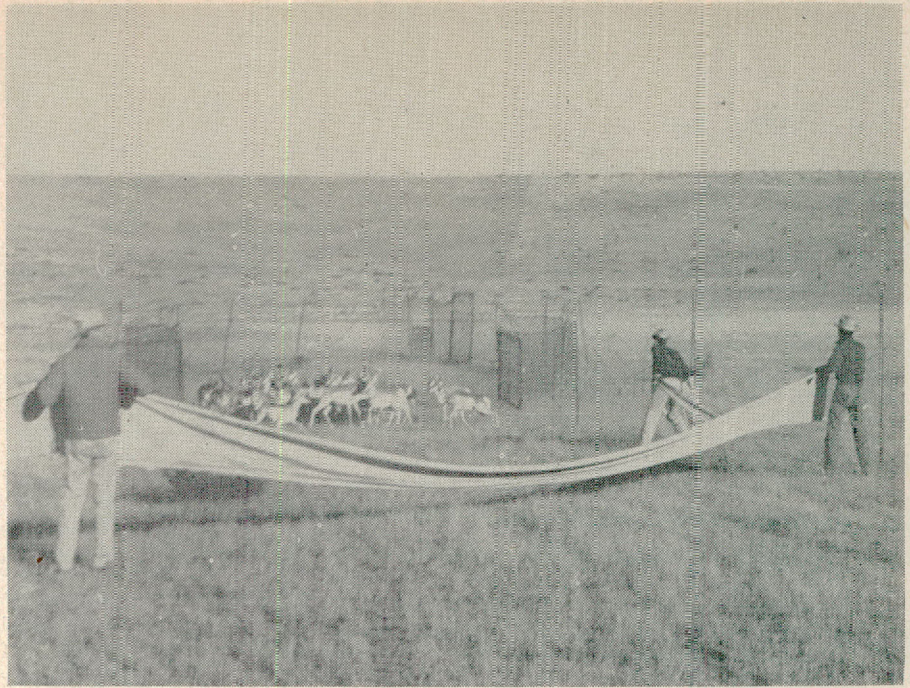
Bracketville, Texas

Trapping the Texas Pronghorn

A Picture Story

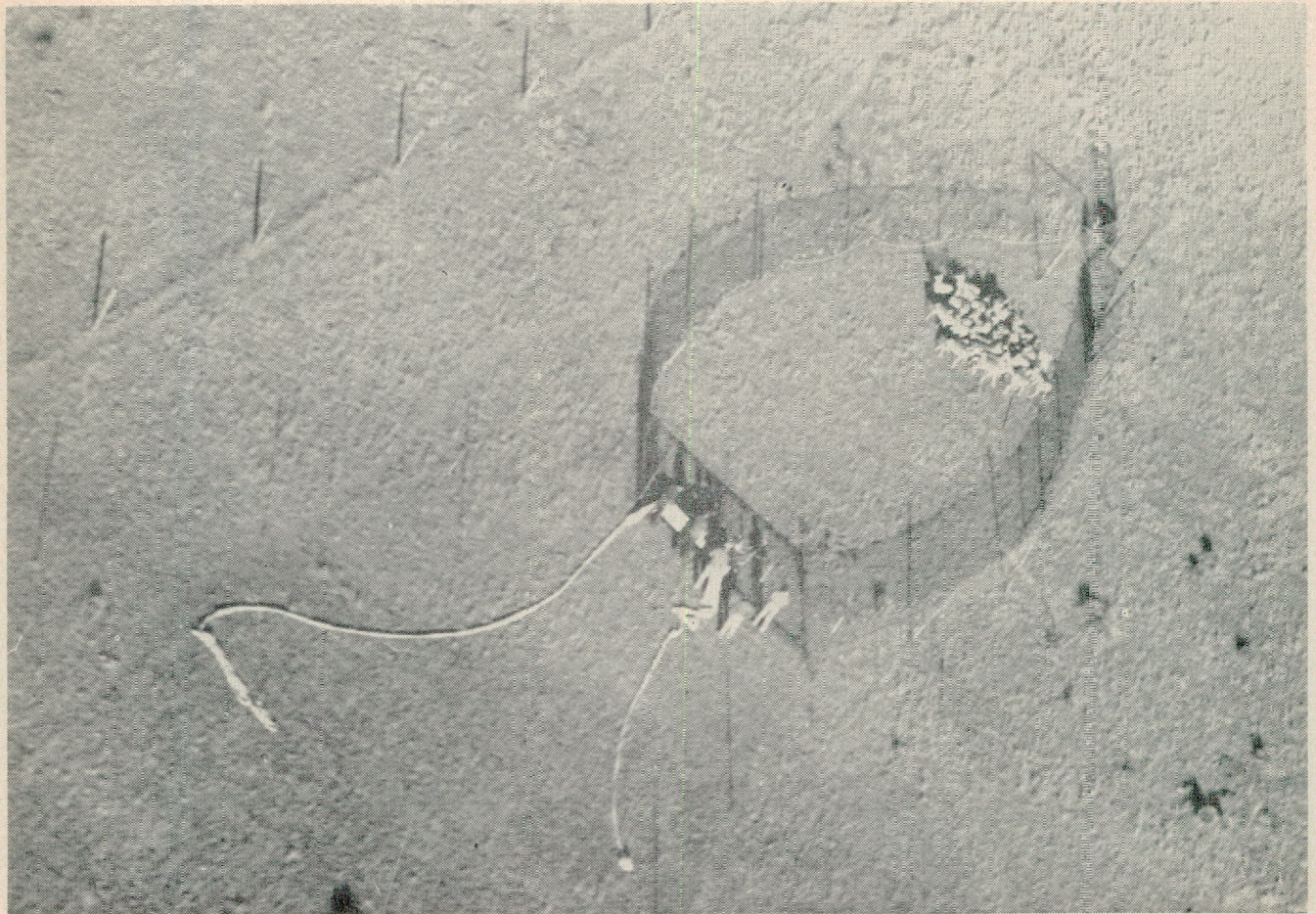
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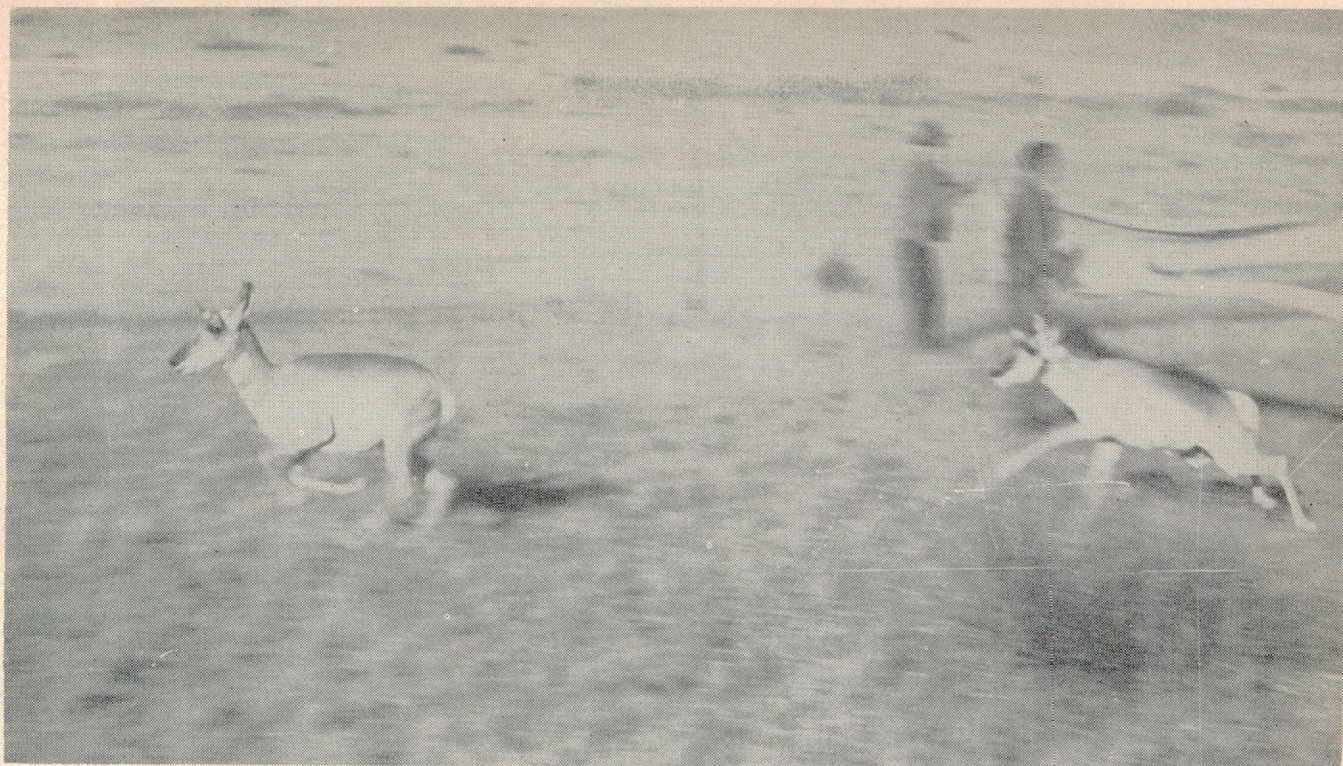
Lon Fitzgerald



Each year the Game Department traps a certain number of antelope for release in areas where the pronghorn population is to be built up. Airplanes are used to herd the fleet footed animals across the plains to the trapping area. In the

