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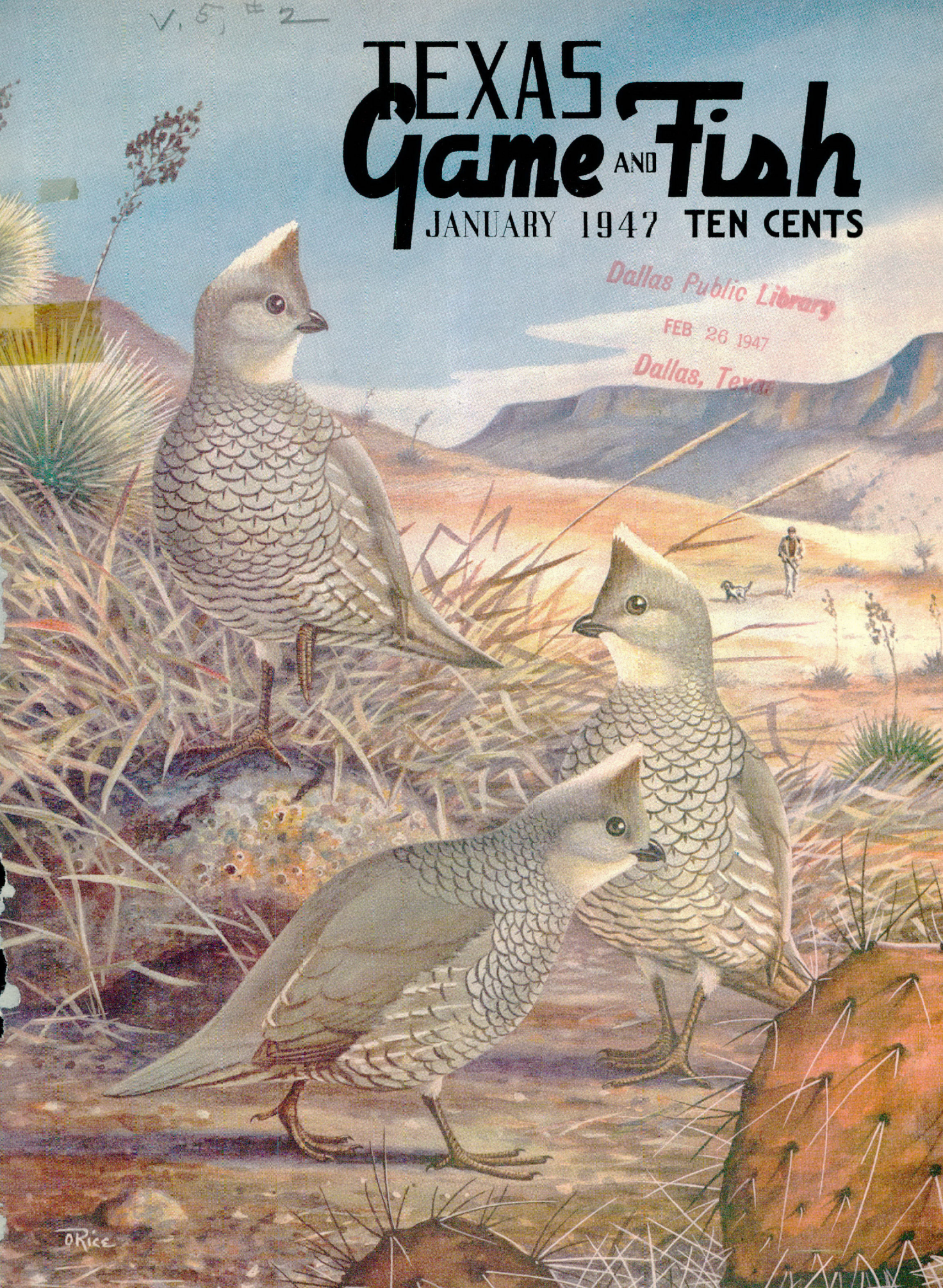
TEXAS *Game* AND *Fish*

JANUARY 1947 TEN CENTS

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TEXAS GAME and FISH

WALTON BLDG.

AUSTIN, TEXAS

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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ROGER M. BUSFIELD
Editor

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Game and Fish Once Were Plentiful
Where Coastal Metropolis Stands

Old Times in Houston

J. L. BAUGHMAN

TODAY, when speckled trout are scarcer than hen's teeth, and prairie chickens rarer than so much fine gold, it may be of interest, particularly to Harris County sportsmen to recall a time when Buffalo Bayou was once a splendid fishing place, and the birds could be killed on the prairies where the Kirby residence now stands.

Impossible as this may now seem, nevertheless it is true. During the years I lived in Houston it was my privilege and my pleasure to talk to many of the elder sportsmen of that place. The stories they told me of those earlier times are here woven into a connected narrative for the edification of the members of "Lake Oshman," the informal noon-day gathering that has held forth for many years in the rear of Oshman's store in that city.

Before his untimely death in a hunting accident a few years ago, I had the good fortune to know Mr. A. E. Kiesling, who had lived in Houston for seventy-five years.

"My earliest recollection of fishing," said he, "is as a small boy, when I used to go in a boat with an older friend of mine to pick up the buffalo fish he used



DUCK HUNTING was good around Houston in the early 20's as these two photos show.



to poison with Indian fish berries. These fish berries were called *Cocculus indicus*, and negroes and boys used to use them a lot. Every druggist sold them, and later on, when we had a drug store, I remember that there was a bottle up near the front of the store, with a gold label, that said *Cocculus indicus* on it. You could buy a lot of them for a quarter, and we would grind them up and mix them with corn meal and cotton to make them hold together in little balls, before we threw them overboard. We used to fish at Shrimp's field, in the second ward, at the foot of Runnels Street.

"We caught bass in the Bayou then, and gaspergou, sun perch, goggle eyes and during a freset, plenty of yellow catfish. We didn't call them bass, however, and I wouldn't have known what you were talking about if you had asked me for one. We always called them trout and fished for them with worms. We didn't know how to fish for them then, but if we had used grasshoppers we would have cleaned up.

"Fish boats used to come up to the

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TEXAS GAME AND FISH

**When Range Is Improved
Wildlife Is Benefited**

What the King Ranch Is Doing About Game

By J. G. BURR

EVER hear of the King Ranch with headquarters at Kingsville, Texas? Quite likely, but even so there is still a lot that has not been told. The King Ranch is a distinctive region of the southland which has been written about again and again, and this is not assumed to be a final report. It may be and probably is just one of a series in the unfoldment of a program.

This is not the time and place for anything more than a passing mention of the primary purpose of the ranch which is to produce and market the finest beef cattle in the world. This largest of all ranches, with its 900,000 acres sprawling over seven counties, has built up this best of all breeds for warm climates, known as the Santa Gertrudis, which resulted from blending the Shorthorn and Brahman cattle. The proportion of the blend is said to be three-fifths Shorthorn and two-fifths Brahman.



QUALITY COVER formed by pruning greynone (*Celtis pallida*) which previously was too open to protect quail. This was pruned back in May; photo in August.

The writer has seen many cattle in his day on the ranges of the southwest, but never anything that compares in size with the Santa Gertrudis breed. While this enterprise has been going on, other possibilities have been kept in

mind, to-wit, the by-product of wildlife resources.

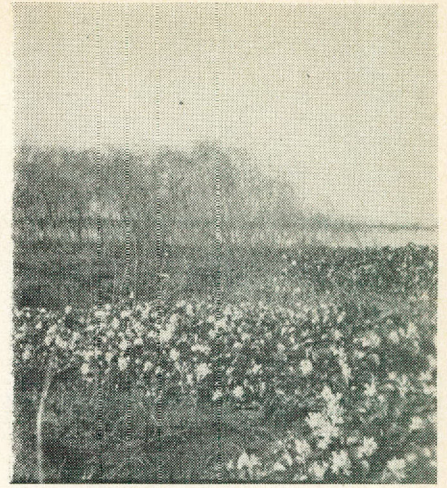
Early in the history of the ranch, the Klebergs found that by improving range conditions all animal life benefited, and



TEMPORARY BRUSH shelter made of limbs obtained by pruning greynone provide good cover while new growth comes on.

that may explain why the ranch has more game in some sections than has any other territory in the country. Mr. Caesar Kleberg, for many years a member of the State Game Commission, was active in the work of game conservation. Not less interested and active in wildlife was his cousin, Robert J. Kleberg, Jr., who is the present manager of the ranch. Mr. Kleberg is a strong advocate of wildlife management practices and holds the view that it is the most neglected phase of any of the forms of land management. Thus it can be no surprise that he has called in a skilled technician, Valgene Lehmann, formerly with the state game department, and placed him in charge of the work of expanding this natural resource.

Having known Mr. Lehmann as a budding biologist, who pioneered in wildlife and made history for the Game, Fish and Oyster Commission, I naturally desired to visit the King Ranch and take a few notes. What I am to



A LAKESIDE PLANTING of water hyacinth and sesbania reduces wave action, increases food and cover for waterfowl and game fish.

write is based on the few notes taken in a period of one day riding over several thousand acres in a jeep.

On entering the area to be studied, we left the roads and plunged into the grassy terrain. The grass was more than knee high so that the character of our invisible pathway could best be discerned by the jolts of the jeep and by our ability to hang on with both hands and survive in our struggle with environment. Environment, as we have learned, has more to do with the survival of species, even that of *Homo sapiens*, than nearly anything else. But we came through with no greater impediment than a few head-ons with badger holes which did us no harm.

Most people have heard of the great quantity of game such as deer, turkey, quail and white-wings. There are even mythical stories of buffalo and elands. Big game hunters with dogs may hunt lions (cougars) as long as the supply lasts, and there is no bag limit or closed season. But such was not our present intention. We were looking for the lowly quail which is now receiving more at-

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LUXURIANT STRIP of sesbania (*Sesbania macrocarpa*) provides abundant quail food.



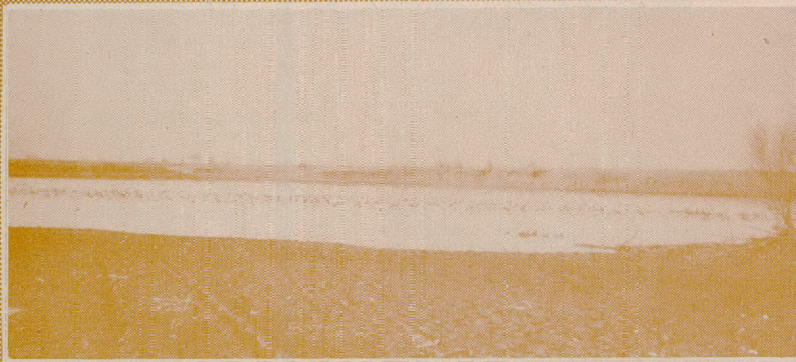
**What Ducks Do On
Wintering Grounds**

Ducks in East Texas

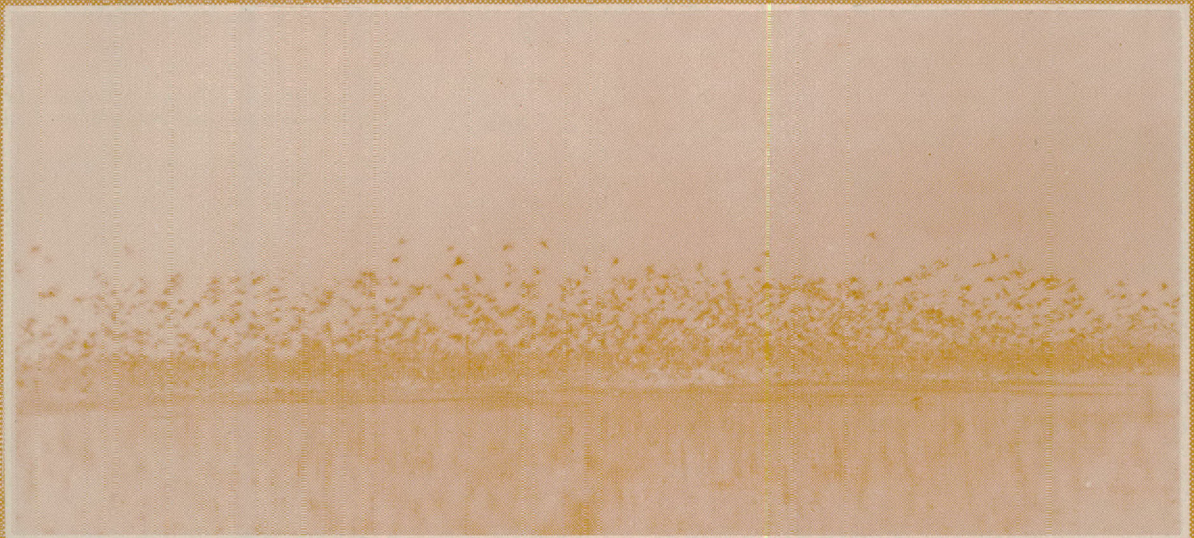
By H. R. SIEGLER



DUCKS BY THE THOUSANDS spend the winter on the lakes and rivers in East Texas but the most interesting duck to those who are interested in bird life is the Mallard, highly prized by all nimrods.



THE QUACKERS usually pick out an isolated body of water to rest after a night of feeding in the marshes and in the rice fields along the coast. A hunter would have a difficult time approaching this body of water without alarming the ducks. Lower photo: At times the flights of ducks literally blacken the skies.



WHAT manner of life do ducks live during their winter months in the timbered region of eastern Texas? The ducks' daily activities during this period are admittedly less colorful than his behavior during the mating season, but they are none the less important to his welfare. We must understand how they fit into his winter environment on the small lakes and river bottom sloughs of the East Texas region if we are to make intelligent recommendations for this area. Activities during the winter period in eastern Texas as elsewhere are chiefly concerned with the daily quest for food, rest, sleep, and avoidance of enemies. Since the mallard and the ring-necked duck are by far the most common ducks killed by hunters in this region, attention throughout the study was focused on their activities and those of the ever-present wood duck.

Mallard ducks ride into eastern Texas on the wings of inclement weather generally during the latter part of Novem-

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Restoration of Habitat Necessary For Increase in Game Production

Changing Concepts of Wildlife Management

By DR. IRA N. GABRIELSON

THE management of the wildlife resources has been successively based on different ideas. Each had its enthusiastic proponents who were sure that their concept provided the method to insure every hunter's and every fisherman's dreams of endless sport.

One after another the believer in regulated hunting, in artificial propagation and stocking, and in refuges—to mention only three of the more important—have had their innings. Yet no one of these methods for increasing stocks of wildlife have proved to be the answer. All remain and probably will remain useful tools of proper management.

Certainly no thinking sportsman can seriously believe that it will ever be possible to go without some restriction on the human harvest of these natural resources. The type and degree of regulation may change from year to year but regulations will always be a part of the management program.