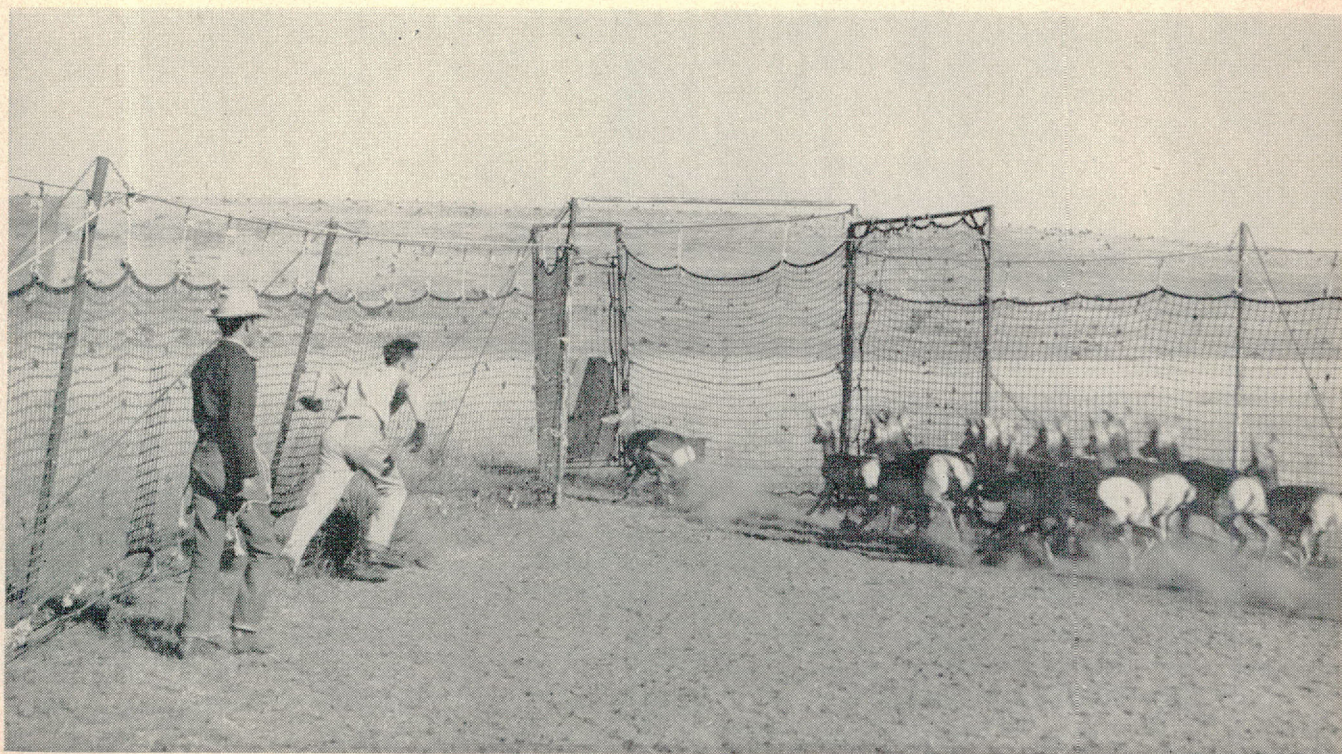
upper photo, three trappers are using a long strip of white canvas to force a herd of antelope into the mouth of the trap. The aerial view of the trap in the lower photo shows the antelope safely inside the trap with the gate being closed.





The two fleet footed antelope in the upper photo refused to be forced into the trap. They raced under the strip of white canvas and took out for parts unknown in a dazzling burst of speed. Their mates, meantime, were going through the next phase of the

trapping operations. They were being herded into a small holding pen at the back of the trap. Only a few antelope are permitted to enter the holding pen at one time because the trappers catch the pronghorns in the small inclosure and carry them to a waiting truck.

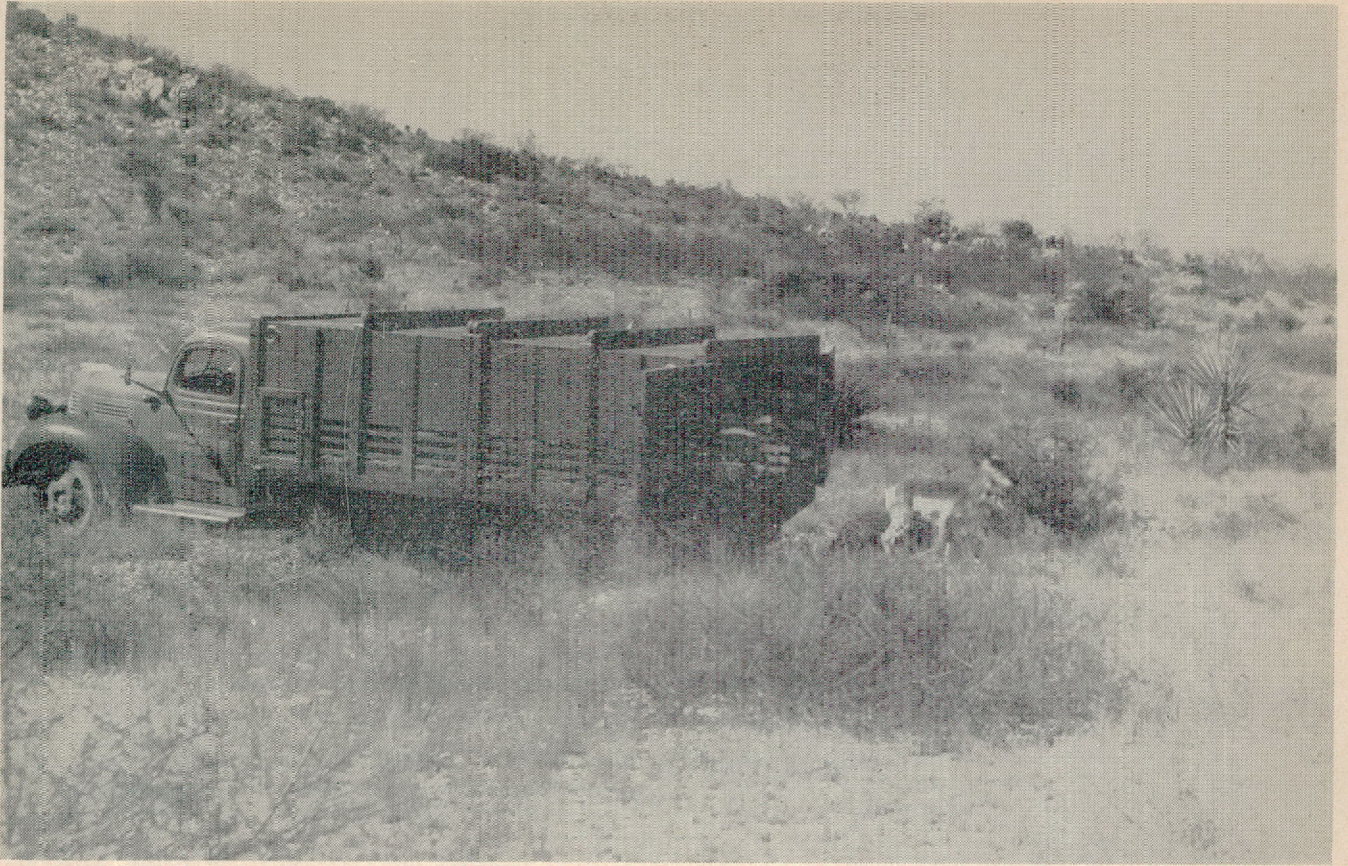




Action is fast and furious when the trappers enter the small holding pen to catch the antelope for weighing and ear tagging, and for loading into

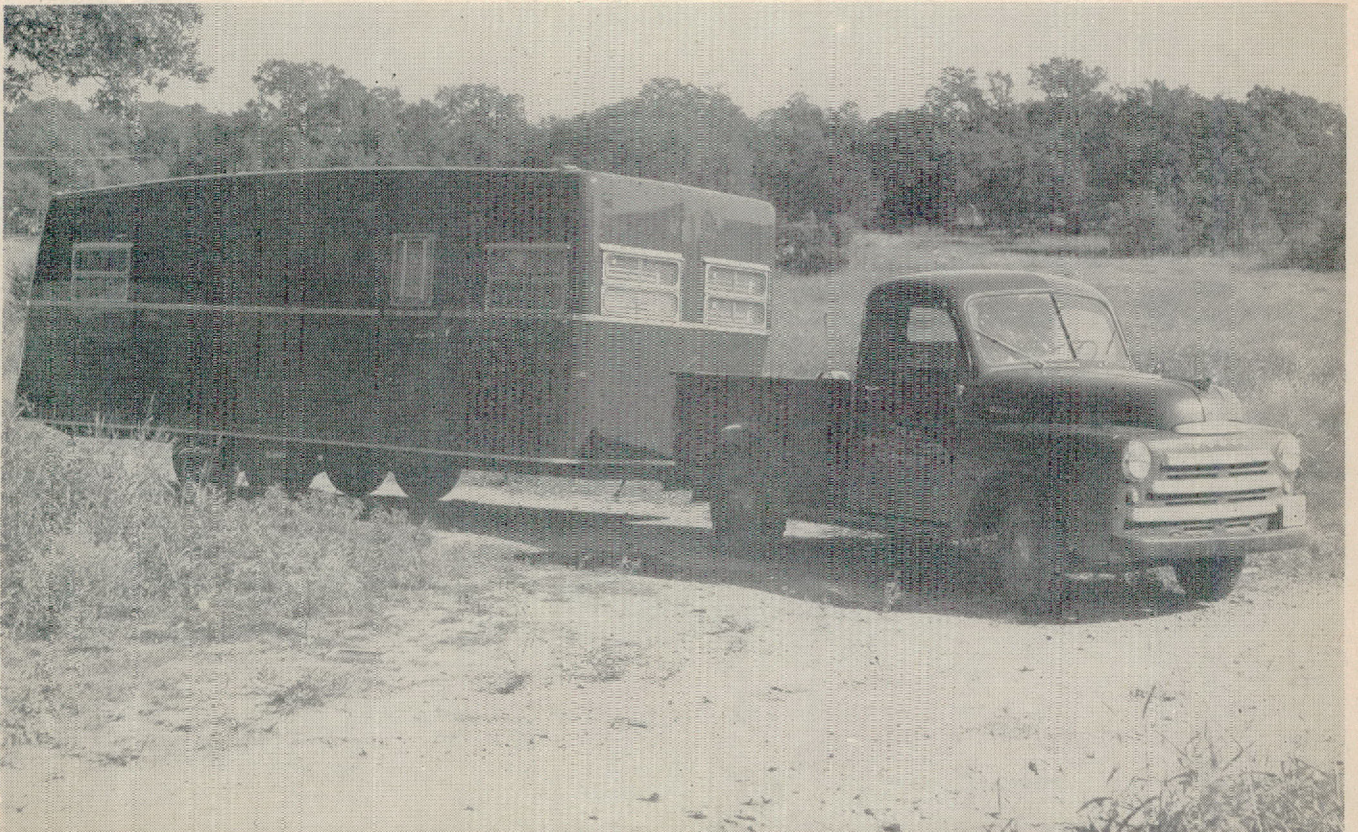
a specially designed truck which will move them to their new range. Antelope are curious creatures and the lower photo shows a pronghorn doing his best to steal the picture.





Antelope are easily unloaded. The tail gates are opened and the pronghorns leap to the ground and scamper off to inspect their new home. The lower

photo shows a specially designed and constructed trapping trailer in which the trapping crew lives during the trapping operations "West of the Pecos."



RECIPES

Turkey Still Tops With Most Gourmets

THE American wild turkey undoubtedly has the most mysterious, most eventful historical record of any game bird found in North America. Misnamed and shifted from hither to yon all over the world, this bird has been accorded the highest national honor—nomination as the National Emblem by Benjamin Franklin. It lost that choice distinction to the eagle; it is lauded as “King of Upland Game Birds”, but invariably loses its noble head to a hungry hunter and ends up flat on its back in a roasting pan. However, reminiscent partakers of its flesh will never forget it. This is as true today as it was way back when.

Long before this “King of Game Birds” was known as the symbol of our own Thanksgiving Day, the Aztec Indians of southern Mexico were enjoying the flavor of its tender, juicy white meat. As a matter of fact, when Hernandez Cortez began his campaign to conquer Mexico in 1519, his troops subsisted on the abundant wild game, and the turkey became an immediate food favorite. Two years later when Cortez’ ragged and weary army captured what is now Mexico City and vicinity, they found that the Aztecs had already domesticated turkeys which bred readily in captivity. How long these birds existed before this time is purely conjecture.

During their sojourn in Mexico, Cortez and his followers retained the keen anticipation of gourmets for the taste of this luscious meat. It was a common sight then to see groups of conquistadores gathered around a glowing fire in their quarters, smacking their lips with impatience for their share of the browning turkey turning slowly on its spit. It was well for them that the bird was so tasty and enjoyable for on frequent occasions the forage parties were cut off from the wild game by attacking Indian tribes who besieged the fort. With passage outside the fort impossible, turkeys, in domesticated form, were still available for food by the simple expediency of taking them from the Indians who dwelled within the confines of the city.

However, the hunting parties must have been quite successful in capturing wild turkeys and stealing domesticated ones from the Indians because Cortez returned to Spain in 1540 and his ships carried a number of the

birds to be served on the tables of Spanish nobility.

Spain proved to be an apt foster home for the turkey. It bred fast and readily and soon it was introduced to France and England, where it was heartily approved by the entire eating populace.

Here, we have the first possible clue to this bird’s name. The latter country received some guinea fowl from Africa early in the 17th century by way of Turkey and this fowl was called by the English, “Turkey Cocke”. When the American bird was shipped to the British Isles late in the 17th century, there was some confusion with the guinea fowl and the people began calling this species “Turkey” also. Theory thus has it that the name became so popular in the British Isles, that it has been used ever since. However, scientists have suggested that the name was derived from the call note of the bird which resembles syllables,

turk, turk, turk. Still another explanation is possible because several American Indian tribes knew the “turkey” as “furkee”. By any name, the turkey has retained its title of “King.”

The wild turkey is a native of North America; the domesticated turkey which the emigrants transported to American shores from England, was originally from the stock found on the southern most part of the same continent. Early settlers found that the turkey was abundant in a wild state while exploring inland from eastern American shores. Though the wild species had a smaller head, larger eyes, and a more streamlined body, they proved to be more succulent than the domesticated turkeys. Founders of the Dutch settlement in Pennsylvania found turkeys plentiful there. Early history of New Mexico reveals that the bird was seen there by a Spanish exploring expedition headed by Coronado.

Castenada, historian of the Coronado expedition, recorded turkeys in abundance near Taos as early as 1540—409 years ago—almost a century before they were recorded from New England after the Pilgrims landed. In his log of the expedition, Castenada quaintly

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Behind the Bullfrog Croak

The bullfrog does much more than just sit on the bank of a stream or lake or a lilly pad, and bellow. He puts up with a routine of life much like the rest of us. Even if he is a cold-blooded vertebrate, he has his moments. During the warmer days of spring he emerges from hibernation in the bottom mud of creek or pond and goes forth with one eye peeled for food and the other for a mate. Chances are he won’t readily see a mate so he sets to work calling for one.

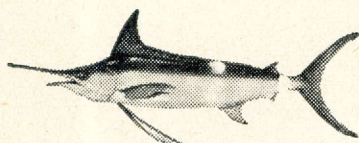
His croaking, or bellowing, is produced by forcing air back and forth between the lungs and the mouth cavity across the vocal chords, which are stretched on either side of the larynx. Scientists say that his “music” is primarily a mating call, but the bullfrog continues his racket through much of friends know that he’s still around.

While mating, the female bullfrog lays her 10,000 or more eggs in a gelatinous film on the surface of still water. Upon hatching, the frog is a familiar character known as a tadpole. At first, the tadpole resembles a small fish, and, for that matter, lives much like one. It even has gills which,

during final transformation, conveniently convert into other useful organs. There are various stages in tadpoling—the creature adds legs, absorbs its tail, and comes to look more and more like a frog. Since there are many kinds of frogs, there are differences in tadpoles. It’s rather hard to tell them apart, but if you find a tadpole over three inches long you can almost bet that it is a bullfrog—or will be. The bullfrog spends two and sometimes three years as a tadpole, and another two years to mature in size.

The bullfrog is a useful creature and perfectly harmless. His tongue is long and sticky and he has a trick of flipping it out to snatch mosquitoes, flies, and assorted bugs before the hapless insects know what is going on. He has a voracious appetite and consumes enormous quantities of these pests. He eats other things, too—swallows them whole, and depends upon his innards to digest them. One frog hunter reported cutting a frog open and finding a tiny live turtle. The frog’s lack of discrimination to any moving meal-sized object is often known to snap up a bare fish hook dangling before his eyes without giving the matter due consideration.

Hints FOR THE Angler



BLUE MARLIN
Makaira nigricans ampla (Poey)

THE blue marlin is one of the world's really great large game-fish, and considered second only to the swordfish. Here is a magnificent fish that will stalk your bait like a vengeful shadow, rush it with breath-taking speed and, when hooked, burst into a frenzy of aerial acrobatics that will leave you spellbound.

The tempo of the battle, the endurance of this sterling fish, and the bag of tricks it will uncork will find the angler awed rather than thrilled over the magnificence of his catch.

The blue marlin is the largest of the marlins found in the Atlantic and it is exceeded in size only by the black marlin of the Pacific. Marlins have short, stocky spears and small dorsals and should not be confused with the sailfish or swordfish found in both the Pacific and Atlantic oceans.

The blue marlin also is known as the bimini blue marlin, Cuban black marlin, marlin swordfish, spearfish and swordfish.

The blue marlin is a fish of striking beauty. The back is a deep blue, shading into blue-silver on sides and blending into a silver belly.

Broad lavender-purple stripes run vertically from the back to the sides, but once the fish is removed from the water these stripes almost magically, or tragically, disappear.

The spear of the blue marlin is comparatively short and rounded, resembling a marlinspike, from which the marlin gets its name. The dorsal fin runs almost the entire length of the back, with the front part sickle-shaped; eyes are large.

The blue marlin travels a solitary life, ordinarily, and is taken offshore where the reefs drop into deep water, and at the edge of the gulf stream.

The blue marlin ranges along the entire east coast from New York

through the West Indies and is plentiful off the coast of Cuba.

The world record weighed 737 pounds and was taken on rod and reel by J. V. Martin, off Bimini, British West Indies, July 16, 1941. As a comparison in extremes, while blue marlin average well above 200 pounds, a 1,200 pounder was taken by commercial fishermen, on hand line, during September, 1934, off Havana, Cuba.

The flavor of the marlin is excellent, although rarely used by sportsmen who catch it. It is a food fish of commercial importance in Cuba. It is particularly good when properly smoked.

Mullet, mackerel, barracuda, squids and other small fish comprise the diet of the blue marlin which is nearly always caught by using a whole fish as bait. It is taken by trolling.

Today's trend is away from the overly heavy tackle formerly used for blue marlin. Rods are made of either hickory or laminated woods and are designed to be used with lines testing 75, 110 and 120 pound test. The reels are generally 14-0 and 12-0, the latter suggested for veteran anglers only.