Likewise few successful management programs and no successful restoration program has to date been put into operation without furnishing sanctuary for necessary breeding stocks by some method or other. It may have been by permanent or temporary refuges, by refuges that were provided primarily for that purpose, or by either public or private lands that were closed to hunting or fishing for other than wildlife conservation reasons but that nevertheless did furnish the necessary protection provided by refuges. There is little doubt that refuges both formal and otherwise, which are refuges in fact though not in name, will always be used in management programs.

Neither is there much doubt that restocking will always remain a useful and, under some circumstances, a mighty important tool in management.

The latest and, so far as its been tried, the most effective method for producing game and fish is restoration of proper living conditions for them. Along with this must go vigorous efforts to preserve such good environment as may still exist. Obviously no gain is achieved if an acre of productive land or water is destroyed for each new acre that may

be restored. All that has been accomplished has been a shifting of population to conform to the changing conditions.

The development of suitable environment has demonstrated that this method will produce more game and fish annually at a cheaper unit cost than any other method yet found. It is nature's way of producing wildlife and it has the enormous additional advantage of fitting in well with the vitally important program of soil conservation and management.

It cannot produce indefinitely expanding quantities of wildlife for there is a

The author of this article needs no introduction to any segment of the hunting and fishing public. One of the world's foremost authorities in wildlife conservation, Dr. Gabrielson recently resigned as chief of the U. S. Fish and Wildlife Service to become president of the new Wildlife Management Institute. In this role his rich experience as biologist and administrator, and his keen insight into fish and game problems, become available to federal government, to all the states, and to the public.—Editor.

definite limit to the amount of life that can be produced even on the best and most suitable land.

The idea of producing unlimited supplies of wildlife on any area of land, however good it may be, is as absurd as the idea of producing 1000 bushels of corn to the acre would be if a farmer expected to do it on land now producing 70 bushels with the very best farming practices. It is said that nothing is impossible. Some day the 1000 bushels of corn per acre may be done but it will take revolutionary changes in present knowledge and methods to bring it about.

If the understanding that only a limited amount of life can be produced on any area is applied to quail—a widely-

loved upland game bird in Missouri—the limitation becomes clear. There have been cases where careful management has maintained a breeding population of a bird to the acre. On good average quail land, however, the natural ceiling is a bird to from 5 to 10 acres—a population which rapidly thins out as land becomes less suited for quail use.

The living requirements of bobwhite are better known than those of any other upland game bird and, therefore, an application of this knowledge is surer to produce results than in other species that have been less intensively studied.

What should be done to produce the greatest annual crop of quail on a given area? Or as one man put it to me recently, what would you do if given 10,000 acres of land and plenty of money to produce a crop of quail? The answer to me is clear. The first job undertaken would be to provide the best living conditions for the greatest number of pairs of breeding birds, and fall and winter feed and cover for the greatest number of covies. These food and cover requirements are well known and equally well known is the necessity of the two being in the proper relation with each other.

In other words I'd spend my first money and efforts in providing the necessary living conditions over as large an area as the character of the land and its other uses would permit. This would be the sensible thing for two reasons: First, that with little or no annual expense, these suitable sites would produce and shelter a new crop of quail each year while others were being developed; and secondly, they would provide the cheapest birds over a term of years.

Once the maximum suitable cover and food had been attained, I'd spend annually the necessary money to keep it in top condition, in order to get the continuing benefit of this natural production.

Next—if the money still held out I'd provide for restocking in very bad seasons, or in areas that for irremediable reasons remained with populations below carrying capacity. This stock might be obtained by trapping wild birds in areas where populations were high. In fact, wild trapping would be first preference if on the area under control an uneven distribution of birds in suitable coverts remained after the shooting season. I might or might not provide facilities for raising some birds, the decision depending on the frequency of bad seasons, the extent of restocking necessary because of spotty distribution, and the availability of wild stocks. Frequently it is cheaper to trap and move wild birds if an assured source of supply is available.

Lastly, if money were available after these programs had been carried out and the suppliers of these funds wanted a greater harvest than the land would produce, I'd fall back on the system used in England and on some of the

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Upland Hunting!



THE BOBWHITE is the Prince of the upland game birds and each fall thousands of nimrods with their favorite bird dogs go into the fields in search of quail. Quail hunting was rather spotty this fall although reports indicated an increase of about 25 percent in the quail popula-

tion. The spotty hunting is due to the fact that the coveys are well scattered, which is a break for Mr. and Mrs. Bobwhite but tough on the hunter and his dog.



MORE THAN HALF of the sport of quail hunting is watching a good bird dog work and in the lower left photo a quail has been retrieved by a dog for his master. In the lower right photo is a covey of quail that ambled across the square in Victoria, British Columbia, unheedful of traffic.



Scottie and Blackie

By **CAS EDWARDS**

Photo by **HAROLD KING**



SCOTTIE AND BLACKIE, inseparable companions, owned by Jimmie Bloys of Fort Davis.

NOT long ago, while visiting in the mile-high city of Fort Davis in the Big Bend Country, I met a friend, Harold King, who gave me a picture and an unusual story of a boy, a dog and a raven.

Jimmie Bloys was the boy who owned a very smart dog named Scotty, and everything that belonged to Jimmie was always looked after by Scotty.

One day a friend brought Jimmie a very small raven that had been found in an abandoned nest, so Jimmie and Scotty were both happy to have a new pet which was given the name, Blackie.

As the raven grew larger and began to fly about in search of food Scotty would trail along and keep an eye on him. When tired of flying Blackie would coast down and light on Scotty's back where he would ride as Scotty traveled about town. Sometimes when Blackie was flying about, a bunch of sparrows or other small birds would take after him as they often do. Blackie soon learned to sail back to the ground and light between Scotty's front feet where he was protected from his tormentors.

When someone gave Blackie a pecan or other nut he could not crack, he flew to Scotty and dropped it in front of him. The dog would immediately pick it up and crack it if possible and drop it back on the ground for Blackie to eat.

For a year and a half this strange friendship lasted and during the time Blackie grew to be such a large bird that he looked almost as big as Scotty when he spread his wings in flight. As he grew bigger he extended his flying trips farther and farther away from town, but never did he forget to return to see Scotty and take long rides around town on the dog's back.

Finally Jimmie's family moved from Fort Davis to a town some distance away. Scotty was taken along, but Blackie was now so large and such a good flyer that it was thought best to leave him instead of trying to put him in a cage for transportation. For a time the big raven was now and then seen in flight around Fort Davis, apparently looking for his friend Scotty, but as time passed his visit became less frequent until finally there was no Blackie as well as no Scotty in Fort Davis, and friends of these two friends missed them greatly.

Skinning a Fox and Stretching the Hide

NOW that the trapping season is upon us I think it might be a very opportune time to give the new trapper a little help in the correct method of skinning a fox and caring for the hide after it is removed from the carcass. I have handled over a thousand fox hides in the past year and it is surprising how poorly cared for many of the hides are, even some of those brought in by men who have been trapping for years. I realize that the price of the hides has been very discouraging the past few years but it is worth something in satisfaction to the trapper himself to look at or show his friends a group of hides all skinned and stretched and cared for in the same manner and hanging side by side from the rafter or wire on which they are strung.

In the first place I like to skin a fox not too long after killing. It skins easier

then than if one waits until it gets cold. If the carcass is frozen it is even necessary to thaw it out before it can be skinned. Before I start skinning I always comb all the burrs and mats of dead fur out. Some of the under-fur will come out with the burrs, but it will look much better with them out than to leave them in.

The first thing I do is to cut up each hind leg from the ball of the foot to the side of the vent. Make the cut just slightly on the under side of the back of the leg. Now join the two cuts across under the vent. Next split the front legs up the back from below the ball of the foot to just above the elbow. Now work the skin loose from the hind leg down to the foot. Cut the pad loose from the bone and pull the skin down over the toes. Cut off the bones of the toes with

By **JOHN F. BLAIR**



a pair of nippers at first joint to the toenail. Cut the vent loose from the body just under the hide and work the fingers under the hide up over the back by the root of the tail. Split up the tail on the under side three or four inches and work the skin loose from the bone until you can get a good hold on the bone at the root of the tail. Slip a clothespin across the bone and far out the tail as you have skinned and grip the clothespin firmly and pull with the other hand and you should be able to pull the bone out of the skin.

Now take a stay from an umbrella and run it into the hole where the tail-bone was, clear to the tip with the hollow part of the stay next to the lower skin of the tail. Be sure that the tail is straightened out as it was on the fox and has not rolled or twisted. Now run a sharp knife up the tail with point in the hollow part of the stay. It is neces-

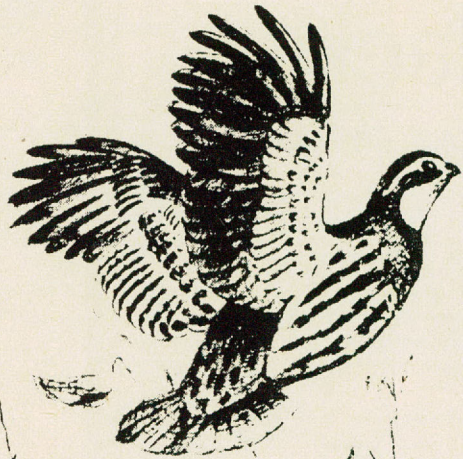
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BOBWHITE—PRINCE OF GAME BIRDS

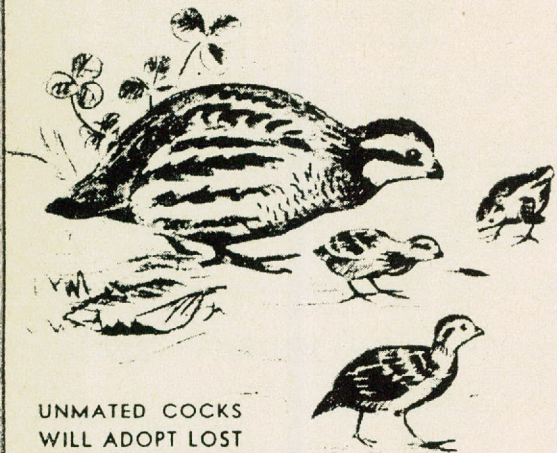
HUNTERS KNOW HIM BEST IN THE FALL, BUT HIS LIFE DURING THE REST OF THE YEAR IS OF EQUAL INTEREST TO ALL WHO VALUE THIS VERSATILE BIRD.



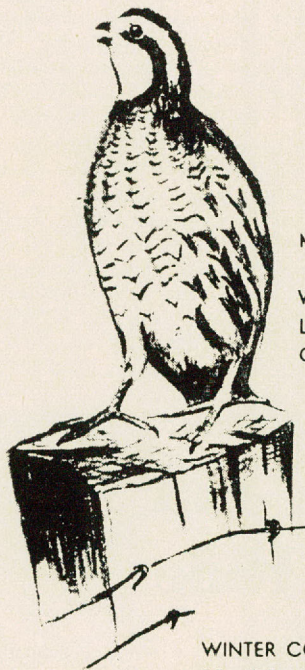
A COVEY USUALLY ROOSTS IN A CIRCLE BECAUSE THIS ARRANGEMENT CONSERVES BODY HEAT, ALLOWS FOR WATCHFULNESS IN EVERY DIRECTION; AND IN CASE OF DISTURBANCE EACH BIRD HAS ROOM FOR THE EXPLOSIVE GETAWAY.



MATURE BOBWITES FLY AT SPEEDS RANGING FROM 28 TO 40 MILES PER HOUR—NO WONDER THOSE NEAR MISSES.

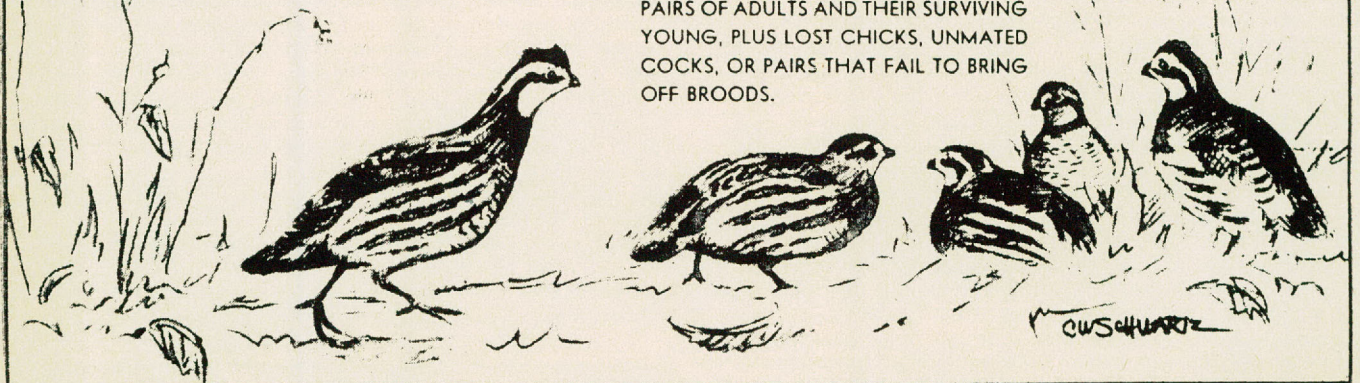


UNMATED COCKS WILL ADOPT LOST QUAIL CHICKS THAT WOULD OTHERWISE PERISH. THIS EXPLAINS WHY BROODS OF MIXED AGE GROUPS ARE OCCASIONALLY SEEN.



MOST OF THE PERSISTENT WHISTLING IN LATE SUMMER COMES FROM UNMATED COCKS.

WINTER COVEYS MAY BE COMPOSED OF FROM ONE TO THREE PAIRS OF ADULTS AND THEIR SURVIVING YOUNG, PLUS LOST CHICKS, UNMATED COCKS, OR PAIRS THAT FAIL TO BRING OFF BROODS.



CWSCHWARTZ

Prairie Dogs As Pets

PRAIRIE dogs make the best pets of animals he has ever owned, so says F. Hiner Dale, District Judge of Guymon, Oklahoma. The Judge has always been a lover of wildlife and has had many pets from bears to guinea pigs. He has come to the conclusion that the prairie dog of the plains is the most interesting of all and he speaks from experience. For over 40 years he has owned and dealt in prairie dogs. During the dry years, to make a living, he organized the "Great Western Prairie Dog Company" and sold prairie dogs in the east for pets at \$5.00 apiece.

The Judge says that prairie dogs make the best pets when taken from their dens while young. There are many ways to capture prairie dogs. An effective way to capture young ones when seen feeding about their dens is to rush upon them in a car or on foot and place your hands over the entrance to their home. The young ones are at first bewildered, but they soon decide to run to their home or a nearby den. Those that run to their home can be easily picked up, while those that take refuge in a nearby den come home in a few minutes, and can be easily taken. This is the way that Willis Forbes, Chief of Police of Guymon, and W. S. Williams of Guymon, an employee of the Phillips Petroleum Company, get the young ones. It is not unusual for these men, in season, to catch a dozen young ones in an evening.

A common way to catch both old and young ones is to drown them out. After a heavy rain, surface water is ditched into their den and they soon come up struggling for air.

Earl Smith of Guymon, of the Smith Brothers Feed Store, takes a fishing line and makes a noose, which he places in the den, where dogs have been seen. The prairie dog soon reappears, and Earl, who stands 50 yards away, pulls the string, which tightens the noose about the head or body of the prairie dog, and he subdues him after a fierce struggle.

Herman Van Wagoner of Guymon drops in their den a fish hook attached to a fishing line, when the dog comes up, he pulls his line and snags his dog and yanks him out. Fishing for prairie dogs around Guymon has become a pastime more exciting than fishing for trout in a mountain stream.

Some hunters have had success by staking down a mouse trap near burrows, where young ones live.

Another way is to fill the burrow



A Texas Prairie Dog "going down."

of the prairie dog with sand, and place a box over the hole with an opening in the bottom. The dogs can dig up but can't dig down through the sand. When the dogs have arrived in the box, slip a covering over the entrance and turn the box upside down. This is the way to catch the dogs wholesale, and it is used by Dennis Reynolds, court reporter of Guymon, who often gets from 3 to 4 at once.

M. A. Holcomb, a prominent attorney of Buffalo, Oklahoma, has had good success catching both old and young ones by filling a wild gourd with gasoline and tossing it into their den. They can't stand the fumes and come up in a few minutes and run into a sack placed over their hole.

Judge Dale now has a colony of prairie dogs established on his beautiful bermuda lawn, one half block north of the Post Office building in

Guymon, Oklahoma. The Dale dogs come in the house and eat crumbs from the table. They lie down by the fire and warm themselves. They will even crawl up in your lap and go to sleep. After the day's work is done, the last job of the Judge before retiring has always been to "Put out the cat." Now, before going to bed, the Judge's wife leaves him a parting admonition, "Be sure to put out the cat and dogs before you come to bed." The prairie dogs on the Dale lawn are pugnacious little animals and run off cats and small dogs that seek to interfere with their activities.

It is a common belief that owls and rattlesnakes live in their dens with prairie dogs. This is untrue as they live only in abandoned holes of the dogs. If a rattlesnake intrudes into a den where prairie dogs are living, he is immediately entombed alive.

THINGS YOU MAY NOT KNOW

Whale milk is not essentially different from cow's milk.

* * *

One Roman pure-food law prohibited the sale of any fish that had lost its lustre.

* * *

Careless people have no license to hunt even if they've bought one.

* * *

The monkey will not pull a banana from a tree until he intends to make use of it. On the other hand humans have grain rotting in one place and bread lines standing in others.

A starfish will eat more than eight oysters in a day.

* * *

Horses can sleep standing up because their legs are provided with muscular mechanism which causes them to lock, making a horse stand as if he were on stilts.

* * *

Snakes cannot travel as fast as some people suspect. One species of king snake has a maximum speed of .72 miles an hour, a bull snake 1.18 miles an hour and the red racer of California 3.60 miles an hour.

ARMS AND AMMUNITION

By ADAM WILSON III



Beware of Those "HOT" 9mm. Loads

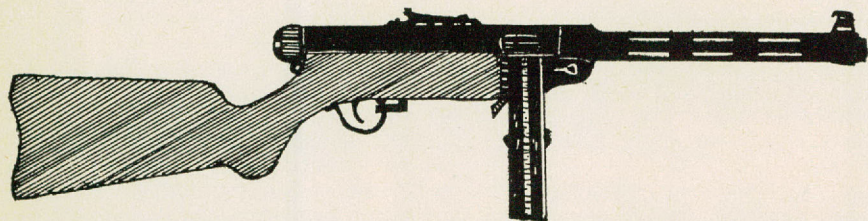
The scarcity of 9m/m Parabellum pistol ammunition, or that which fits such pistols as 9m/m Lugers and P-38's, is still causing trouble among the trigger-happy and less cautious owners of foreign handguns chambering this cartridge. Since the commercial ammunition is not available in sufficient quantities to accommodate the thousands of pistols brought to this country in this particular caliber, some fellows are substituting the high-velocity machine pis-

cartridges can cause unhappiness if fired in any weapon lighter than a sub-machine gun. Even the brass case number from "over there" has been reported as being "dangerous when fired in pistols." I have never found any of these (brass case) that were loaded with extremely heavy powder charges or with semi-armor-piercing bullets, but I do not doubt their existence.

Numerous warnings on this form of 9m/m ammunition have been issued by

several different countries, including those made by the U. S. Government. "He supplied the ammunition. The figures quoted are fair and honest. They are facts, not publicity department releases." Keep in mind that our commercial 9m/m Lugers have a muzzle velocity of 1150 feet per second with a 125-grain bullet which creates a pressure of about 35,000 pounds per square inch. In regard to the black numbers, Mr. Sharpe stated: "This ammunition showed an average pressure of 41,700 pounds per square inch, with a maximum recorded of 46,300 and a minimum of 37,600. The bullets average 99.4 grains in weight, which compared favorably with the intelligence (U. S. Army) data which listed them at 99 grains. Velocity was up to an average of 1,518 feet per second, with a maximum of 1,527 and a minimum of 1,499 feet. If you try to shoot these in foreign pistols, you may end up in the embalming room of your local undertaking establishment. Look at the facts, not propaganda. Over 40,000 pounds in that doubtful Luger or P-38? The cartridge was designed for a heavy nine to ten-pound sub-machine gun — not two pounds of handgun."

Only a short time ago a fellow came to me and wanted to borrow a few rounds of all-black ammunition which I had on hand for experimental pur-



THIS SKETCH of a 9 m/m Finnish Suomi sub-machine shows the type of weapon designed to withstand the pressures of the high-velocity 9 m/m Parabellum loads. The Suomi, and other sub-machine guns of equal weight and similar construction, weighs approximately five times more than the handguns which will chamber the same ammunition.

tol and sub-machine gun load for the much lower powered pistol fodder. The usual result is at least a damaged weapon.

Among the 9m/m caliber pistols which take "Luger ammunition" are the Browning Hi-Power Model 1935 (used by England, Belgium, China, Greece, and Germany), Spanish Astra Model 400, Polish Rodom Model 1935, German Dreyse Military Model, German Mauser with a figure "9" cut on the grips, German Walther P-38, and of course, all the various models of 9m/m Lugers. Unfortunately, all of these weapons will chamber the hot loads also.

Most of the foreign ammunition that reaches America is not in its original carton or box bearing identification labels; consequently, we can not be absolutely sure of how potent ANY of it is, or know positively what type of weapon it was intended for. We do know that cartridges with black cases and black bullets are *always* poison for handguns. Black cases loaded with "copper" bullets are *sometimes* safe, but unless the bullets are pulled and weighed, these

the National Rifle Association of America. The Association's last notice reported the findings of Philip B. Sharpe. Mr. Sharpe, well-known authority on powders and bullets, ran his tests at the Winchester laboratories "to get American facts" on 9m/m pistol and machine gun cartridges that were manufactured in

A detailed illustration of a military rifle with a scope mounted on top. The rifle is shown from a side profile, facing right.

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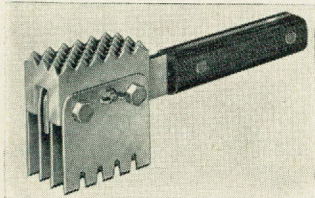
poses. "I can't find any of the right kind, so I want to try some of those—I've got to try out my Luger," he said. There are many fellows like this one who are getting anxious to see how their Lugers, P-38's, et cetera, will work again.

Occasionally a well-made pistol will take the beatings from a few rounds of the high-velocity ammunition, but the best and strongest handguns can stand only a certain amount of such punishment before giving away or becoming damaged. Why use those hot numbers, anyway? They are inaccurate and very unpleasant to shoot in a light weight weapon—not to mention the fact that first shot may blow a hunk of metal into the shooter's face, or remove a portion of his hand.

I have received an announcement from F. R. Krause, "The Gun Man" and custom loader in Albuquerque, New Mexico, that should be of interest to owners of 8x57R and 8x57JR German rifles, and 6.5m/m and 7.7m/m Jap rifles.

Mr. Krause can load the rimmed German 8x57R and JR with a 185-grain hollow-point gas-check bullet at a muzzle-velocity of 1900 feet per second. He does not guarantee the fit of these cartridges as the rimmed rifles vary considerably in bore and groove diameters and in chamber measurements. Some rifles handle the cartridges perfectly, while others will not allow the cartridges to enter because the diameter of the rim is less than that of the case. It is best to send such rifles, especially

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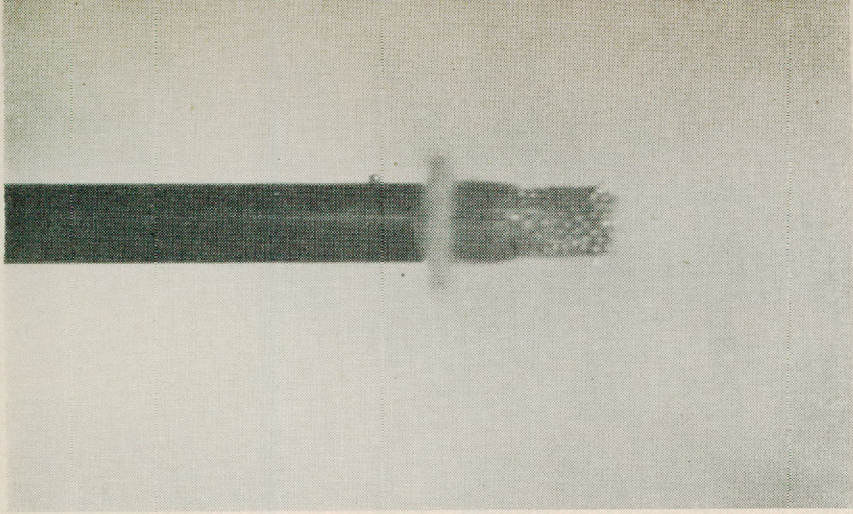


WHY CALL THEM SPORTSMEN?

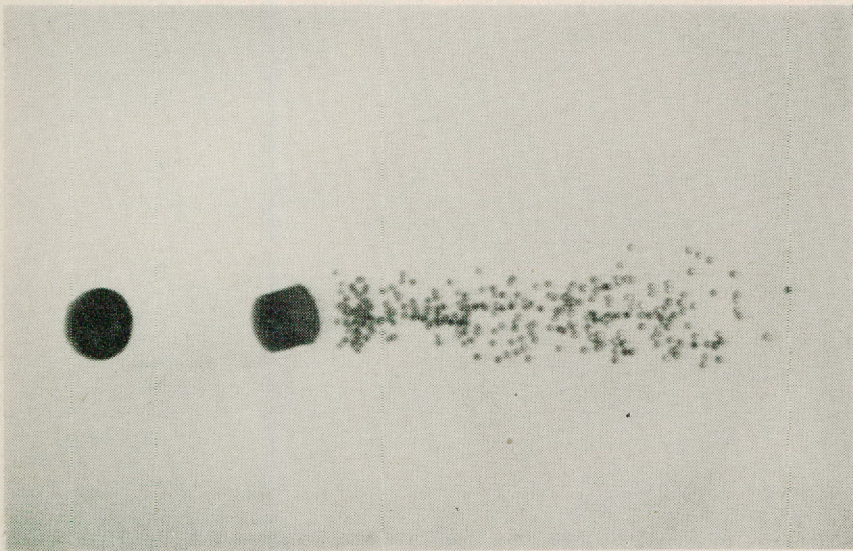
the JR, to him to be checked and, if necessary, have them rechambered to take an improved cartridge formed from a .30-40 case. I have seen the results of these loads in German three-barrel weapons. They should take care of a

white-tail buck at a short range. Just for the novelty of doing so, a friend of mine planned to try his highly decorated multi-barrel German 8x57JR using custom ammunition on a buck last season. At this writing I have not had a report on how the loads performed as deer stoppers.

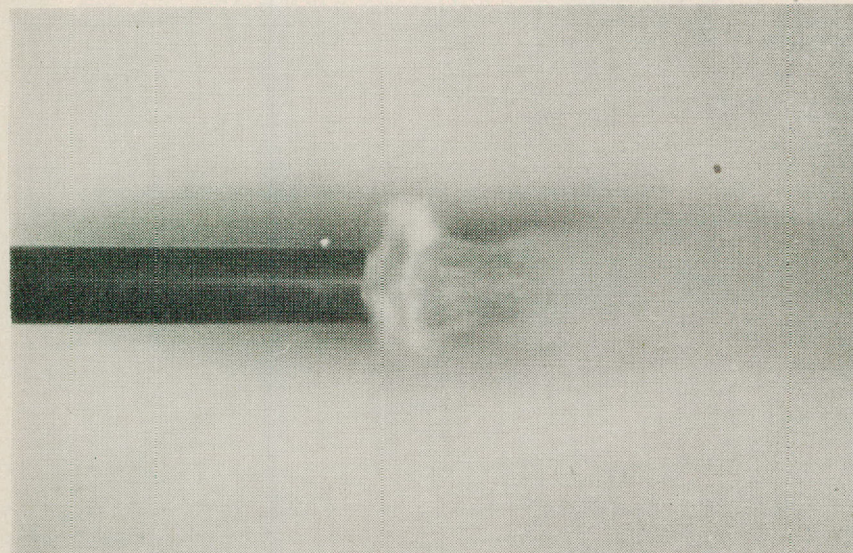
The well-cooled barrels of Jap souvenir rifles are apt to get a warming by American powders since The Gun Man can furnish fodder for these weapons too. None of the Nipponese service rifles are recommended for conversions as their actions are not strong enough to take high pressures safely, but most any gunbug will enjoy playing around with arms just as they are. The 7.7m/m caliber cartridges are formed from .30-06 cases. Krause rechambers the little 6.5m/m Arisaka to take an improved cartridge which is actually a .257R. It might be well to mention that before



THE NEW OLIN EXPANDING CUP WAD for shotshells seals the bore of a shotgun so completely that gas leakage is impossible and the entire pressure is exerted behind the pellets. These pictures were made at three one-millionths of a second.



MISSION COMPLETED, the new expanding cup wad, preceded by filler wads, drops away as the shot charge heads out uniformly toward the target. These ultra-high-speed pictures taken at a speed of three one-millionths of a second were made by ballisticians of Olin Industries, Inc., of shot charges leaving a full-choked 12-gauge shotgun barrel.



THE LEAKAGE OF POWDER GAS ahead of shot pellets reduces the velocity of the charge, malforms the pellets and produces spotty "patterns" and shot "strings."

firing ANY Japanese rifle one should take the piece to a competent and reliable gunsmith for a thorough inspection. Many of these weapons have excessive headspace.