In trolling for blue marlin, outriggers are used. These are long poles extending on either side of the boat, holding the anglers line high in the air and to one side. This keeps the bait out of the propeller wash and gives it a life-like skipping motion on the water.

When a marlin rushes the bait and raps it with his bill to stun it, this disengages the line from the outrigger and the ensuing slack fools the marlin into thinking it has injured the bait fish. At the proper time, the hook is set and the right is on. Two things you will never forget—the indisputable thrill of the blue marlin and the indispensable skill of the boat skipper.

A Leader Dispenser

Salt and fresh-water fishermen are welcoming a new package-dispenser for nylon monofilament leader material. Two circular sheets of transparent plastic, shaped to hold a coil of leader material, are bonded together in the center to form a nearly flat, reel-like spool. The outer edges of the flattened spool, which normally meet in a tight seam, open easily under finger pressure to allow the coiled monofilament within to be drawn from the dispenser without tangling or kinking.

The new dispenser is especially handy for the fisherman who buys long lengths of the nylon leader material for use as a line. The monofilament is transferred easily to a regular fishing reel, and, in addition, the dispenser serves as a convenient

storage reel for the line until it is used again.

Glen L. Evans, Inc., of Caldwell, Idaho, is selling 25-yard lengths and 100-yard lengths of the nylon monofilament in all popular diameters. It is available in the regular solid colors as well as the camouflage tints. The dispensers vary in size from 3 to 6 inches in diameter, depending on the length and weight of the leader material.

Nylon monofilament for lines and leaders requires no soaking before use. It combines strength and flexibility with resistance to rust, rotting, and kinking.

The Philosophy of Field Sports

• Continued from Page 7

not in the habit of practicing any wilful cruelty. To "take, kill, and eat" was a divine command and they do no more. The sportsman usually treats his horse and dog with a fondness not common among other persons.

Pursuit of all noxious animals is imposed upon us by necessity and is, therefore, neither wanton nor cruel. The fox is one which it is imperatively necessary to pursue to his destruction. His habits are marked with rapine and shedding of blood. In his destruction the pursuer, however, does not aggravate the fate of the plunderer by wanton infliction of pain. He does not strew poison in his path and thus heighten his sufferings by torture. He is first fairly sought for and when found is afforded a reasonable chance of escape. Should he be overtaken, his life pays the forfeit, but death is instantaneous and marked with much less suffering than the protracted miseries which age and decrepitude would inflict upon him.

Sharp Shooting Fish

Shooting a stream of separate droplets at aquatic and air-dwelling prey, the Siamese Archer has been known to score almost 100 per cent in accuracy at distances up to four feet. As the Archer's eyes are always under water when the fish shoots—and the eyes apparently have no specialized features—one of the greatest mysteries is how this fish compensates for refraction and judges distances. Moreover, when the fish shoots, it clamps down its gill covers to force water through its mouth and at the same time forces some water out at the rear. As this tends to move the Archer forward, that movement also must be allowed for in a well-directed shot.

Pistol Packin' Pussy

NO CREATURE that walks or crawls has the easy-going, devil-may-care manner of the skunk. Combine arrogance of a mule with the courage of a jet-pilot, and you have the skunk's personality. Intensify a thousand times a liquid stench of burning glue, condensed sewer gas and essence of garlic, capable of being sprayed ten feet with deadly aim, and you have the reason. The mere sight of a skunk apparently strikes terror in the hearts of bird and beast. A dog, for instance, may be brave in the face of bull, bear or lion but will likely tuck-tail and slink shamelessly away from the stink-kitty.

Should you meet Mr. Skunk on any warm, sunlit day, you will marvel at his nonchalance, his swaggering insolence as he waddles about his business. A member of the weasel family, he is about the size of a cat; thick-set, carrying the hindquarters high and the head low. His heavy fur is jet-black except for a white patch on the head, from which white stripes of varying length extend back, sometimes to and even along the tail. He will not run upon your approach but may stamp his feet and watch you out of the corner of his eye with the deadly caution of a gunman loosening his pistols in their holsters. Come too close and he's apt to stiffen; facing you with a beady stare, as if to say: "One more step and I'll let you have it." You'd better take steps in the opposite direction, for the stink-kitty doesn't need to aim his business-end at you. Throwing his swivel-hips in action he can fire right over his shoulder.

The skunk's formidable weapon, his exclusive patent, is a liquid musk secreted by two large glands located strategically under the tail. The tail serves as a flag of battle, and of warning—when the flag is raised, and the feet stamp, look out. Each of the two musk glands contain enough ready ammunition for about six rounds, repeating action. Both sixguns can be fired separately or simultaneously at any angle up to 90 degrees of the body. The aim is deadly at close range, provided the skunk can see his target. Hamper his vision, thus spoiling his aim, and he's apt to fire blindly, gassing innocent bystanders and generally stinking up the whole neighborhood.

The skunk knows where his liquid shrapnel does the most good; so, when possible, he deliberately aims at the eyes and nose, blinding and suffocating his enemy in one action. Entering



Ready for Action . . . !

the eye, the musk causes a painful, temporary blindness. Entering the nostrils, it produces a swelling of the mucous membrane, resulting in choking, gagging, and sometimes vomiting.

The musk was once used for medicinal purposes, in the treatment of asthmatic conditions but was soon discontinued. The treatment proved to be worse than the disease. We pause here, and pay tribute to woman; her powers never to be slighted. For years she's worn the lowly skunk's fur and called it "Alaska Sable." Now she's wearing skunk musk and calling it "Evening in Podunk." Skunk musk, deodorized of course, is used as a base in the manufacture of expensive perfumes.

Skunk musk is so potent that the skunk tribe has outlawed its use in civil battles. Males of the species frequently fight, especially during spring mating season, but they rely entirely upon tooth and toenail, main strength and awkwardness. Gas warfare is definitely out.

Aside from its trigger-happy tendencies, the skunk is a lovable and

Sport Fishing Institute Formed

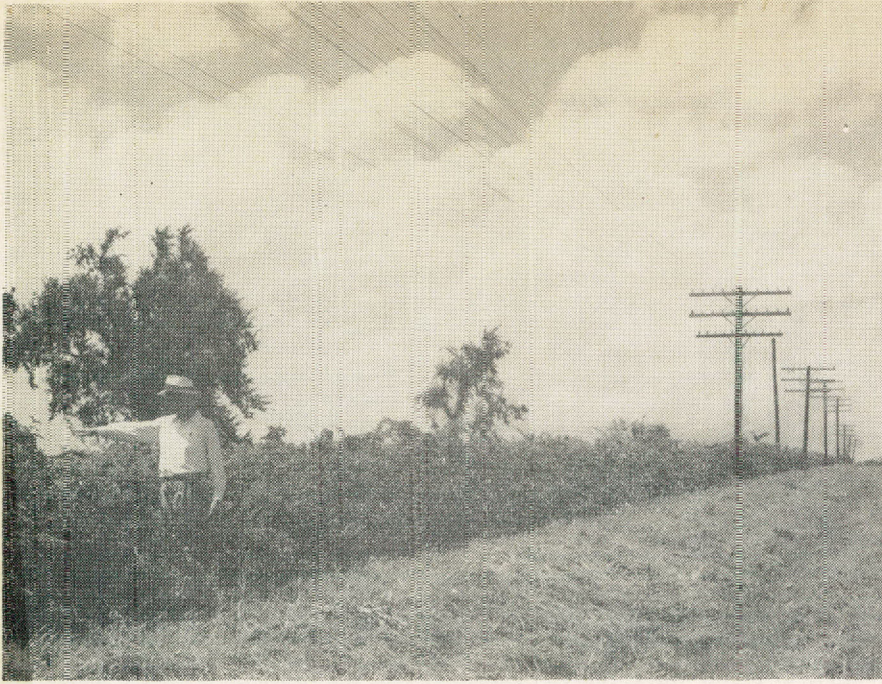
A new organization which has as its goal the improvement of fishing opportunities in the United States has been incorporated in the District of Columbia. The Sport Fishing Institute's charter states: "It is necessary that a nationwide effort be made to restore and maintain sport fishing facilities for the continued enjoyment of our people."

The organization's program calls for the conservation and development of recreational fisheries resources; the advancement and encouragement of fishery research and management; collecting, evaluating, and publishing information on fishery science and fishing; assisting educational institutions in training personnel for fishery management; encouraging wider participation in sport fishing; and assisting and encouraging cooperative effort between existing conservation organizations. To carry on this extensive program, the Institute will obtain the services of a conservation director of national reputation and wide experience to head its research and management activities.

At the initial meeting of its board of directors, A. R. Benson, East Berlin, Connecticut, was elected president. Henry Shakespeare, Kalamazoo, Michigan; R. H. Balch, Utica, New York, and Graham Treadway, Bristol, Connecticut, were elected vice-presidents; and John M. Holmes, Washington, D. C., was appointed secretary-treasurer. Mr. Holmes will manage the Institute's headquarters office in the Bond Building in the Nation's Capitol.

useful creatures. Not only is it a valuable furbearer, but rids the land of many harmful insects. It is particularly fond of wasps, crickets, grasshoppers and beetles — actually, such citizens of the crawly-clan make up over 40 per cent of its diet. Other staples include berries and fruit, mice, grain and carrion. Contrary to popular belief, few skunks venture to raid the farmer's poultry.—Ralph Pogue, Missouri Conservation Commission.

All tall tales don't originate in Texas. These are vouched for by California conservationists: A coyote was seen racing madly away from a black-tail doe . . . A porcupine ate a wooden pump pullet, shutting off a forest ranger's water supply . . . Another forest ranger lost his lunch to a bear which was drinking coffee from the ranger's thermos . . . A beaver colony destroyed a man-made dam and made one of his own.