Prices for custom loading, rechambering, and general gunsmithing can be obtained by addressing Mr. Krause at 305 East Iron Avenue, Albuquerque, New Mexico.



What Makes a Gun Kick?

That which goes up is bound to come down is an old statement of a recognized fact. But this doesn't mean that all that goes out has to come back.

However, when a firearm is fired a certain amount of "come back" is bound to happen. This, in shooting parlance, is known as recoil, more commonly called "kick." To understand it, all that is necessary is a little knowledge of elementary physics.

To every action there is an equal and opposite reaction. This is one of the so-called laws of motion and is the basic cause of recoil.

The gases generated by the burning of the powder in a shot-shell exert a force which pushes the shot charge and wads out of the barrel. In so doing an equal force is exerted in the opposite direction against the breechblock. If the gun is free to move then the above law of motion tells us that the weight of "charge" (shot, wads, and $\frac{1}{2}$ the powder) times its velocity equals the weight of the gun times its velocity. Thus the speed with which the gun recoils is inversely proportional to the ratio of the gun and charge weights, i.e., the heavier the gun, the slower it recoils, the heavier the charge, the faster the gun recoils.

There is a slight further increase in the gun recoil due to the "rocket effect" of the gases during their escape from the barrel after the shot and wads have been driven out, continues Dr. Cummings. It is this effect which is utilized in the recoil reducing devices such as the "compensator." Neglecting the mass of the powder and wads in comparison with the ounce and a quarter of shot in a 12 Ga. load with a muzzle velocity of about 1400 feet per second, we see that a gun with a weight of $7\frac{1}{2}$ lbs. will have a recoil velocity on the basis of the above of about $14\frac{1}{2}$ feet per second, plus a small increment (2 to 3 feet per second) due to the "rocket effect."

Since the gun is held in the two hands against the shoulder, the recoil momentum is absorbed by the hands and shoulder. This amounts to approximately 35 foot pounds of energy.

The three factors most affecting recoil are the weight of the gun, weight of the shot, and the velocity of the shot. Thus a heavy gun has a lower recoil velocity and, hence, less recoil than a light gun if used with the same load. Similarly, the recoil is less with a light load than with a heavy load.

Relatively little can be done to reduce

the recoil velocity of the shotgun for a given load except by the use of a device such as the compensator. The action of this device is to "reflect" the powder gases backwards and, hence, to deliver a forward push to the gun thus reducing the rearward velocity. The physical effects, that is to say the effect on the shooter, of recoil may be controlled to some extent in the construction of the gun. Stock length, drop, and pitch should be correct so that recoil is absorbed at the proper points. The distinction between reduction in recoil and reduction in punishment due to recoil must not be forgotten, however.

Proper gun holding will do much to minimize the effect of recoil on the individual shooter. Many experienced trapshooters shoot through large tournaments without getting bruised shoulders but the inexperienced gunner who does not make his gun become a part of himself gets punched around some every time he pulls the trigger.

Good advice to the beginner, concludes Dr. Cummings, is to stop trying to make yourself become a part of the gun. Rather try to make the gun become a part of you. Then the recoil will become much less objectionable.



A 28 Bore Shotgun

By Dr. Richard L. Sutton

"I HAVE always been of the opinion that one can kill game just as dead with a small gauge shotgun as with a big one," declares this globe-trotting angler and hunter. "It all depends on the shooter's ability to center his target and know when birds are in range. On diverse occasions I have been privileged to gaze upon some hair-raising exhibitions of automatic 12 bore marksmanship in which I wished that the operator and not the quarry was the target."

"Like most of the pioneers, I was raised on large bore, hammer guns and I still have a soft spot in my heart for the old L. C. Smith which was my first 'good' gun. Loaded with U. M. C. shells and black powder it enabled me to bring home a lot of game. Later I was privileged to own a high grade Ithaca, a 20 gauge which accounted for its share of rabbits, quails and ducks. Today, at the end of three decades, it is as tight and good as new and is the most prized possession of my young grandson.

"For many years I shot 20 bores, at first with the light loads which then were standard and later with the magnum load containing a full ounce of chilled shot. After having shot all over the world, I am quite sure that American ammunition is the best to be had anywhere. In fact, I would say that it is 50% better than any other. Late in life, the idea occurred to me that some of the lack of my success as a gunner might be dependent upon the facility and speed with which I handled my weapon. Some of my friends, as Ralph

Johnson and his associates of Houston, depend largely on 410 gauge guns for all sorts of game, and Don is an artist with a little Winchester pump of this size. I have repeatedly seen him grass two or three doves straight with a 410 pump. I promptly ordered a double ejector of this gauge, in fact as I always like to have plenty of everything about the house, I ordered three of them. One of them fitted me perfectly and I felt sure I could register with it.

"The following season I took it to Port Aransas, Texas, arriving two days before the season opened. I tucked in a spare, a 16 gauge Parker, just in case. But such was my confidence that all the ammunition I had was two cases of 410 magnum loads. To make a long story short, I couldn't hit a darned thing. Had I been standing up in a ground blind it might have been different, but from a skiff it was impossible. While Don (my hunting companion) would jump to his feet like a speckled tom cat, bang, bang would go his little Winchester and one or two long necked Sprigs would bounce on the water. At the end of three days I got Billy Ellis to run over to Corpus Christi and pick up a case of 16 gauge shells for me. After that I did pretty well but no better than Don who averaged a duck to every three or four shells with his little pop gun.

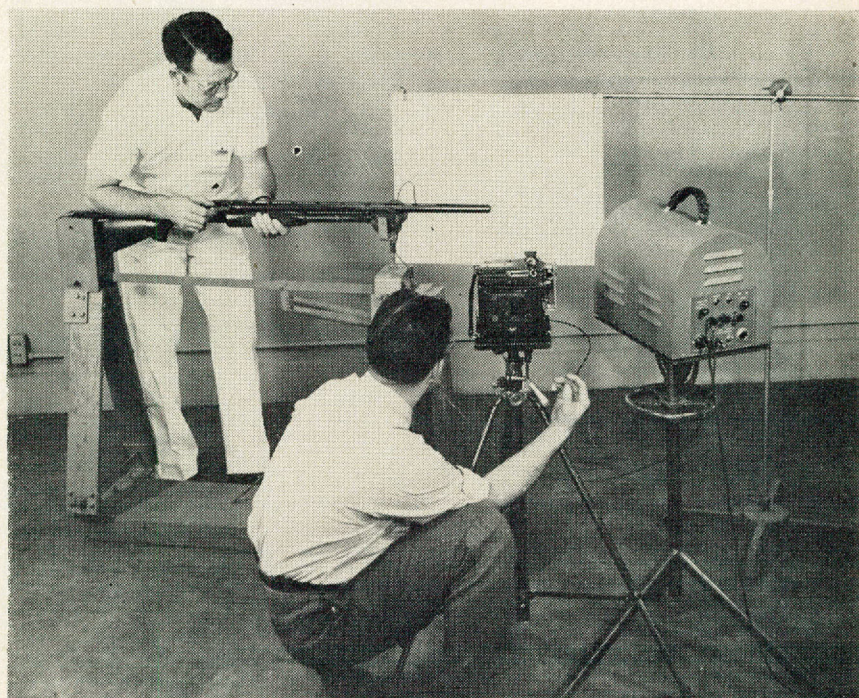
"The following May when I arrived at Port Aransas to interview the tarpon, one of the first remarks that Don made was, 'Doctor, I think I have found the gun for you.' Don then told me of a patron who had spent the last week of

the preceding season with him. This man shot only a 28 bore, and Don insisted it was poison. One day my little secretary brought to the house a copy of 'The Rifleman.' Among the advertisements was one of a 28 bore G. H. E. Grade Parker ejector. I asked her to get in touch with the owner, who was a Colorado garage man, and a few days later the little gun was in my possession. It had 26 inch barrels, modified and full. Weight six pounds. It fitted me and handled well, and I was very anxious to try it on game. In order to equalize matters, I purchased a 28 inch full choke, Winchester of the same gauge for Don. The middle of November rolled around and on the 14th, the two miniature guns, three cases of shells and your humble correspondent reported at Tarpon Inn. Don and I planned to shoot magnum loads 2¼ drams powder and ¾ oz. of No. 6 chilled shot. The shot load is almost the same as in the old 20 gauge shells, and the same as in the 3 inch 410 gauge. But the results were vastly different, why I do not know. Perhaps a better balanced load in a barrel of slightly greater diameter than that of the 410 gauge.

"Don had spoken truly and with good judgment. The season proved a good one with plenty of Sprigs, Widgeons and Red Heads. Day after day we easily got our limit, generally long before 10 o'clock. The little guns might not be powerful enough for pass or other very long range work but up to 45 yards we could simply break a Sprig Duck in two

★ Continued on page 30

HOW THESE HIGH-SPEED PICTURES were taken. George Butler (right), Olin Industries technician focused a conventional press camera at a spot just forward of the gun muzzle. A tiny "disjuncter" wire stretched across this space was connected with a photolight. As soon as the lights were extinguished, Butler opened the shutter of his camera and Kenneth Bauser (left), pulled the trigger of the Winchester. By breaking the disjuncter wire, the shot charge tripped the light that took its own picture at three one-millionths of a second.



**Little Is Known About Many of the 450 Species
Of Fish Which Are Found in Waters of State**

A Census of Texas Waters

By J. L. BAUGHMAN

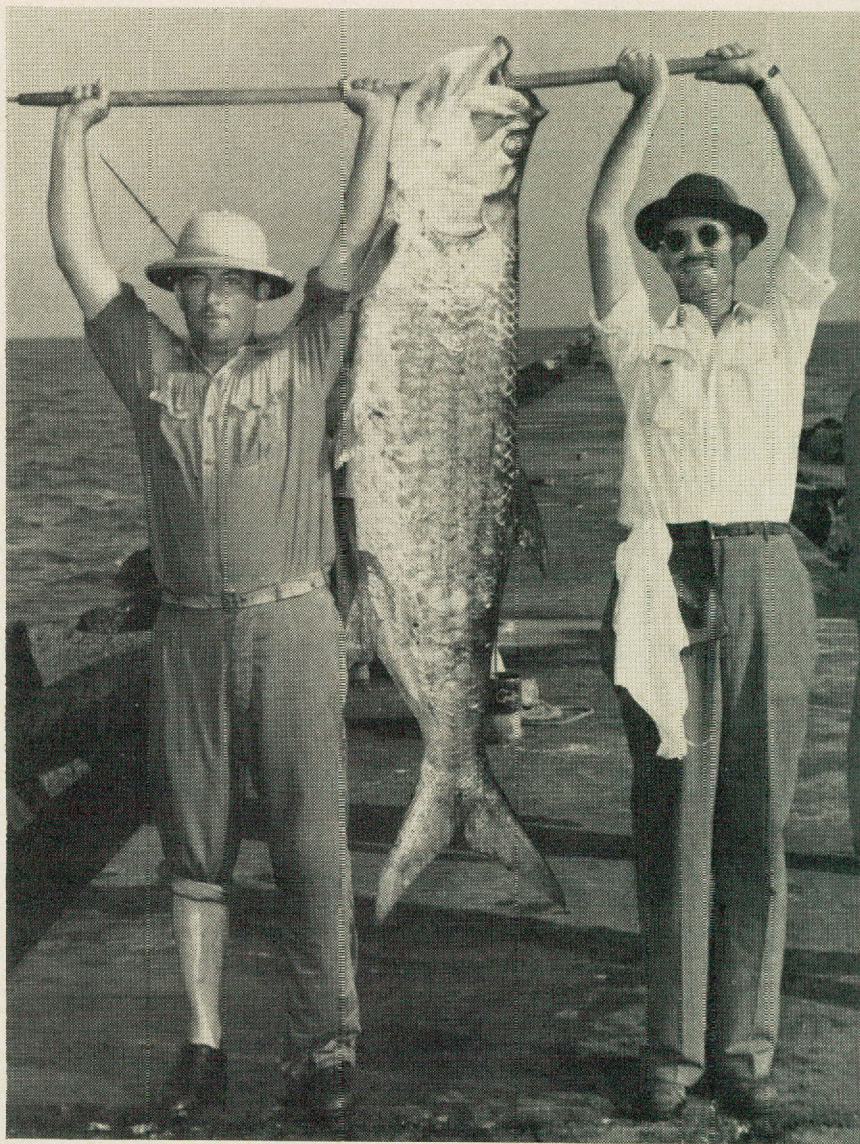
TEXAS, within the marine and fresh waters of the state, has over 450 species of fish. This is more than almost any other state, with the exceptions of Florida and California, but so little are they known that the most comprehensive survey heretofore has listed not more than 230, which were about evenly divided between the fresh and the salt waters of the state.

Of the 450 species now known, however, approximately 200 are marine in their habitat, while the balance are found in fresh water, with the exception of a few families of small fishes, such as top minnows and gobies, that inhabit the brackish dividing line between the fresh and salt waters of the coast.

Among the marine species are many that deserve attention, either for their beauty, their oddity, their interesting habits, their economic value or their sporting qualities, yet many of them are little known, and their true place in the families of the sea is not generally recognized.

First among them all are the sharks, fishes which have no bones in the true sense of the word, their skeleton being made up of cartilage, some of it almost as hard as bone, but cartilage, nevertheless. Of these, Texas has about 15 species which range in size from the little shovel head, generally less than two feet in length, on up to the big bull sharks, which may reach a length of 15 feet. These, the hammerheads both large and small, and several species of sharks from the Panama coast are quite common throughout the summer, as is the black tipped, a species whose leaping fight when hooked has endeared him to the sportsmen.

Wanderers, but occasional visitors on our coast, are big tiger sharks which are sometimes taken off the jetties at Galveston and Port Arthur; the thresher shark, which has been caught at Port Aransas; the angel shark, from Nueces Bay; and the mako or mackerel shark, a number of which have been taken about Port Isabel and on the lower coast. It is not impossible either that the great white shark, or man eater, may appear from time to time, but of it, or of the blue shark, I have never had any certain reports. Any of these, however, with the exception of the angel shark, because of their size, and power, and flashing speed, are prizes of which the



KING OF THE GAME FISH in the Gulf of Mexico is the Tarpon. Here is a silver beauty caught off the Sabine jetty by Harry Aldrich, a sports writer of Port Arthur.

sportsman might be proud, and whose capture would entail a long and vicious fight.

An interesting relative of the sharks, about half way between them and the rays, is the sawfish, of which Texas is the only state in the Union to have two species constantly resident on her shores. The ordinary one has from 20 to

30 teeth on each side of its saw, while the other form, which was first discovered in West Africa, has from 15 to 20. The latter reaches a much greater size than does the first, and a number of them have been taken, both at Galveston and Aransas Pass, one of the Galveston specimens weighing 1,300 pounds.

The rays, which are merely sharks



A STRING of speckled beauties taken from the waters of the Gulf of Mexico. Catches like this are common when the trout are running.

that have flattened out and moved their gills to the underneath side, number 18 or 19, if we count the banjo fish, and the skates, and any other miscellaneous trash that may be hanging around, and, contrary to the general belief, most of them are not stingrays, and most of them do not have spines on their tails. As sporting fish they are of little value, offering only a hard, sulking fight on the part of most of them. One species, however, the calico or spotted ray, is occasionally hooked, and in such a case the fisherman is apt to get a showy, leaping scrap out of his fish, for they take to the air at the slightest provocation. Biggest of all this family on our coast is the manta, or devil fish, which is fairly common during the summer, especially on the southern portion of the coast.

Next in order to the rays are the gars, prehistoric hang-overs from an ancient world. Of these we have three or four species, none of which are of any value for anything, as far as can be learned. Close behind them come the Elopidae, the tarpons, one of the royal families of the sea, every member of which is a battler in his own right.

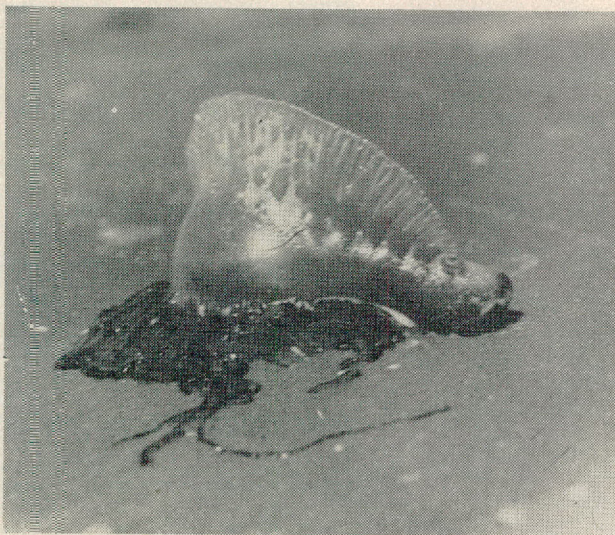
The silver kings of Aransas need no introduction, or course, but it is not generally known that the bonefish, to which

some men become addicted like others do to dope, is found in the southern portion of our range, nor that the lady fish, or horse mackerel, known on the Florida coast as the 10 pounder, and almost as eagerly sought as the bone fish, is a common inhabitant of our bays and inlets.

Fitted by form for a life of speed and activity, streamlined so smoothly that even their eyes lie flat in the plane of their body, and with fins, other than the tail, fitting tightly into pockets, so that nothing shall delay the rapidity of their going, the mackerels are the wolves of the sea. Smallest of all on our coast is the Spanish, and next to him comes the spotted king, which may reach a weight of 30 pounds, and which differs from the great kingfish, or cavalla, in having spots on his sides, and a black line on his dorsal. The great king, steel colored and swift, is the one commonly caught, and though in this territory one of 50 pounds is a rarity, they have been caught weighing well over a hundred.

Distinguished from them and all other mackerels by their color are the wahoos, whose sides are almost zebra striped at times, and whose jaw is tipped with a peculiar bony formation which also serves as an identification mark. Several of these have been taken at Port Isabel within recent years, and from here also has come Texas' one representative of the tuna family, Lesson's Black-finned tuna, a form intermediate between the blue-fin and the yellow-fin, which last may also prove on further investigation to inhabit our waters.

Closely allied to the mackerels are the jacks, among which are the yellow, the red, the horse-eyed, and the big fellow, called craualle in some places, you so-and-so in others, and "tourist tarpon" all along the coast. In the same family are the pompanoes, no mean game fishes in themselves, and of these Texas has at least four, the permit, or giant, the palometa, the common, and a fourth which is called palometa, too. Moon-fishes, the silvery little look downs, and bumpers, or yellow-tails, are classed with these also, as well as a small slen-



MANY ANGLERS are finding the shark an excellent fighter. Incidentally, more and more people are learning that shark meat is a tempting morsel.

der fellow known as the runner, or leather jacket.

Amberjacks, close cousins to the jacks and the mackerels, are found on most of the reefs along the coast, as is the ling, or sergeant fish, which is known in the Chesapeake Bay region as the black bonito, although it has not the slightest resemblance to this fish, which is also found in the Gulf. Lings have been known to reach a weight of 106 pounds, but most of those from this coast are considerably smaller than that.

An offshoot of the same ancestor that produced the mackerels, sailfish and marlin are apparently more common on our coast than we have given them credit for being.

Incidentally, both these fish deserve a great deal more attention than they have been getting. It seems not improbable that deep drifting off the snapper banks around Port Aransas,

★ Continued on page 19



FLY FISHING NOT NEW

By P. F. HELTON

THERE is a story of fishing in Macedonia of which I have heard and have knowledge. Between Berea and Thessalonica runs a river called the Astraeus containing fish of a special speckled coloring; as to their local name you had better ask the Macedonians.

They feed on flies which hover about the water, peculiar flies, quite unlike those found elsewhere, not resembling wasps in aspect, nor can one match them rightly in shape with what are called "anthecons" or wild bees, nor with hive bees; but they have something in common with all bees; their color is modeled from the wasp, but they buzz like bees. The people of the place invariably call them horsetails.

These flies settle on the stream in search of their special food, but cannot avoid being seen by the fish swimming below. When, therefore, a fish detects a fly settling on the surface, he swims toward it very quietly under water, taking care not to stir the water above, which would scare his prey.

So coming close up on the side away from the sun, the fish opens its mouth,

snaps the fly down its gullet, like a wolf seizing a lamb from the fold, or an eagle seizing a goose from the farmyard; and then retreats under the ripple.

Anglers are aware of the whole procedure, but never by any chance use the natural fly as bait; for when the flies are handled, they lose their proper color, their wings are battered, and the fish refuse to feed upon them. Anglers accordingly leave the flies alone, resenting their cursed behavior when captured; but they get the better of the fish by a clever and wily contrivance of their art.

They wrap dark red wool around a hook and tie onto it two feathers which grow under the wattles of a cock and resemble wax in color. The fishing rod is six feet in length and the line the same.

Catfishermen!!!

Bring Back Catfish—Not Alibis

"The Original Mississippi River Catfishing Guide" with America's best Catfish bait Recipes and Secrets, Fish and Game Recipes, Valuable Catfishing Tips. Complete booklet, \$1 postpaid. Sold only on a money-back guarantee.

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Do Catfish Purrr?

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Made of nine different ingredients, any one of them attractive to catfish, FISHBURGER CATFISH BAIT is a combination that can't be beat. See for yourself. Try FISHBURGER CATFISH BAIT! You will say... as so many others say... that FISHBURGER CATFISH BAIT is the best you've ever tried.

MONEY BACK GUARANTEE

If you are not perfectly satisfied, we will cheerfully refund your money. FISHBURGER CATFISH BAIT is made *by* catfishermen for catfishermen. That's how we know you'll be satisfied.

"For a fishing thrill, Send a dollar bill."
24 Oz. can . . . \$1.00 . . . postpaid



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Rush me . . . postpaid . . . ___ 24 oz. can (s)
of FISHBURGER CATFISH BAIT at \$1.00
per can.

NAME

ADDRESS (RFD)

CITY.....STATE.....

When the tricky fly is lowered a fish is attracted by the color and arises madly at the pretty thing that will give him a rare treat, but upon opening his jaws is pierced by the hook and finds poor enjoyment of the feast when he is captured.—*Written by AElion, 100 A.D.*

I guess fly fishing is not new, but the more recent sportsmen can lay claim to the multiple hook, dynamite, set line, ideas.

POP'S PET

Ace among Hair Streamer Flies. Trout, bass, crappie—they all take it. Texas made, of Texas materials, for Texas waters. Sample, and price list, 25 cents.

Made and guaranteed by

T. Lindsay & Son, Stanton, Texas

DO YOU HAVE A Dipsy-Doodle?

Texas Waters

★ Continued from page 17

where so many sails have been raised, would be apt to produce marlin, just as deep drifting off the Cuban coast has produced these same fish, even when there have been no surface indication of their presence.

Another group of offshore fish are the snappers and groupers which inhabit the reefs. Everyone is familiar with the red snapper, but how many know the little gold lined fellow that is called Lane's, or the mahogany-colored mangrove snapper, the greyish green schoolmaster, or the rusty colored dog snapper whose presence is welcomed by the sporting goods dealers because he is one of the best tackle salesmen on the coast?

Jewfish are nothing but big yellow groupers, while the warsaw of the offshore banks are black members of the same family. Then there are the spotted hinds, the red, Nassau, and black groupers, and the gag, all of which are fine fish, all good eating, and, like the scamp, another of the family, all fun to catch. Incidentally, these reef fish are clean fish, in the sense that they have far fewer parasites than any other fish in our waters, with the possible exception of the mackerels. Red snapper are very rarely infested with anything at all, nor are most of the others.

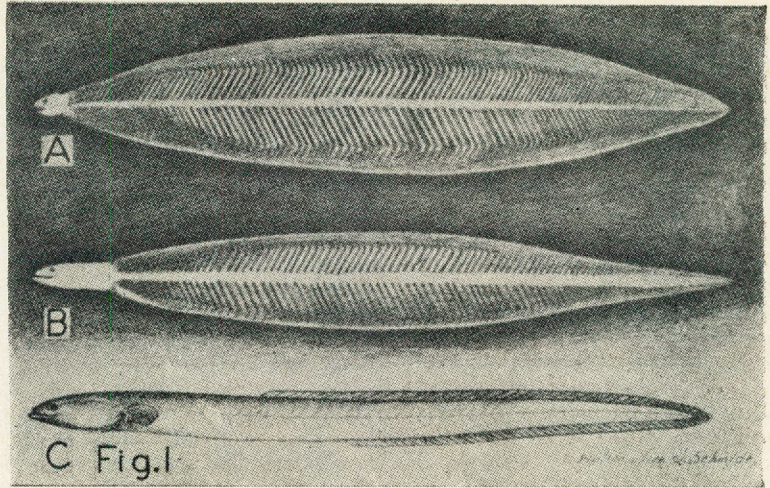
Closely related to the sea basses, of which the snappers and groupers are also members in good standing, is the pike of Port Aransas and southward, an excellent food fish, and a handsome fighter, but to the family of croakers belong the yellow tails, the spots, the croakers, the speckled trout, the redfish and the drum, as well as the fresh water gaspergou. Inhabitants of sandy shores, the marine members of the family feed on small fishes, crabs, and in the case of the drum, oysters, and because of their habit of bottom feeding, most of them are apt to be parasitized, many of them with a worm which inhabits the flesh of their backs.

Besides these there are a host of others, though none, with the exception of the sheephead, are of much value economically.

The sargassum fish and the sea bats belong to the fishes which go fishing themselves. On the sargassum fish the

★ Continued on next page

Fabulous Fish Facts



STAGES OF EEL—This drawing shows three stages in the development of the common American eel. Fig. A shows the newly-hatched young or larva, a minute and transparent ribbon-like creature. Fig. B is the intermediate stage of the larva. Fig. C shows the young eel fully transformed and ready to enter fresh water.

The Amazing Eel

FOR tens of centuries the spawning habits of American eels were shrouded in mystery, and even now eels that inhabit streams of this country are the subject of fabulous speculations when fishermen get together.

The American eel (*Anguilla rostrata* Les.) is one of the most remarkable of the fishes inhabiting our waters. She is a despised creature, but is a tough and voracious battler that will devour anything she can overcome. Only the female eel is known to enter fresh water, according to scientists who have studied the migrations of this curious species.

Despite her snake-like appearance and movements, the eel is a true fish whose scales are embedded in a slimy and gelatinous skin. Through examination of these minute scales it has been determined that an eel has a life span of at least 37 years.

The female eel lives for years in inland waters and then makes its way almost to the Caribbean Sea, where it spawns only once and then dies. This is the reverse of the habits of the King Salmon, which ascends streams for as many as 1,000 miles to spawn and then succumb.

Not until 1874 was a male eel discovered. Long research revealed that the spawning grounds of the eel are in an area southwest of Bermuda, in the depths of the so-called "Sargasso Sea." The eel is said to lay extreme numbers of eggs, estimated as at least 10,000,000 from a single female. The larvae, ribbon-like and transparent, float for a time at depths of 600-900 feet in the sea. As they approach the coast and the salinity of water declines, the young eels begin to take the shape of an adult. They are then three or four inches long. Only the females enter fresh water and they may travel 1,000 miles inland in 12 months, remaining eight to 12 years before becoming mature. European eels have been found 5,000 miles inland.

Some observers claim that eels travel over dry land when dew forms on vegetation. Others say they have seen young eels conquer perpendicular barriers by traveling over the dead bodies of many that failed to make the climb.

When the female eel becomes mature she begins her journey back to the sea, the principal migration being in late summer and fall. At this time she is very fat and in best condition for table use. Although there is considerable prejudice against the eel as a food fish, its flesh is abundant in fat and highly nutritious.

Eels have been known to attain a length of six feet and a weight of 16 pounds, but most mature specimens average 24-30 inches and 2-3 pounds. They will devour all kinds of aquatic animals, dead or alive. They may become especially destructive upon entering streams of hatcheries.

The eel is a scavenger and is refused by many as food, but these same persons will devour the blue crab with gusto, heedless that the crab is more of a scavenger than is the eel.

Even Izaak Walton admits getting a thrill out of the gentle art of "snigling" for eels. The famous "first" angler wrote:

"I shall therefore conclude this direction for taking the eel, by telling you that, on a warm day in summer, I have taken many a good eel by snigling, and have been much pleased with that sport."

SAVE Snagged BAIT!

Van Sickle
BAIT RETRIEVER
PATENT APPLIED FOR

Your favorite bait isn't lost, now, if you own a Van Sickle Bait Retriever. It rescues bait snagged behind stumps and under brush. A 36 inch telescopic rod (extends to 8½ ft.) with spring coil, slides down line to grip bait, as illustrated. A push and a pull and out it comes. Packed in handy carrying case, only \$1.75 (plus 10% excise tax), postpaid. If your dealer can't supply you, send order and remittance direct to us.

WILTON VAN SICKLE MFG. CO. LINCOLN, NEBRASKA

fin, and on the sea bat a regular line, which is reeled in beneath his nose, serve to support baits which are dangled enticingly before them until some unwary fish stops to investigate and is liquidated.

Two Texas fishes, the torpedo and the star gazer, carry storage batteries in their heads, with which to shock the unwary, and another, the midshipman, lights his way through the waters with rows of phosphorescent dots which adorn his sides like the portholes on a ship.

Cowfish and moonfish, dogfish and catfish, sea bats, sea horses, and sea cows, frog fish, oyster fish, gobies, and blennies which look like the gargoyles on Notre Dame, all go to make up the marine fauna of our waters, and to furnish interest to the student, food for the hungry, and sport for the angler.