Multiflora rose fence in Missouri at one year after transplanting. — Photo by Don Wooldridge, Missouri Conservation Commission.

Roses For Quail

• Continued from Page 8

we think this species on sandy soils with sufficient rainfall will provide a livestock-proof fence about six feet high and six feet wide. This, of course, will be welcomed by quail.

Those who fear that roses will spread and become nuisances will be glad to know the department has withheld judgment on the species until we felt sure it would not spread. Multiflora is the common rootstock for domestic roses and has been used in the north for a number of years for farm fences. In other states it does not spread either by runners or seed. In Newton County, Texas, all efforts to propagate by seed have failed. The native Texas roses which do spread are distributed readily by seed and often by runners.

Requirements of the species are hand-setting of plants on well-prepared seedbed in winter, very heavy mulching or frequent cultivation during the first year, and protection from grazing for at least two years. Failures have resulted from excessive grazing, lack of cultivation, planting in wet

site, and very heavy grasshopper infestation.

Providing other conditions are met, grasshoppers may prove the most serious obstacle to successful establishment of multiflora, more especially in the case of first-year plantings on range land.

Nearly 10,000 transplants of multiflora were made in the early spring of 1949 on a Federal Aid Wildlife Restoration Project in Wise county. All locations were heavily infested with grasshoppers throughout the summer. The insects showed a pronounced preference for multiflora foliage over native vegetation, and even consumed the lighter stems. Nevertheless, each summer rain started fresh growth of leaves, and the recovery of living plants was prompt when fall weather brought a reduction in grasshopper activity. Many plants leafed out at ground level, and the real extent of damage cannot be determined until next spring.

Inspections were recently made of trial plantings in Bell, McCulloch, Wichita, Throckmorton, Donley, Swisher and Potter counties. Six of eleven plantings examined suffered grasshopper damage, varying from moderate to severe.

Special interest is merited by success during its first year of a planting in Swisher County. A row of 150 plants was set out along a fence separating field and pasture land. Only 5 plants died, for no apparent reason, and average height was 20 inches on October 18. If multiflora can be grown in the Lower Plains, it may prove a most

valuable tool for quail management in that region, where natural quail cover is unstable from year to year.

Only partial inspection has been possible for multiflora plantings in South Texas. Three strips in Willacy county were failures, probably the result of poor soil preparation and lack of cultivation subsequent to transplanting. Another Willacy county strip, about eight miles southeast of Lyford, has shown excellent growth. Ten plants were killed by accidental application of 2-4-D, but all others survived.

First year cultivation and care gave marked results in Willacy and Wilson counties. Roses so treated developed stems up to four feet in length. The Willacy county strip had an average growth of three feet.

Although we do not know the western limits of the species, it should be about the same as for domestic roses that are not irrigated.

Some plants were distributed by the department last year in an effort to learn what conditions multiflora rose requires. More plants may be available this winter, for those who wish to request them of the Austin office. Applicants must be prepared to meet the requirements listed above and pay express charges on the plants. Those desiring large numbers of plants may be able to purchase them from out-of-state nurseries.

The photograph of one year plants in Newton county gives an indication of growth rate. It is probable that quail will find such rows acceptable as cover within two years and that they will turn livestock in four years.

An intensive investigation was made of insect life in rose hedges in another state and it was found that the hedges do not increase insect populations but rather they attract more quail and non-game birds which in turn exercise increased insect control. Apparently, clean fence-row farming has no advantage over rose fences so far as insect control is concerned. As compared with the old osage hedges which were formerly used for fences, multiflora is superior because it does not sap adjoining soil.

As for the farmer who does not like trespassing, multiflora roses will guarantee that visitors enter through gates.

*Federal Aid Projects 18-R, 20-R and 21-R.

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The Swimming of Fishes

• Continued from Page 11

may serve as a resonating organ, as in the Croaker and Gaspargou. Remove the swim bladder, the Croaker ceases croaking. Substitute an artificial rubber bladder, the sound resumes.

Fish move their bodies from side to side except in such specialized species as the Rays and Mantas, while the Porpoises and Whales, which are not fishes but are mammals (the Cetacea) and originated from ancestors that once lived on the land, move their bodies up and down, the better to secure the necessary air they breathe. Once land animals, they actually are in many ways more efficient swimmers than the fishes that never left the water.

The leaping of fishes is a spectacular form of locomotion. Examples are the Mullet, the Tarpon, the Leaping Shark and the Manta. Most fishes jump to escape enemies, to endeavor to rid themselves of external parasites or to endeavor to shake out hooks. Some of these leaps are extraordinary. A four ton Manta, or Devilfish, as they often call it, can turn a complete somersault in the air. Needle fish, bad bait stealers here in Louisiana, apparently leap for fun since they will explore almost any floating object to discover if it is stable enough and not too high and they then will rapidly jump it out of pure devilment. A stick dropped into a school of Needle fish will almost immediately start them leaping. Leaping becomes the most highly specialized as a means of escape from enemies in the flying fishes that are actually gliders and never flap their wings. The flying fish first hydroplanes its body above the water, sculls rapidly along the surface using the elongated lower lobe of its caudal fin, taxis up to a speed of thirty-five miles an hour, then, becoming airborne, glides at the same speed for twenty seconds, thirty seconds or (our longest record) forty-two seconds, distances that sometimes much exceed one-eighth of a mile.

Some fish swim in strange positions. The Seahorse swims only vertically and is most unfishlike in shape, but the Shrimp Fish, *Aeolicus*, a "fish-shaped" fish of the Indian Ocean, also always swims straight up. Strangest of all is an African fish, *Synodontis batensoda*, which always swims upside down and was even so depicted by the Egyptians in ancient tombs of Pharaohs.

The speed of swimming is a matter of much discussion. Here are some figures in miles an hour, with some comparisons with other water speeds: Carp—0.9 of a mile; Bream—1 mile and a half; man—world's record—

Nakama of the United States of America, 1942, free style, 2.8 miles an hour; the United States Naval Corsair submarines (the class came out in 1943)—9 and 1-5 miles an hour submerged and 23 miles an hour surfaced; big Sea Mackerel, cruising—30 miles an hour; flying fish at take off and airborne—35 miles an hour; the Normandie—35.9 miles an hour; the Lexington 36.9 miles an hour. Sharks have been known to pace fast ocean liners. Tuna and Swordfish (both have been taken in Louisiana) have been clocked at 60 miles an hour, fastest of all fishes. Contrast with this the pitiful embarrassment of the Seahorse which, swimming by vibrating his fins so fast that the eye cannot follow their movements and swimming at top speed, takes all of five minutes to cross an ordinary bathtub.

Illustrative of the driving power of the fishes' forward motion is the fact that the Swordfish (a 400 to 600 pound species), of which we have some Louisiana records and with which I was quite familiar on the Nova Scotian coast, has, on a number of occasions, been known to drive its sword completely through two inches of solid planking, and in some cases has actually driven its sword completely through both sides of a fishing dory. I have personally examined such examples in the North Atlantic.

The energy expent by some fish is prodigious, almost incredible, yet scientifically confirmed. King Salmon, largest and most valuable of our Pacific Salmon, travel inland to spawn. Tagged individuals have been known to travel two thousand miles upstream at the rate of fifty miles a day, then at journey's end lay up to eleven thousand eggs, and die, as do other Western Salmon, unlike the Atlantic Salmon which returns again to the sea.

The writer had the pleasure a number of years ago of going over, on the West Coast, these results with the late Dr. Charles Herbert Gilbert, who accomplished these remarkable researches.

Considering the currents against which they struggle, this is equal to a three thousand mile trip during which time the Salmon take not one mouthful of food. Translated, it would be equivalent of yourself swimming three thousand miles, from New Orleans to Cape Farewell, the southern tip of Greenland, without once pausing for sleep, for food, for a glass of milk or for the contemplation of the beauties of nature.

Fish can swim.—Louisiana Conservationist.

Letters

Kind Words, Indeed

I was very much pleased to receive my first issue of your magazine a day or so ago. I like it very much. In fact, the very first issue had an answer to some questions that I had been wanting to know for some time.

Let me commend you and your department on the fine job you are doing. No one realizes better than I the handicaps that you are forced to operate under. First, there is the short amount of funds. That means also a shortage of men in the field. Then there is the absolute non-cooperation of the public, and I am ashamed to say it, the sportsmen themselves. Despite these and other drawbacks, you are doing a good job.

Being a sportsman, who is very much conservation minded, as well as a sports writer for several of the local newspapers, I am in a position to be in contact with some of your men and to be able to really know what they are up against. I especially wish to commend the men out of the Houston office and this area that are handling the pollution situation and the opening of the current duck hunting season. These men are doing a swell job and doing it in a way that is winning the respect of the sportsmen in this area.

I have always, and still do, advocate an educational program as a means of conserving the game and fish of our state. But there are still some of our citizens, if I may call them that, who are just too bullheaded to see that if something is not done in a hurry, all of our wildlife will be gone the way of the passenger pigeon and the buffalo. Or I may be more correct in saying that this type of man just doesn't care about anything now or in the years to come, except getting a hog's share for himself, regardless of whether he is stealing from the honest sportsman, who plays the game fair or not. For this type of game hog, there is no hope except the full penalty of the law, when and if he is caught. But, for our boys and girls, the future sportsmen of this great country. I firmly believe that if they are given an education in the ways of conservation and taught to obey the game laws of our state the same as they are taught to obey the other laws, they will grow up to be the kind of sportsmen and citizens that will be referred to with pride by the future generations, which is something that we cannot always say of the genera-

• Continued on Page 25

Bicolor for Quail

• Continued from Page 9

habitat are on the decrease. Although different factors operate to limit quail numbers in various parts of the state, increasing food and cover supply where needed is the best known approach to increasing quail. With this must go proper control of the hunting pressure on each land ownership unit.