Old Times

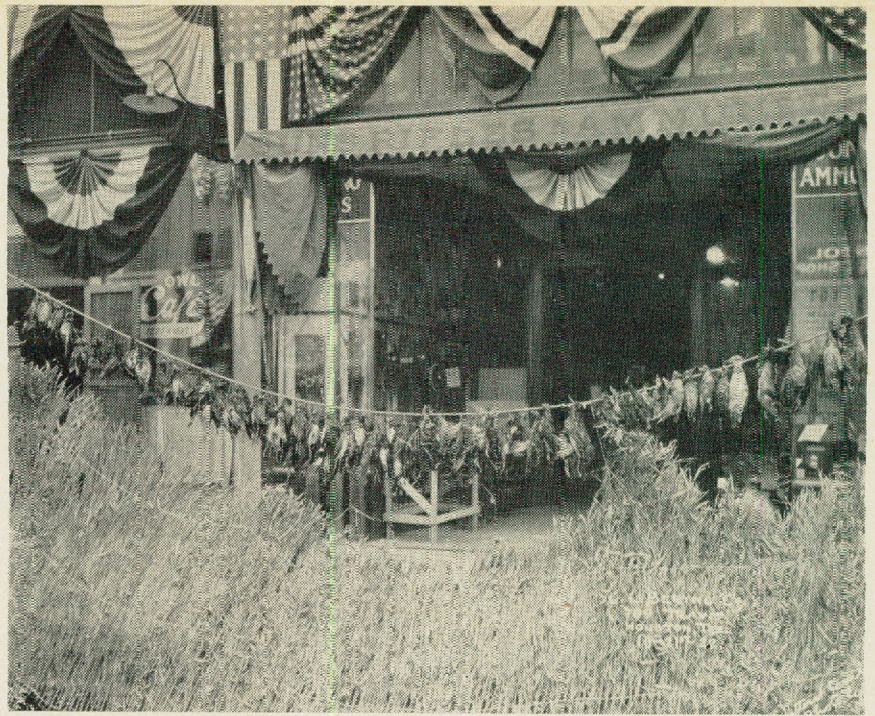
★ Continued from page 4

foot of Main Street with their fish in live boxes and you could buy bass about a foot long six for a quarter. The fishermen strung them on rushes for you to carry home.

"In those days the water was good enough to drink, and there were lots of swimming holes up and down the bayou, which all the boys in town used.

"Right across Buffalo Bayou, where Peden's store is now, there used to be a big thicket of yaupon, sweet bay and magnolia. This was a famous place for robins, tramps and gypsies but I used to go over there and get the magnolia blossoms to bring back in to town and sell. That was the way I got money to buy fish hooks and lines. Cane poles could be cut at any time in the big cane brake on Bray's Bayou, where Kensington now is, and later on, when I got big enough to own a gun, I used to go down there to try and shoot woodcock. I don't remember that I ever hit any, though.

"We often hunted on McClure's prairie in Kensington. There were deer, geese and snipe out there, as well as lots of doves and curlew, while where Telephone Road now crosses Bray's Bayou, there was a noted spring, about which the perch fishing was always fine. In what is now Montrose, but which was then called Hooker's Flat, there were world's of duck, snipe, curlew and plover. I suppose we killed more plover than anything else, for you could drive up to within twenty feet of them in a buggy although if you were on foot you couldn't get within a hundred yards of them. Another good place for plover was down where the Friendswood oil field now is. The ground there is high, and the birds used to come in there to feed on grasshoppers and caterpillars. There were snipe and duck there, also, and prairie chickens by the millions, while quail were everywhere. I've even caught them with a trap in the thicket called Allen's woods, across Buffalo Bayou from where the old gas works used to be.



JACKSNIFE also were numerous around Houston in the years after the first world war.

"They sold lots of quail in the markets, as well as doves, rabbits, ducks and venison. Up around Hockley there used to be a lot of market hunters that brought in ducks by the thousands. At the old city market, which was a show place then, you could buy a pair of mallards for fifty cents, and they would be picked, all but the tips of the wings, for the hunters kept the down and sold it. In the 70's a venison ham sold for seventy-five cents, as did a wild turkey. The turkeys came from the San Jacinto bottoms and they used to say that they trapped them like they did quail, but I never saw them do this.

"Prairie chickens were also sold. Al Raynaud, a market hunter here in Houston, used to come in with wagon loads that he had killed on the prairies close to town. They sold for about the same as did the ducks."

Dan C. and Ed C. Smith are other old time Houstonians, their father, D. C. Smith, having been mayor of the city in its early days.

"My hunting and fishing was done west of town," said Dan, the younger of the two. I usually started at Hangman's Grove, never going beyond Yates' gin (about where the Braeburn Coun-

try Club is now situated). I often came home with ducks, prairie chicken, quail, snipe and doves tied to both sides of my saddle. My first Canada goose was killed right where Westmoreland Gates are at present. I heard some one shoot over towards Main Street and looked up and here came the geese. I shot one but I was so small that when I held his head over my shoulder his feet and wings dragged the ground."

I remember fishing boats coming in to Main Street. They caught the bass they sold at Lynchburg, and that is where they got the rushes they strung the fish on, also. Watermelon boats from Smith's Point tied up there, too, and it was a favorite hangout for boys. The water was so clear that they used to dive for pennies sometimes. We used to go fishing down at the dam below the waterworks (Capitol and the bayou). Everybody would take a pole and a can of worms with him, and sometimes we caught catfish, but mostly if you didn't get a bite within a minute or two, some kid would dive over your shoulder and that would be the end of the fishing."

Dan's brother, Ed, once caught quail in a trap where the Medical Arts building now stands.

"Hill Freeman and his daddy lived there. His father ran a Brazos bottom plantation and he brought some quail home in a cage and they got loose and bred. I got a black eye out of those quail.

"We started early to hunt. When I was eleven I got my first twelve gauge shotgun and, boylike, went out to try it. Right where Sam Taub's house is now (2714 Commonwealth) there were two houses, and in front of one of them was a slough much favored by ducks. I

BRANT

*Dead leaves falling
To their mother, the ground.
Gray brant calling—
A vanishing sound.*

*Future man will know wonders
We now living lack;
But the brant's call, when silenced,
Will never come back.*

ETHEL ARNOLD

slipped up and killed three teal (my first) and fifteen minutes after I shot 'em was home again, showing them, I was so happy and proud."

Henry H. Graf, another old time sportsman, now lives in Galena Park, but he moved to Houston, in the old second ward, fifty seven years ago.

"We used to get in a row boat over in the fifth ward and row down to Morgan's Point and catch trout. We would row down Saturday and come back Sunday, camping on Hog Island after we got there. You didn't have to go down that far, though, because we used to catch lots of fish at the old Southern Pacific ship ways, where the Sinclair Refinery now is. There were trout there, and redfish, sometimes, and I have seen the mullet so thick that you could take a skiff out at night with a light in it, and the mullet that were attracted to the light would almost fill the boat, so many would jump for the lantern. People never did anything much with them, but just fished that way for the fun of it. We used to set trot lines across the channel along there, and I have seen the time when eighteen inch catfish bit so fast that you could turn right around when you reached the end and run your line again, and it would be just as full as it was the first time. There were lots of alligators in the bayou, too, and we shot several where Norsworthy terminal is.

"Coons were plentiful, and nearly everyone had a coon dog. One night some of us went coon hunting at the mouth of Green's Bayou and in a lot of down timber ran into some turkeys that were roosting. The timber was so thick that they had to get out of it before they could fly, and while they were doing that the dogs caught one. There were turkeys all around Houston."

Uncle Charlie Bering, at Oshman's, confirmed this.

"When I was a boy," he said, "out where the Southern Pacific now goes through Montrose you could get anything that you wanted in the way of game, and then, too, we'd go up and down Buffalo Bayou, from where River Oaks is to our place (just beyond Post Oak Road). There were quite a few deer there, and lots of wild turkeys, as well as plenty of woodcock and quail.

My first gun club (the Bering Gun Club) was where Kirby's home is now. Bryan Herd, Camille Pillot, Otto Sens, Louis Schweikart, Charlie Lidstone and Ed Dupree were among the men who shot there. We shot live pigeons and the kids of the neighborhood would lie outside our shot range, picking off the strays and cripples. Lots of times prairie chickens and ducks would come over and we'd stop shooting pigeons and go hunt game. The chickens would light in Settegast's pasture. There were lots of ducks on the ponds where River Oaks and Braeswood are now, and you could catch three and four pound bass in Vick's park, which is within the city limits.

King Ranch

★ Continued from page 5

tention on the ranch than any other game. (No, not hunting on October 22.) We found them in multiplied numbers, perhaps more than could be found in any other part of Texas. How and by what technique was the result achieved?

The safety and abundance of certain kinds of game depend on their ability to find hiding places. That is especially true of quail. Almost all reptiles and carnivores feed on quail. The swift blue-darter hawk overhead will certainly catch a quail which has no place of refuge. The nesting quail which, by its skill, must find a fairly safe place for its eggs, must sometimes abandon the clutch and fly to safety. Nature does not always meet such needs, and in such places the quail population is scant or entirely missing.



EXCELLENT "HEADQUARTERS" cover made by half-cutting a mesquite tree and fertilizing the ground underneath. (20% super phosphate at rate of 100 lbs. per acre to encourage luxuriant growth of weeds and grass.)

To meet cover needs has been the object of much research. A study of quail habits and methods of increasing population reached a high point a few years ago when Lehmann, while with the State Game Department, introduced a system of brush shelters which are now used in many portions of the state. His was the first Texas treatise or bulletin to be published on the subject. This bulletin of 1937 was followed by others in 1939 and 1941. I had read them and now I was to see whether he was preaching and practicing the same thing. The jeep ride through quail territory revealed how well and how far the shelter technique had evolved when compared with the first pictures of half-cut trees and diminutive brush arbors shown in the early bulletins. Few urban dwellers have ever seen a brush arbor such as were once built in rural communities for the purpose of picnics and revivals or even political rallies. These arbors were for protection against



PRUNED GRENJENO MOTTE with dead limbs piled on the living cuttings to form "headquarters" cover.

the heat and sun in fair weather. Built on a small scale with less than a foot clearance from the ground and about ten feet square they furnish good protection for quails from their feathered enemies. Such shelters are usually simple and economical. If there is plenty of brush nearby it is not expensive to cut supports and poles and pile on the brush. They are not only places of refuge to which the birds may fly when in danger, but are good loafing places at all times when the covey is not out feeding. But if the country is open and the brush must be transported, then the arbors begin to be impracticable. But in any event a more economical and permanent cover has been developed in shelters made by half-cutting branches of trees. This is mentioned in the Lehmann bulletins, but has been given tremendous emphasis in the King Ranch project.

We drove into an open prairie which contained an occasional mesquite or an occasional western hackberry and found some 500 "half-cut" shelters in an area of 15,000 acres. In most of these shelters (3:30 p.m.) quails were loafing or taking their afternoon rest. Some of the "half-cut" shelters would remind one of an open umbrella stuck in the ground. This effect was obtained by partly cutting the branches so that their extremities could be pulled down and made to rest on the ground. There they continued to grow and make shade and protection. Some of the shelters are located not more than one or two hundred yards apart, a short quail flight from one to another. In areas where the trees were too far apart extra trees are to be planted for half-cutting.

Prior to the erection of shelters the quail population was about one bird to ten acres, which was about an average for good quail territory in other parts of the state. Now, with shelters the population is estimated to be one quail to every two acres which is well above the population to be found in most experimental tracts of land. On a certain

500-acre tract, said Lehmann, the population density reached one bird to 1.4 acres. Three coveys were present last year and others moved in after the cover was improved. Unusual conditions can sometimes produce unusual concentrations. Lehmann, for example, saw seven to ten birds to the acre on a 30-acre tract on St. Joseph's Island in November, 1936 (P. 37, Bulletin of 1937). These birds were to be trapped for distribution on the mainland, and perhaps were held together by artificial feeding. Under more natural conditions the highest known population is nearly one bird per acre. (See page 49, Principal Game Birds and Mammals of Texas). This record was made on a tract of land two miles south of Cat Springs in Austin County. Lehmann thinks he can beat that by making it one quail to the acre.

There are several reasons for believing that such a high average population is possible on the King Ranch. Predator eradication in cooperation with the U. S. Fish and Wildlife Service goes on intensively. More than two thousand coyotes and bobcats have been trapped, shot or poisoned in the past ten months. Snakes and rodents are being poisoned by using sodium cyanide gas similar to the potassium cyanide which Goering took. The beneficial hawks, useful in rodent control, are not being exterminated because they are not a threat to quail, where shelters are abundant. Very few hawks were seen, the fall migration not having reached the seasonal peak.

It is said that when a quail is nesting it emits no scent by which a predator may be attracted. This provision of nature, we are told, makes the bird safe unless it can be seen by its enemy. But with all that, many quail nests are ravaged. The list of destroyers is long and impressive. It includes the coyote, gray fox, skunk, opossum, raccoon, cotton rat and house rat, dog, armadillo, king snake, white racer, blue racer, chicken snake, terrapin, road runner, domestic turkey, chickens, crows, ravens, cattle, the fire ant and the acrobatic ant. Where nesting cover is poor, the loss is naturally greater than where nest concealment is good. In regions of abundant rainfall the quail is persistent and when a nest is destroyed another try is made by the nesting pair. In South Texas re-nesting is not general except after rains. Favorable rainfall conditions and favorable nesting seasons occur only about one year in three. The predator control program on the King Ranch aims at saving the first nesting efforts of spring (thus making re-nesting unnecessary) and providing a larger quail crop every year. But let us now observe the shelters and how the birds are behaving in their hiding places.