After several years of trial, bicolor lespedeza appears to be the best food planting that can be used for quail in Eastern Texas. When properly handled, it makes a six to ten foot shrub with a heavy crop of seed. It is a perennial and thus comes out each year without further planting. It is a deep rooted legume that improves soil fertility and once established, it is drought resistant.

Bicolor is widely used in the southeastern states with excellent results. The Game, Fish and Oyster Commission has been making trial plantings in Newton County, Texas, for five years in an effort to learn how the species should be propagated under local conditions. Many of the early trials failed. Planting bicolor seed, as recommended in the southeast, failed repeatedly. Setting transplants failed until certain requirements were discovered. In Wilson county, southeast of San Antonio, termites and drought caused several plantings to fail. In Wise county, northwest of Fort Worth, grasshoppers and insufficient rainfall seemed at the time to be responsible for a failure. At the present, however, better understanding of the plant's requirements justify the conclusion that the failure in Wise county was caused by inadequate preparation of the soil and lack of tillage for at least the first season. It must be emphasized that bicolor lespedeza cannot be started successfully on even terms with our native weeds.

Last winter the department distributed some 65,000 plants to individuals who requested them, in an effort to learn more about where the species will grow in Texas, and how well. Some of the plantings, such as those at Carthage, made excellent growth. Others further west failed, perhaps for lack of rainfall. Although we do not yet know the western limits of the species, we know that it grows well in Eastern Texas. It has been interesting to note that most of those who planted bicolor last winter want more plants this winter.

The species has at least one very definite soil requirement—good drainage. We do not yet know whether it grows in blackland, but in sandy soils it prefers those with good surface and

subsoil drainage. Some of the best plantings were grown on the tops of listed ridges.

Those interested in planting bicolor lespedeza for quail may write the department at Austin. We hope to have 300,000 plants for distribution some time during the winter or early spring. There will be no charge for the plants, although recipients will be expected to pay express charges. The only requirement is that you assure us you can give the plants the following essential care during their first season.

(1) Set plants in rows in plowed and fertilized bed, preferably prepared the fall before.

(2) Cultivate the rows regularly to prevent grass and weed competition.

(3) Protect the plants from all grazing.

(4) Trap or poison all pocket gophers that appear on the strip, otherwise they will eat roots off of enough plants to ruin the planting.

(5) Set the plants in a place near cover where a covey of birds might be expected.

Although we do not know the minimum number of plants required to hold one covey, we recommend 1,500 plants to a planting. However, last year our expected supply of 200,000 plants was reduced to 65,000 and we were forced to distribute only 750 to each applicant. Many of these plantings should be supplemented with more plants.

First Game Laws Passed in 1879

• Continued from Page 12

home and adjoining counties, and remarkable to say, 5,000 licenses were sold the first fiscal year ending in 1910.

In 1915 the limit on quail and doves was cut to 15 a day, and in 1919, ducks, geese and shore birds were given their first protection under state law with a closed season and a bag limit of 25 in any one day; and the season on wood ducks was closed for five years.

The legislature of 1919 gave the turkey hen its first protection from all hunting. This gallant conservation act was just one more courtesy in the long list of nearly 70 years of legislation which was doing but little to check the trend of disappearing game. The closed season on antelope, mountain sheep and prairie chickens had been constantly renewed; other seasons on game shortened, and bag

limits reduced, but this meant little when it is understood that the Department had only six game wardens in the field, outside of a similar number on the coast to look after fishing interests.

After inaugurating a game division in 1907 with the understanding that it must pay its own way, and after refusing the Department more than enough of the game fund to hire half a dozen wardens, the 37th legislature took from the Department the accumulated fund of about \$100,000 and diverted it to other channels.

The outlook for game had never been worse, not only in Texas, but in other parts of the nation. It was Professor Harry Fairfield Osborn, author of the "Age of Mammals," who declared that "We are now at the end of the Age of Mammals," and to this statement was added the comment of William T. Hornaday of the New York Zoo Park, "It is my fear that man's rapacity and greed for wildlife now is so great that nothing will avail to save for the next century anything more of it than mere tattered remnants of a once glorious fauna—rats, mice and English sparrows."

Such was the alarming note sounded 42 years ago with every appearance of a truthful prediction. Without doubt, up to that time the great flights of ducks and geese were decreasing year by year, and the prairie chicken, quail, turkey and deer were dwindling in numbers, and the day of hunting was dropping to a dismal end.

But it was at about that time that spring shooting of ducks was legally stopped, bag limits and seasons were further reduced on other game and a conservation wave was sweeping over the country. Caught in the beneficent trend, the Texas legislature of 1923 turned over the entire game fund to the Department with authority to hire any reasonable number of wardens to enforce the game laws. This was the turning point in the fate of Texas fauna. About 45 wardens were soon placed in the field with the result, among other things, that the sale of hunting licenses was soon doubled; the laws were more strictly observed, and game began to show an increase. The appearance of game wardens in sections where none had ever been seen before, came as a surprise, and as a shock to many who had hitherto indulged in a greater degree of liberty than Patrick Henry had ever dreamed of.

Another chapter in this interesting history of wildlife conservation in Texas will appear in an early issue. —Editor's note.

Turkey Still Tops With Most Gourmets

• Continued from Page 18

described his impression of this strange bird, "the cocks with the great hanging chin," bespoke amusingly of the impression they made upon the unaccustomed eyes of his companions.

Other early writers have told of the huge flocks numbering in the hundreds which were a common sight. Today, the turkey is extinct in many states and only in a few are hunters allowed to take any. Texas is most fortunate to be one of those, where in many counties, turkeys are plentiful enough to allow hunters to bag them. In southwest Texas among the chaparral, in the neighborhood of streams, and in the oak and pinon groves, they are more numerous than in other parts of the state. Wild plum thickets found throughout the brush and hill country are some of their favorite haunts.

Some portions of the state are closed to turkey hunters. The general law provides that a hunter may take three gobblers a season—if he is a good shot or just plain lucky. In all cases, it is best to check the local regulations.

The King of Upland Game Birds—the largest in America—is highly prized by the hunter as a trophy of the chase. As a source of delicious food, it is even more valuable. Commonly linked with Thanksgiving Day, wild turkey eaten at any time makes a day one for offering thanks that such a succulent bird exists.

We have many varied methods for preparation of the turkey for our tables now, but it is doubtful if its flavorful flesh is more desirable to the modern gourmet with today's progress than it would have been had he participated in the devouring of the spitted bird cooked slowly over a fire by Cortez' troopers. The spit method over an open fire was practiced by early American Indians, though traces of "pit" cooking have been found. The Colonists brought with them European tastes and methods which added to the store of already good recipes. It is no problem to cook a turkey. The simplicity of preparation gives possible rein to freedom of imagination to achieve the best flavor. At our fingertips are recipes proven by famous chefs of the world from Paris to China. With this combination of experiment, knowledge, your own good taste, not to mention the sighs of reminiscent gourmets at the thought of wild turkey, the most popular method can be attacked with gusto. It is probably best that some tried and proven recipes and tips begin here. And first of all, here is some advice from a very famous chef.

Chef Yves "Louis" Ploneis who is lord and master of the "21" kitchen in New York, says that any housewife can triumph with game bird dishes if she doesn't get panicky at the thought of a little more complication than meat balls, for instance. He warns that the main danger of failure is in ruining the birds before they ever reach the kitchen. Thus, according to one of the top chefs in the country, the success of game bird cooking begins with the hunter.

Every effort should be made to keep the bird cool. Two schools of thought, both may be right, give us a choice of drawing the birds and removing their crops at once or just before cooking. After the bird has been drawn, shake it and wipe the neck and abdomen clean with a damp cloth; then, with their feathers unplucked, hang them in a cool spot and sprinkle with pepper to keep off flies in an open camp. Cooling period depends on the weather. Cold weather will naturally preserve the bird longer. Chef Ploneis advises with emphasis: "Never, never skin a game bird and never scald it." Pluck it dry and then cut out the oil sacs in the tail. A slightly tainted bird may be saved by washing it in vinegar or salt water.

Rout any possible panic from the kitchen for game bird cooking can be an art—or it can be ordinary. Take good care to enhance and emphasize the gamey flavor of the turkey. It is essential that plenty of fat be used often on any game bird. However, with the greatest care in cooking, your game dish will not be at its best unless it is served at once, hot and aromatic from oven, broiler, or spit.

Roast Wild Turkey

Pick and dress turkey. Rinse cavity with light salt water and wipe with damp cloth. Stuff with chosen dressing. Rub entire surface of bird with salt, then with the following mixture: $\frac{1}{4}$ cup butter and $\frac{1}{4}$ cup flour, creamed. Cover breast with thin slices of salt pork, or country smoked bacon is good. Place turkey breast up on dripping rack in 500 degree oven until well browned (about 20 minutes). Turn bird breast down, steady with small dishes such as custard cups, to keep the delicious moistness of the bird. Reduce the heat to 275 degrees and pour 1 cup of the stock (recipe below) over the turkey. Cover and roast until done, basting every 15 minutes if self-basting roaster is not used. Three hours should be sufficient roasting time for a 12-pound turkey. Turn breast of bird up the last half hour to brown.

Basting Stock

Combine the following: 1 cup water, 1 or 2 celery ribs and leaves chopped,

$\frac{1}{2}$ onion sliced, 1 small carrot, sliced parsley, and salt and pepper.

Now for several dressings excellent for wild turkey.

Chestnut Dressing

1 cup melted butter.
2 teasp. salt
 $\frac{1}{4}$ teasp. pepper
 $\frac{1}{2}$ cup cream
2 cups dry bread in small pieces
4 tbsps. chopped parsley
1 cup chopped celery
6 cups skinned chestnuts

Shell and skin chestnuts. Drop into boiling salted water and cook until soft. After cooked chestnuts have been put through a potato ricer, combine them with other ingredients. This makes sufficient dressing for a small turkey.

Oyster Stuffing

Remove the heart (or eye) from 2 dozen oysters. Mince, then pound to a paste and mix them into the following:

1 ounce butter
1 tbsps. chopped parsley
5 ounces of bread crumbs
 $\frac{1}{2}$ lemon rind grated
dash of cayenne
1 teasp. salt
 $\frac{1}{2}$ teasp. pepper

When well mixed, bind the whole mixture with one egg yolk and a small quantity of the oyster liquor added gradually.

Bread Dressing

6 cups bread in small pieces
3 eggs
6 tbsps. chopped parsley
1 cup chopped celery
 $1\frac{1}{4}$ teasp. salt
 $\frac{3}{4}$ teasp. paprika
 $1\frac{1}{4}$ cups nut meats, preferably black walnuts.

Combine the above ingredients and add milk to moisten. This makes a delicious plain nut dressing. This recipe will serve as a basic dressing to which varied additions may be made.

For instance, saute the chopped giblets in $\frac{1}{4}$ -cup butter with 2 tablespoons of chopped onion and add to the basic mixture. By the same token, raw whole oysters may be used instead of giblets. By increasing the amount of chopped celery to 1 quart and adding $\frac{1}{2}$ -teaspoonful of celery seed—celery dressing that is very tasty—or if, in addition to this same variation $\frac{1}{4}$ -pound of uncooked shredded dried apples is mixed in—the result is excellent as well as new. These are only a few. According to your own tastes, other ingredients may please your family's palate more.

We are familiar with leftover turkey dishes such as hash, scrapple, creamed turkey, and many others which helps to avoid waste. The taste

for the above dishes is dimmed quite often because of the sameness of flavor and the family looks forward to the day after with dread. How often you hear "Eat some more—or we'll get it all week." Well—here is a recipe with a slightly new angle that will add zest to the leftover turkey meat and speed to the second helping.

Spanish Turkey

1 cup cooked turkey minced.
¼-cup minced ham.
2 cups hot boiled rice
1 clove garlic finely minced.
1 cup mashed potatoes
½-cup turkey gravy
3 canned pimientos chopped fine
¼-cup grated cheddar cheese.

Into the turkey gravy, mix the meats and potatoes. Salt and pepper to taste. Put this mixture into 6 buttered ramekins and cover with layer of rice which has the garlic and pimientos stirred in. (A dash of thick Spanish tomato sauce with or without hot sauce as desired, may be mixed with the rice, garlic and pimientos for one variation.) Sprinkle with grated cheese and heat in a fast oven. Serve at once with thin toast on the side.—Thed Bourke.

Fast Guns and Results

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what would happen to a 1,000-1,800-pound animal when fired on with a .50 caliber, or larger, gun.

Observers reported that almost all members of the deer tribe, when absorbing six or eight streams of .50 caliber bullets, would seem to shudder for an instant, then sink to the ground. Occasionally, a moose or grizzly, not receiving direct hits, would jump or rear and wheel back as the huge roaring bird swooped down and over them. Of course, the riddled bodies would stagger only a matter of steps before collapsing. Frightened animals, running from low-flying planes, could take an amazing number of the 711-grain pills before rolling to a dead stop—sometimes, according to my informant, the beasts would remain on their feet for as long as five seconds. Naturally, the H.E. shells were somewhat more brutal on these kinds of animals, also.

In a neighboring state I saw elk which had been machine-gunned from a low-flying plane with a .45 caliber "Tommy Gun". The shooters, evidently, dived on the animals, then showered down on their backs when the range grew short enough. The 230-grain metal-cased slugs plowed into the backbone area and rib cage—very few

of them making their way completely through the heavy, thick carcasses, however. One bullet—even a M.C. one—in, or near, the spine was all it took to down the mighty beasts; and if they did not die on the spot, a ground crew in cahoots with the flyers, soon found the kills which were packed out to a remote mountain cabin to await a substantial offer from an unfortunate hunter (not sportsman). Yes, gangster methods are often practiced even in connection with the grand and glorious sport of hunting our big game animals.

I have used, experimentally, American and German "chatter guns" on different kinds of condemned domestic animals, fowls, and predatory animals—besides numerous man-made targets. From all observations, all machine guns were designed to kill and destroy in a wholesale manner, and vicious killers and destroyers they are. I well know that it is no cinch to connect on aerial targets with air-borne guns, but I have found that missing a target located on the ground with a fairly well aimed full automatic firearm is a bit like missing a big chrysanthemum with a spraying garden hose. If the first slug does not get the job done, there is a whole crew of deadly little helpers following right behind it.

NINE TIMES OUT OF TEN, it is a Christmas morning, or maybe a Christmas Eve night, which brings future hunters their first honest-to-goodness shootin' iron—a .22, a .410 or light 20-gauge shot gun.

Probably, the most lethal weapon ever owned by Junior—previous to the spine-tingling moment when he first grasps that smooth wood stock, runs his hands along the blue steel barrel, inhales that fragrance of factory newness—was a "B-B" gun, or nigger-shooter.

Fathers, do not let this big day—especially tailored for fond memories—shrink into insignificance in the minds of our embryonic nimrods by not giving an ample portion of your time to acquaint them with the essentials of genuine sportsmanship, and to instruct them on proper gun handling. Arm the youngsters with a thorough knowledge of the new toy's deadliness, of its ability to provide supreme pleasure and joy.

While those young minds are eager to absorb every tiny particle of information about "my new gun", expose them to the unwritten laws concerning gun behavior, field etiquette, and safety—those rules which will cull your sons from the menaces on the range, the game hogs in the woods, and the just plain damn fools so often found possessing a firearm.—A.W.III.

Letters

• Continued from Page 22

tion that preceded us. Especially, as far as the game situation is concerned.—K. L. Fregia, Highlands, Texas.

The October Cover

Dear Sir: Who said the cover of the October magazine is a Mallard? In my books, Mallards, especially the male, have a green head and a yellow bill and this duck looks too much like a bull sprig to satisfy me that it is a mallard.—S. L. Gill, Raymondville, Texas.

Dear Sir: I know you have unusual things in Texas but your cover on your October issue of a mallard beats all. Either you or Mr. Rice don't know your ducks too well.—Sante Fe Sporting Goods Co., Sante Fe, New Mexico.

Dear Sir: It seems some one should study up on his ducks.—J. R. Schmidt, La Porte, Texas.

Dear Sir: By what authority do you change the name of a Pintail duck to a Mallard?—Paul V. Johnson, Commerce, Texas.

Dear Sir: I have on my desk at this moment the October issue of Texas Game and Fish and have just read on page three the wonderful picture story of the Lordly Mallard. Now I have nothing against the Pintail pictured by this article and also on the front cover, but I do believe that it would have been more appropriate for the big fat "Greenhead" to have been shown. For 30 years I have added both of them to my bag, but there seems to be something about the Mallard that is lacking in other ducks.—A. E. Odom, Jr., Jacksonville, Texas.

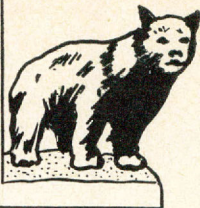
Dear Sir: You can't fool us. That ain't no Mallard on the October issue. We wouldn't have known either several years ago, but during these days the duck hunter that doesn't have a book on "20-20 vision at 40 yards," "how to count to four" and "what kind?" is lost in some "up the river."—Ted MacIntyre and Harold Smith, San Marcos, Texas.

Dear Sir: I saw that unfortunate error in the box note inside the October cover alluding to the cover picture. That was too bad for it is a fine painting and the reference was so nice except for the misfortune of the "highly Mallard" instead of the beautifully pictured bull sprig. But let's forget that one.—Wirt C. Welch, Dallas, Texas.

Let's do.—The Editor.



BOOKS



NORTH AMERICAN WATERFOWL—by Albert N. Day; 329 xx pages. Illustrated by Bob Hines, 59 half-tones and six figures. Published by Stackpole and Heck, Incorporated, the Telegraph Press Building, Harrisburg, Pennsylvania; 1949. Price \$4.75.

This is probably the first book to be devoted exclusively to American waterfowl administration. It was written by the man best qualified to prepare such a work, the director of the U. S. Fish and Wildlife Service. On the broad shoulders of Mr. Day each year falls most of the heavy responsibility for setting regulations governing the hunting of migratory game birds in the United States and Alaska.

Devising regulations which will insure enough protection for waterfowl to preserve hunting for future generations and which will, at the same time, satisfy some two million individual hunters is a superman task. Mr. Day makes it quite clear that the Service usually must consider the welfare of the waterfowl first and that of the sportsman secondly. The early history of waterfowl management, the jobs of the flyway biologists, the work of federal game management agents who enforce the migratory bird hunting laws, the story of the development of the refuge system, the growing position of states in the waterfowl management program, and the Mexican waterfowl situation, all are discussed in detail.