As we circled the shelters sometimes a covey would fly out. Sometimes they would freeze, and, at other times, they would be found feeding in the grass near the shelter. Sometimes none were at home but droppings, feathers, dust baths and other "signs" were always

The Mighty Angler

By J. L. BAUGHMAN

He riseth up early in the morning, and disturbeth the whole household;
 He stampeth down the stairs in his heavy boots, and shouteth, "Where is my fishing tackle?"
 He consumeth much toast and hot coffee, and partaketh long of eggs and of bacon;
 He goeth forth with great expectations, and boasteth loud of his prowess;
 He knoweth the haunts of the redfish, the cavallo, the trout and the mackerel;
 The pompano, pickerel and bonefish, the splash of the bass and the leap of the tarpon;
 He fisheth for muskie, for choupique and ling, for shad, for runner and swordfish;
 He understandeth the way of the kingfish, the amberjack, the tuna and tautog;
 Of sea-bass, cero and jew-fish, and he knoweth the pastures where the sea-horses feed;
 He promiseth his friends much fish, many crabs—yea, even oysters;
 He carrieth rods and a gaff, numerous reels, and a landing net.
 Matches, tobacco, tackle-box and head-net,
 Camera, fish-knife, spoons and lures without number.
 He roweth for miles in a boat, and goeth all day with boots filled with water;
 He trolleth for the pike and waiteth patiently for sac-a-lait and for sheeps-head;
 He returneth home in the dark of the evening, raw of hand, sore of back and of temper;
 And bringeth no fish on his shoulders, nor fish hath he in his knapsack;
 He descendeth on the ice-box as descendeth the locusts on green vegetation;
 And the spirit of truth has fled afar from him, for he braggeth thus to his comrades,
 Boys, "I got one this long," and extendeth his arms to the limit.

present. After visiting a few dozen shelters and flushing the birds we repented of our rudeness and began approaching the rendezvous more quietly and without conversation. This decorous demeanor on our part won no applause from the birds. They hate a sneak. It simply awoke curiosity as to who the sneak was. Figuratively speaking, they threw up the blinds and peeked out at the intruders. As we sat still leaving the birds to wonder what was happening, Lehmann would imitate the bobwhite's querulous notes of discontent. This usually brought the birds into the open for a better view and then they would run back. At times they came out in a fighting mood, with feathers fluffed like an old hen ready to flog. The bird vocabulary is not well understood even by the experts. It was evident that some misunderstanding had arisen that caused resentment. Maybe Lehmann used the wrong word, some cuss word in bird land, that got them riled up somewhat like a politician who has been called a communist!

The best way to keep birds in a good humor is to give them plenty of food. As desirable as are shelter and protection the birds would have no use for them unless food could be found within a reasonable distance. The menu also has been abundantly provided, with such trimmings as might be called for by a quail of discriminating taste. A plowed

strip six feet wide and 30 miles long has wound around the quail plantation to promote the growth of dove weed (Croton), also called goat weed. It comes near being the bacon and eggs of the quail diet, but their larder is not without great variety which includes more than a dozen types of grass and weed seeds.

In the winter of 1934-35 Lehmann examined 1984 quail crops and made a list of the thirteen most important seeds on which quail had been feeding. (Page 55, Birds and Mammals of Texas.) Dove weed was apparently the food preferred above all others. The choice of foods must, of course, depend on seeds that are available. If dove weed is not present the quail must accept what it can find. The writer has no data as to what percentage of dove weed seed is eaten by doves, but evidently its name is taken from the habit of the dove's gustatory inclination. But we balk at any assumption that horse radish is called horse radish because it is a favorite food of horses!

It was the psalmist who said, "O that I had wings like a dove, then would I fly away . . ." That is just what a dove can do if food is scarce in one place. He can move into adjoining counties where dove weed is to be found. Not so, the quail. He lives in a restricted area. In the following sections

are the dove weed percentages found in quail crops by Lehmann:

Eastern Timber Belt,	51%
Coastal Prairie	58%
Rio Grande Plain	19%
Central and Northern Farmbelt	17%
Edwards Plateau	25%
Panhandle	7.5%

Coming second as food was panic grass (*Panicum*) seed, which on an average furnished a little more than half as much as the quantity of dove weed.

Danglepod (*Sesbania*) is an excellent quail food that is also relished by ducks and other fowls. It grows best around the edges of ponds and lakes. This plant now lines the shores of the King Ranch lakes as far as the eye can reach. These bodies of water were formed by vast levees which impound hundreds of acres of water and all are stocked with fish from the hatcheries. Also along the shores are now growing recently planted willows and water hyacinth. Other foods are found such as duck potato, widgeon grass, nais, chara, potamogeton, duck millet, etc.

To this delectable spread of food the upland birds and the waterfowl are invited and many of them can hardly wait to get there. The first great flight of ducks came to the ranch ponds on August 25 and the geese were arriving October 15. Other water birds also are at home on these lakes. White pelicans in splendid array sailed into view and lit on the water. Sandhill cranes, though not seen at the time, are home folks on the ranch. Even the whooping crane has found the ranch a desirable place to winter. It has been asserted that only on the Aransas National Wildlife Refuge in Aransas County do the whooping crane appear in Texas, but Mr. Lehmann says they have been seen every winter, except the last two on the marshes of the King Ranch.

It was about 25 years ago that game warden R. D. Camp, a naturalist and bird lover, first reported the presence of whooping cranes on the King Ranch. He communicated his discovery to the National Association of Audubon Societies. They were doubtful, believing the bird to be extinct in that part of the world. Camp challenged them to come and see. Professor Allen of Cornell University came down and with Camp, located about eight and made moving pictures of the whoopers. I was with Camp many times and we always talked about birds and mammals. His enthusiasm was infectious; it was his religion. The reader will pardon this digression from my main story in the interest of ornithological history. These great migrants which barely escaped extinction are now getting a toe-hold in Texas. The last census at the Aransas Refuge, as far as known to the writer, was about fourteen individuals. They breed in Canada.

With this detour along the marshlands we are ready to return to a further consideration of upland birds, specifically, *Colinus virginianus*. Already the reader

has a question in his mind, to-wit, what is to be done about all this potential quail shooting on the ranch?

One answer is that quail clubs are being organized; two clubs with forty members are now in operation. Each club member pays \$50.00 a year for shooting privileges. The money is used to employ a club manager, who in co-operation with the ranch, carries on habitat improvement, predator control and other activities to increase quail population. Such clubs may be expanded in territory where quail management is feasible. The cost of cleaning up infested areas in the interest of livestock is considerable and if game can carry some of that load or most of it, both the ranch and the sportsmen are benefited.

You can now begin to appreciate the statement of Mr. R. J. Kleberg, Jr., that wildlife management is the most neglected phase of any of the forms of land management. If this plan of game control is good for the King Ranch, it is good for other ranches. The Armstrong Ranch in Kenedy County is following the plans heretofore outlined. Also, a game cooperative of 35 land owners adjoining the King Ranch has been formed. This cooperative is making good use of the principles and practices that have been so convincingly demonstrated as being the best of possible land uses.

This will answer some questions arising as to what the King Ranch is doing about game and the various forms of wildlife. In short, they are carrying on a program that is in every respect as sound and as worthwhile as their contributions in livestock breeding, soil conservation and range management.

"Burning-Off" Habit

Conservation officials, together with state agriculture officials, are united in their opinion that nothing is gained from the "burning-off" practices indulged in by some farmers at this time of year, who believe that they are burning up weed seeds or "giving the land a fresh start."

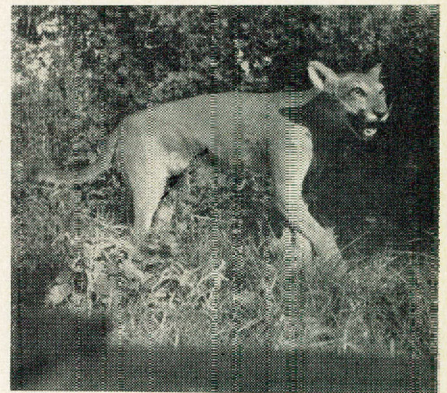
Actually weed seeds are seldom damaged by the swift flames that sweep across a dry stubble field partly because most seeds resist very high temperatures and partly because many seeds are still in their pods.

Many young trees are kept from growing. In addition, fires denude vital watersheds causing floods and soil erosion. Too, vital soil elements are destroyed by fires in spite of the belief that "burning-off" revitalizes the soil.

Wildlife takes the worst beating from such fires in that their winter homes are destroyed and also a great amount of winter food is made unusable.



The first successful magazine repeating rifle was the invention of C. Spencer, an American, in 1860. This rifle was used to some small extent in the Civil War.



Deer and Lion Bagged on Hunt

W. W. Barth, who lives just north of Queen City Annex, Mercedes, had an unusual hunting experience last year, an experience he will long remember. He bagged a six-point buck and a large mountain lion in one afternoon while hunting north of McCook.

The mountain lion measured 5 feet 3 inches from tip to tip and Barth mounted it. That's the mounted lion in the lower photo. The upper photo shows Barth and his one afternoon's bag.

A game warden who saw the mountain lion shortly after it was shot, asked permission to open the animal to see what it had been feeding on. He discovered the mountain lion had an unusual appetite for deer.

Both animals were shot in almost the same part of the body—the deer in the front shoulder and the lion only a couple of inches behind the shoulder. Both were killed with a 30-30 rifle.

Letters

Dear Editor: I am a reader of the TEXAS GAME AND FISH magazine and I and the family enjoy every article as we are fond of outdoor life, love sports, and enjoy reading about other people enjoying themselves in outdoor sports. We are particularly fond of fishing and never pass up an opportunity to go fishing. As I have two days off each week, we usually spend them on the bay or on a lake somewhere, and of course, we meet many sportsmen and hear many



13-year-old Richard Wheeler and his prize catch.

different experiences. Then, too, we read of them and think what joy and thrill they bring. We, too, had quite an unusual fishing experience which made an impression on us. It sounds like "just one of those fish stories," but it is the actual truth. So here it is.

Friday, October 25th, my wife and I went fishing at what we call "Mud Island," which is out from Virginia Point in the Galveston Bay. This is one of our favorite spots and we caught some nice trout and some redfish when I hung a fish which gave me quite a battle. As I was reeling it in, my leader broke and, of course, he got away. I didn't know what it was so we fished on and caught a few more fish and went in, and never thought any more about the

one that got away. Just one week from that day, which was November 1st, my wife and I went again, this time taking our 13-year-old boy who is quite a fisherman, too, and to our surprise he caught the first fish, which was a 3¼ pound redfish. When we got him in the boat we discovered that the fish had the hook and leader in his mouth which I lost the week before. Of course, this to us was quite an experience. I am sending enclosed in this letter a picture of the boy, the fish and the hook.

—W. W. Wheeler, Houston, Texas



Dear Editor: I wish to commend everything Mr. Willie T. Elsick, of Caldwell, Texas, had to say in his letter in the November, 1946, issue of our magazine, on the legalizing of the killing of doe deer. Some of these doe in our populated areas are old and barren. They should be trapped, all the old does put on the market as food, and the others thinned out and moved to other areas. Too many hunters go into the woods and shoot on sight, as it is now, and it would be worse if it was legal to kill doe. Our laws should be more strict. We have worlds of good deer territory in Texas. Where deer are scarce, or none at all, the places should be restocked and protected by game laws. But to keep deer localized is another problem when the foxhounds are chasing them all the time. I have had fox hunters tell me their dogs trailed deer all night. Now it is a question whether we want the fox hound for a sporting proposition or do we want deer, for the sport and the supply of meat. I venture if it was left up to a vote of the people, the fox would go and deer would stay, because who ever heard of a landowner charging anyone for running fox on his land, or who ever heard of a fox hunter offering to pay for such privilege. No, the landowner is only too glad to get rid of the pest. On the other hand the deer hunter pays quite a revenue for the privilege of his sport. I doubt if this should be in print in TEXAS GAME AND FISH, but anyway it is how I see the situation after the November issue is full of fox hounds.—Dr. J. A. Whitacre, Stephenville, Texas.



Dear Editor: I wonder if a man who does his hunting in "the wide open spaces of God's great out-o'-doors" instead of a cushioned seat behind a clicking typewriter, can have his say in the pages of your very interesting magazine?

The news has just been received by me that the son of an old schoolmate had been killed on a hunting trip by a fellow hunter and that another with whom I hunted last season had been shot at three times, but had been able to duck behind a rock before the moron could get a bead on him for the fourth shot. This latter mentioned friend had paid his \$10.00 bill along with just 83, yes, 83, others, to hunt on a ranch the opening day of the season.

I was out the same day with nine

others on a little ranch of only 400 acres that probably had not had a legal deer killed on it for the past five years. One of my companions was a veteran who was captured on Wake Island and had lain in a filthy Jap prison camp for more than three and one-half years. Another was with Patton's army and had stopped a couple of German slugs. They were charged \$5.00 each to look at the scenery that probably no deers' eyes had beheld in many moons.

A few days later I went on another three-day hunt that I had arranged for several months previously. Five in our party were supposed to have exclusive rights to a certain 1,000 acre pasture. I was surprised when we drove up to the old ranch house where we were supposed to camp. There were about a dozen cars parked around the place. I supposed someone had died and that there was a funeral going on and our hunt would have to be called off. But no, it was only other hunters hunting on the same premises. The house was piled full of bedding and more than \$1,000 worth of guns stacked about the walls besides what was being carried in the woods.

The ultra rich have plenty of dough and can always buy the best in privileges to the detriment of the average hunters who are in the vast majority. The former can also bring along an over supply of booze and when he gets tanked up it is no wonder he wants to try his new super-duper cannon on anything that moves in the woods. The only hope real hunters have is that with bleary eyes and shaky hands, the rich old soak will miss him.

Why is it, if the deer and other game belong to the State, that the State cannot regulate the price to be charged for hunting and the number of hunters to be placed on any given number of acres? Why let a few ranchers get rich at the taxpayers expense, or let a few wealthy would-be hunters outbid the poor devils, yes, even the veterans who made it possible for them to profiteer on the property of the State? Is it any wonder we have head-lighters, road hunters and doe killers?

I spent 15 years trying to protect the deer and other game down near the border and know hunters as well as any other man now living. The vast majority of them are gentlemen unless made to be otherwise by unjust treatment. Those who are not should be handled without gloves. Those caught killing does or head-lighting should have all hunting privileges taken from them for three or more years, or a compulsory jail sentence of not less than 30 days. That



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DIXIE KENNELS
Herrick, Illinois

would break them from sucking eggs. That should apply to the local landowner and his tenants also, for I believe that more does are killed by the underpaid attendants of the ranchers than by the hunters who come in during hunting season. This opinion is based on a third of a century of actual observation. With meat rationing, a Mexican foreman with a dozen children and half as many dogs just could not get along on \$40.00 or \$50.00 a month without a little foraging.

The does are very scarce now in all the country south of the hills to the Rio Grande. Some ranchers are very fond of doe meat also, but of course it would be sacrilegious for a common hunter to even mention such a thing. Most game wardens understand what I mean and have my sympathy. I know what they are up against.

Another synthetic toy balloon I would like to puncture while I'm at it, for it is often the cause of some hunter's untimely death, is that all this up-to-the-minute poppycock that is being peddled by the so-called gun experts, that you have to have a super-duper cannon in order to get your buck. I have known of several hunters being shot at so far away across the canyons or mesquite flats, that the shooter could not possibly tell what he was shooting at. The super-cannon advocate is always yapping about killing his game quickly and surely. Well, he ought to give a little of his sympathy to the hunters in the surrounding country. In the last 40 years I have been called on to help trail many wounded bucks and 90% of them were butchered up by these cannon toters who had been told they could kill a deer any distance, hit anywhere, with such rifles. I know boys in their teens who have already killed more buck with fewer cripples with a .22 than these dolled up cannon carrying dudes can ever hope to shoot at.