To those hunters who make the oft-repeated accusation that federal administrators are "armchair bureaucrats," to those who question the need and value of refuges, and to those who feel that all hunting should be regulated on a local or regional basis, this book is particularly recommended. The author pulls no punches and does no shadow boxing in answering critics of what is probably the best possible program of waterfowl management consistent with our modern industrialization. This is a well-written book which should be read by everyone interested in the preservation of the waterfowl resource. It should do much to dispel the curtain of fog which lies between many duck hunters and the game administrators of the Federal Government.

THE LIFE STORY OF THE FISH: HIS MORALS AND MANNERS—by Brian Curtis; 284 xii pages. Illustrated with 34 drawings and six half-tones. Published by Harcourt, Brace and Company, 383 Madison Avenue, New York 17, New York; 1949 Revised. Price \$3.75.

Although this book first appeared some 10 years ago, it has suffered none with the passage of time. The author probably was the first to recognize the void that exists between the ichthyologist and the average angler and to do something about it.

Technical books are standard tools of the scientist, but most fishermen without a thorough background in biology would become lost after reading a few pages of most of them. Volumes written by anglers frequently skim lightly over the biology of the fish and many contain inaccurate statement. The author, as a biologist, sought to remedy this deficiency by approaching a technical subject from a nontechnical angle. The result is this book—scientifically accurate yet entertaining, delightfully readable, and extremely interesting. Any angler who wishes to know more about fish, their needs and habits, their life histories and food, should read it. Some scientists may take exception to the author's light approach to grim biological facts. Literature for sportsmen, however, would be more complete if more biologists would step out of their laboratories as a few have done and would give the layman scientifically accurate facts on fish and game in language he could understand.

THE SAGA OF THE WATERFOWL—by Martin Bovey; 141 xiv pages. Illustrated with 71 half-tones, 3 pen-and-ink drawings by Francis Lee Jaques. Published by the Wildlife Management Institute, 824 Investment Building, Washington 5, D. C., 1949. Price \$5.00.

Old timers still speak nostalgically of 25-duck bag limits and four-month open seasons, of shooting over live decoys and over baited fields. Neither they nor probably any other living American is likely to see the restoration of these discarded institutions.

The reason is not hard to find for those who think things through. When more people must be fed from a smaller loaf, the bread must be sliced thinner. The goal of conservationists today is not to restore baiting and 25-duck limits, but to make certain that waterfowl are preserved for posterity and to try to assure sportsmen of a harvestable annual surplus of a natural crop.

The story of the waterfowl decline and its causes, the last-minute rescue of duck hunting in the 1930's, the rise of a strong conservation movement, and prospects for the future, all are told in this unusual volume. In a sense, it is the story of American conservation, for the welfare of soil, water, forests and wildlife are so interwoven that isolation of any one resource is impossible. Pressure on the land for food and clothing, ditching of marshes for mosquito control or to make work for the jobless, drought cycles aggravated by greed fanned by high wheat prices, denuded watersheds and lowered water tables—these and other factors have bearing on whether there will be more or fewer ducks. Using magnificent photographs, each bolstered by a few lines of vivid prose, Martin Bovey tells the story more forcefully than would have been possible in an unillustrated volume containing many times more words. Both words and illustrations carry a message which should be read and memorized by everyone who hopes that his sons and grandsons will know the thrill of wing music in the dawn.

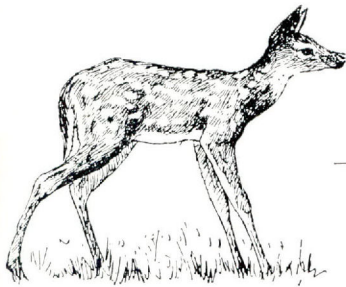
Cure Believed Near For Spotted Fever

Two new antibiotics, aureomycin and chloromycin, have been discovered which show promise of effecting cures for the dreaded Rocky Mountain spotted fever.

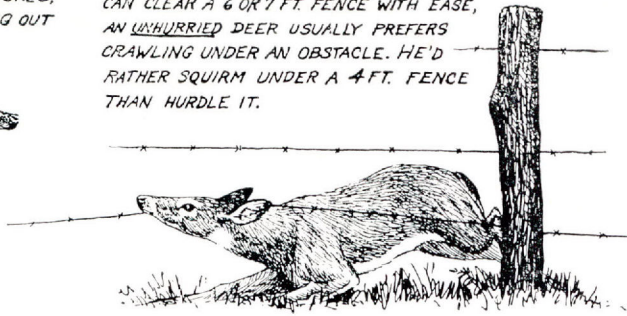
Neither drug has been completely tested although excellent results on 20 cases are reported. The tick-transmitted fever presents one of the most feared hazards of the outdoorsman in a large part of North America. While reluctant to predict that these drugs will cure tularemia as well, the U. S. Fish and Wildlife Service indicates that good results have been obtained in experiments with infected animals. In its methodical, close-mouthed way, the medical profession is making strides toward mitigating this scourge of the small-game hunter.

It takes a lot of patience to be a careful hunter but those who aren't are often patients.

THE BELIEF THAT Fawns GIVE OFF NO SCENT IS ERRONEOUS — DOGS, FOXES, ETC. HAVE NO DIFFICULTY SNIFFING OUT THEIR LOCATIONS.



THOUGH HE'S OUR MOST FAMOUS HIGH-JUMPER AND CAN CLEAR A 6 OR 7 FT. FENCE WITH EASE, AN UNHURRIED DEER USUALLY PREFERS CRAWLING UNDER AN OBSTACLE. HE'D RATHER SQUIRM UNDER A 4 FT. FENCE THAN HURDLE IT.



OUR WHITE-TAIL CAN BE DISTINGUISHED BY THE TAIL AND THE SMALL METATARSAL GLAND (R). THESE FEATURES ON BLACK-TAILS ARE SHOWN IN FIG. B, AND FIG. C SHOWS THE MULE DEER.

White-tail Facts

BY E. STANLEY SMITH



A DEER OF EITHER SEX LEAVES AN IMPRINT LIKE THIS ONE ON FAIRLY HARD GROUND OR LIGHT SNOW.



IN SOFT SOIL OR SEVERAL INCHES OF SNOW THE PRINT ON THE LEFT COULD HAVE BEEN MADE BY A BUCK OR A DOE.

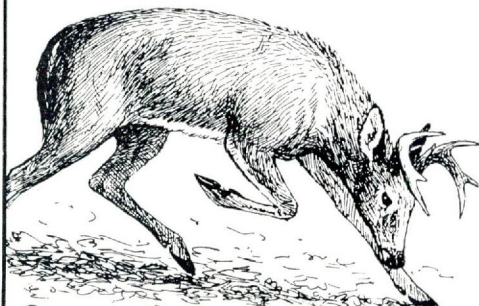


WHEN POURING ON THE STEAM, AS THIS DEER WAS DOING, BOTH BUCK & DOES LEAVE IMPRINTS OF THEIR DEW-CLAWS....

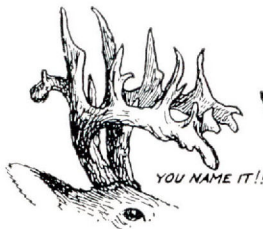
YOU'RE JUST KIDDING YOURSELF IF YOU THINK ALL TRACKS SHOWING DEW-CLAW MARKS WERE MADE BY BUCKS.. ALL DEER HAVE DEW-CLAWS, AND ALL LEAVE THEIR IMPRINT UNDER THE PROPER CONDITIONS.



DON'T BE MISLED BY THE POPULAR THEORY THAT A WOUNDED DEER ALWAYS SLAPS DOWN HIS TAIL, WHILE AN UNHURT ANIMAL INVARIABLY RAISES IT WHEN RUNNING AWAY. EXCEPTIONS ARE SUFFICIENTLY COMMON TO WARRANT A COMPLETE INVESTIGATION AFTER SHOOTING AT A DEER, REGARDLESS OF THE POSITION OF HIS FLAG..



DURING THE MATING SEASON AMOROUS BUCKS LOSE ALL THEIR CUSTOMARY WARINESS AND FOLLOW THE TRAIL OF DESIRABLE DOES SO INTENTLY THAT OLD-TIME HUNTERS OFTEN KILLED 4 OR 5 BUCKS SEVERAL MINUTES APART BY WAITING ON THE TRACK OF A DOE.



YOU NAME IT!!



A RARE 3-HORNED BUCK



"DON'T SHOOT!!" A FREAK SPIKE-HORN.



PALMATED ANTLERS — A "SHOVEL BUCK".



HIGH AND NARROW

WHITE-TAIL ANTLERS COME IN A VARIETY OF SHAPES & SIZES. ABOVE ARE A FEW.

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2. Because TEXAS GAME and FISH reaches the very persons you want to reach — the men and women and youngsters who REALLY LAY THEIR DOUGH ON THE LINE for hunting and fishing equipment that will get the job done. Ninety-two percent of the readers of TEXAS GAME and FISH are buyers of hunting and fishing licenses. Think that over, because Texans don't buy hunting and fishing licenses to frame.
3. Because TEXAS GAME and FISH is adding new subscribers at a rate better than 500 a month WITHOUT THE USE OF PREMIUMS — HIGH PRESSURE SOLICITORS — OR A CLUB RATE. Subscribers lay one buck on the barrel head for a one-year subscription to TEXAS GAME and FISH and in return they get a magazine THEY LIKE and SWEAR BY.
4. Because TEXAS GAME and FISH right now has a PAID circulation of more than four times the combined circulation of all the other hunting and fishing magazines IN TEXAS. And TEXAS GAME and FISH is growing rapidly. A low basic rate, which is bound to be upped very shortly, makes TEXAS GAME and FISH a "MUST BUY" on the schedule of alert and progressive manufacturers and advertising agencies.

**To Really Reach the TEXAS Market
You MUST Use TEXAS GAME and FISH**