I am just back from a hunt where a fellow sat on the same log and got two nice buck with a .22 in a two days hunt. He did not cripple any either. Still our gun editors are inclined to call even the old reliable .30-.30 an obsolete popgun. Well, anyway, all old hunters know that said .30-.30 has killed more deer than all other rifles combined in Southwest Texas. While on this trip, my son shot a 15-point buck, about the largest one I have ever seen come out of these hills with a .30-.30 carbine. The deer was facing him at 50 yards and the bullet went entirely through him endways and shattered one hind quarter so badly it was all but ruined. You could almost stick your fist in the hole where the bullet came out. I have shot them with everything from a .22 to a .45-.70 in the last 40 years and know, as real hunters know, that for the deer of this section even the .30-.30 is a bit heavy if you want to use the meat. I have a .30-.30 Model 55 that a friend had the Winchester people to send me when they first came out, and this gun has killed about 70 legal bucks by myself and others. I cannot recall a half-dozen that

needed the second shot or that escaped when hit perceptibly. After all it is about 90 per cent man and 10 per cent gun even in deer hunting. I have never known a deer to stay on his feet one minute when shot through the heart or very near it, other opinions to the con-

trary, and notwithstanding. The last 10 I killed with this gun were as follows: No. 1—A nice eight-pointer standing at 80 yards, very early, only head showing over brush, first shot a miss, he didn't move, second shot was a bulls eye center in the white spot under his throat.

The Tables Are Turned

The King's Master

By W. B. DAVIS

ONE of the most widely known facts about snakes is that the king snakes relish other snakes. They have been known to eat even rattlesnakes and other venomous species, to the poison of which they are relatively immune. Most snakes, unless larger than the king, are terrified in the presence of the latter, seeking only to escape. How they realize immediately that their lives are in danger is a matter for conjecture, but their reaction is prompt and of a very characteristic type. Either a calm or a belligerent specimen will become positively frantic

in its efforts to escape as a king snake is placed in an enclosure with it. Snakes even have developed a special defensive parry, a thrust with the arched fore part of the body, to help ward off the king's attack. On the other hand, it is well known that a snake as large as or larger than the individual king with which it is confronted shows no special fear, in effect realizing that it cannot be eaten.

Not long ago I was visiting Charles Baker, a ranchman who lives near China Springs, 18 miles northwest of Waco, Texas. Baker makes a hobby of catching snakes, and gave me what he happened to have on hand. Included was a very fine Blotched King Snake (*Lampropeltis calligaster calligaster*), some two feet long, that he had taken on his ranch. This was a real prize, since only one had ever been taken in the county before, and the species was therefore to be counted as a very rare one in that area. In addition he gave me a couple of com-

mon Blue Racers (*Coluber constrictor flaviventris*) and a Long-Nosed Snake (*Rhinocheilus lecontei tessellatus*).

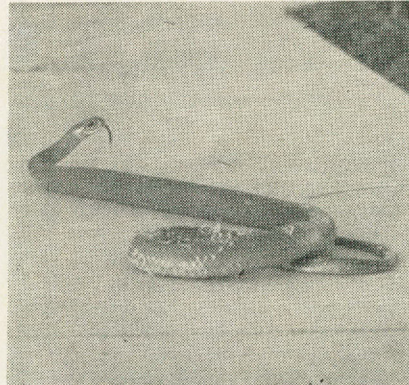
Somewhat cramped for space in my office, I placed all of the snakes together in a single cage. It was my opinion that the king snake would be-

have himself anyway, even if he were not in a separate cage, since all the other snakes were of equal size or somewhat larger than he.

For several days all was well, and I became convinced of the safety of all snakes at least from each other. It was then much to my astonishment and con-

cern to observe, after a week or so, that only three snakes were in the cage instead of four, and that one of them had a conspicuously swollen body. But it was not my king snake with the bulge. No, it was one of the commonest snakes of all, one of the blue racers, which had gone berserk. Moreover, to my utter chagrin, he had spurned more common food, and had devoured my prize king snake! The lord and master had fallen to a commoner.

Aware that digestion proceeds rapidly in snakes, I made no attempt to recover the remains of the king snake. They would probably have been useless. But, if I could derive no direct benefit from the king snake, I hoped to realize some indirect value at least, in the form of food for the racer. The racer would otherwise, however, and after a few hours disgorged the king, which proved too much of a stomachful. And for me the king was a total loss.



THE BLUE RACER with his belly-full of King Snake.

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He never knew what hit him; No. 2—A seven-pointer, walking toward me, a neck shot near the shoulder, fell in his tracks, apparently never moved; No. 3—A large eight-pointer, rattled up while sitting at root of tree, he walked to within 30 yards, stopped and turned his head, another neck shot near shoulder, killed instantly in his tracks. No. 4—A fine fat nine-pointer, shot while I was sitting on a stump. He jumped a fence and started to run by me at about 50 yards. Spine was severed just behind the shoulder, apparently never moved, was stone dead when I walked to him. No. 5—A fine ten-pointer trailing in a trot like a hunting dog out in a cedar burn about 100 yards away, shot through the chest, ran about 40 yards, stopped with only head showing and was shot again just under the eye which slapped him down for keeps. The last shot was useless as he could not have possibly stood on his feet 30 seconds more. No. 6—next morning, shot running through a cedar burn at about 40 yards. One shot, a broken neck sent him end over end and he lay perfectly still, a nice eight-pointer. No. 7—A ten-pointer, shot while I was sitting down 315 paces, about 250 yards as the man who stepped it off was a little duck-legged guy, shot through the heart and very dead when I walked to him. However, he ran about 40 yards before falling. I just tilted that little front gold bead up to top of his back and squeezed off. This gun is sighted for about 125 yards. A fellow who has hunted for half a century or more learns a little about how to aim, even an obsolete .30-.30. No. 8—A nice eight-pointer, rattled up while sitting in a mesquite tree some six feet off the ground. He came in a fast walk but stopped about 60 yards away with only neck and head showing, had to shoot as he was looking at me, a neck shot and plenty hard, as I was sitting in a bad position, but lucky enough to connect. Killed in his tracks. No. 9—A long, hard shot on a cold frosty morning. A badly shattered shoulder. I trailed him till he got into cedar brakes and had to give up. No fault of the gun. I just didn't put it in the right place. No. 10—A fine eleven-pointer running from another hunter came by in pretty rough country about 70 yards away. I whistled to him and he stopped with only head showing. It was take it or leave it and that quickly. I connected and his head was like a crushed eggshell, one horn pulled out when I tried to roll him over to dress him.

Now, these were shot the last five seasons, one shot each with one exception and the second shot then was unnecessary. It is an approximate picture of my hunting experience for the last 40 years, so far as deer are concerned. I have killed a dozen or so fine bucks running and missed as many more. I have hunted with hundreds of hunters, many of them fine shots and, Brother, I have yet to see the man who can kill more than half the time on running deer no matter what distance he shoots or

what kind of gun he uses. Personally, I have found peeps and scope sights all but worthless in this brushy country. The man who claims he can kill them up to four or five hundred yards, running, is just day day-dreaming. "There ain't no sich animal in captivity!"

I have gone into detail concerning this that I may encourage those who for financial reasons or otherwise cannot own all the newfangled guns that are to be had by the more fortunate hunters, and also to reduce if possible, the accident hazard to all hunters exposed to the super cannon addicts. Summed up, I am sure the hunters of today are as certainly over-gunned as the man who hunts sparrows with a 10-gauge shotgun. Why, I just read a long dissertation about the lowly .22 and the author wound up by warning the readers that the .22 was not powerful enough for squirrels and here I had been shooting them with a .22 for over half a century and have yet to see a .22 short fail to go through a squirrel if it had not struck a limb or other object before striking the squirrel. I very often go out and shoot a half dozen or more without missing. I shot some the past week and those shot endwise were hardly worth dressing and that with shorts.

Another expert only recently stated in a sports magazine that open sights were entirely useless for a man past middle life. Well, I've been squinting down a rifle barrel for well past a half century and can still shoot five-inch groups at 100 yards with the above mentioned .30-.30. Guess it will have to come someday, but I am going to feel mighty bad when the time does come when I cannot hit a deer's head three times out of four, off hand, at the average distance they are shot here which is less than 100 yards in most cases. The man who cannot kill a 1,000 pound ox with a .22 at the average distance a squirrel is shot has no business in the woods. He had better go right back to mama and start all over again with his BB gun on the neighbors' tom cat.

I have a very close neighbor who got his two bucks last year the first morning of the season and repeated the same performance this season and he did this with a .32-.20 Winchester. He didn't cripple any either. He knows where to hunt and how to hunt deer, and, what is more important, he knows what to do when he finds them, and does it. Personally, I had rather be in the woods full of such hunters than with a single-super-duper dude obsessed with an insatiable desire to slay and slay utterly by annihilating, obliterating, and destroying everything he sees moving in the brush.

After all, is it not entirely possible that this concerted effort all over the country to bar all but the super-duper high-powered guns, is but a sinister effort by the ultra rich, to bar the common hunter from the fields and forests of America? Already they have leased four-fifths of the best deer territory to

be had in this section of the state at prices that the average hunter cannot possibly afford. My dear hunting pals, think it over.

—O. Saunders, Knippa, Texas

East Texas Ducks

★ Continued from page 6

ber. Small groups show up earlier on a few lakes, but a cold rainy spell in late November scatters them over the entire region. Thereafter, they gradually increase in number until in late winter they are found on all lakes and major streams as the predominant species. Groups of mallards generally select a favored roosting ground which forms a base for their activities.

A typical day for the mallard as observed on refuges in eastern Texas is somewhat as follows. Shortly before sunrise the flock sets up an over-all commotion as the hens call to one another from all over the lake. Then, as a general stretching and splashing takes place, one can hear but not clearly see small groups of mallards take off through the predawn mists for their feeding grounds. Where concentrations of mallards are large, these groups quickly become long flocks in the air. The general exodus of singles, pairs, small and large groups continues until most of the lake on which they have roosted is left in possession of diving ducks, coots and grebes.

In eastern Texas the mallard feeding grounds are generally apt to be wherever the most acorns are to be found in the river bottoms. At some places the oaks are so conveniently adjacent to the roosting lake that large groups of mallards simply waddle up the shore and into the oak groves, gobbling up acorns as they move along. I have stood against a tree at dawn on an oak-covered hillside several hundred feet from a lake, and have had several hundred mallards come rustling through the leaves all about me. At recurring intervals, the whole flock would simultaneously burst into the air and fly back to the lake, only to start another march through the oaks. Just how far mallards will fly from their nightly roosting grounds in search of food is not settled. At one refuge adjacent to the Neches River they would scatter along the river bottom for a distance of five miles from the refuge. On another refuge, which held an estimated 25,000 mallards, definite proof was obtained that large numbers would fly ten miles to a large farm on which the peanut crop had been stacked awaiting dry weather to harvest.

Throughout the day small flocks of mallards will come and go from their headquarters. During the hunting season it is a common sight to see small flocks come into the refuge after a shot is fired on the river bottoms. Those ducks left

on the lake would alternately spend their time in paddling about looking for food, and in preening and resting. At certain times during the day, practically every mallard on the lake will launch into a splurge of vigorous splashing and preening. This was observed on several occasions to take place about 2:30 in the afternoon, lasting for fifteen to thirty minutes. From sunset until dark, mallards gradually return to their roosting lake in singles, pairs, and in large flocks. Not every night do they rest serenely on roosting grounds, however. Often on moonlight nights they are noisy, and will feed during most of the night.

In the "bottoms," one can meet an old drake leisurely feeding along a river bank. A few paces farther, a pair or a small flock will fly up from a slough. Not all of the time spent by mallards in bottomlands is spent in feeding. One flock of fourteen mallards was observed in a small slough all of one afternoon, alternately feeding, preening and sleeping. Their sleeping was done first on a protruding log, next on the water, and then on shore. They slept with their heads tucked under their wings, and with their heads out.

The daily activities of mallards are much under the influence of local conditions. Early in autumn the river bottoms in East Texas are usually dry. When winter rains set in from October to January, the sluggish East Texas streams become several miles wide in places and remain thus until late in spring.

As the rivers rise they inundate the bottomland, and floats the accumulation of acorns which have dropped from the oaks, thus making this food available to mallards on the water. Under such conditions, mallards will often remain in the river bottoms to roost. Another local condition affecting mallard concentrations is the sudden severe freezes that sometimes occur, turning the lakes in eastern Texas north of latitude 33 into sheets of ice. This occurred twice during the period of this study, in each instance forcing a large portion of the ducks in the northern half of the region to move south. Some ducks, however, remained in the northern portion of the region on open streams until the lakes thawed.

An experience with a hen mallard demonstrated the remarkable sense of direction these birds possess, and also their ability to walk a considerable distance on land. During trapping operations the wing of a hen was broken. This bird was banded and taken to a farm one and one-half miles from the lake where she was placed in a pen for the night. The next morning the bird was missing and was found back in the trap. Since she could not fly she must have walked the entire distance back to the trap.

In early February mallard flocks begin to thin out, many doubtless starting their leisurely journey northward. By March 1, about eighty per cent of the mallards are gone. Small flocks can

still be found however, in April, in the river bottoms, although these possibly may be ducks from farther south. Some few mallards remain to nest and raise their young in eastern Texas as several brood records testify. The southernmost of these records is for Tyler County which lies between latitudes 30 and 31 degrees. This species however, does not commonly nest in the region, although mating display, courtship behavior and pairing have been observed throughout the winter months before birds leave for the north.

The ring-necked duck is the most common diving duck on the deeper lakes of the region during the winter months. It appears in large numbers in mid-November, between the time other species have passed on to the coast and the arrival of mallards in abundance after Thanksgiving day. The hunter, sitting in his blind during this period, may hear a flock of these fast-flying little ducks before he sees them, for the approach of even a few sounds like a windstorm.

In contrast to the mallard, ducks of this species when undisturbed and when food is available, spend a great share of their time on the same lakes they have chosen for roosting sites. Throughout the greater part of the day the ring-neck duck is actively diving for the seeds of submerged water plants. Their feeding activities, however, are most intense at break of day, at which time they generally spread out over most of the lake. As the day advances, many take time out from feeding to preen, rest, or sleep. At certain times of day, as though by a given signal, all the ring-neck ducks on a lake will begin to preen, splash, and play—a most vigorous and noisy procedure. Here and there, one after the other they rise up on their tails, throwing a shower of water into the air with energetic flapping of their wings. Others will fly short distances and land again on the water. This period of intense activity has been noted to occur most commonly in mid-morning, and again at twilight. Late one evening a raft of over one hundred ring-necks had finished their splashing and were quietly preening as the light faded. The moon arose, and with this the ducks left the lake in four large groups, to return after eight minutes' flight, just as though they had taken a little jaunt for exercise as a prelude to settling down for the night.

Where ringneck ducks are forced to roost on a lake containing little or no food, they are generally strung out in a long compact formation. At various times of day they leave for feeding areas where they remain until satisfied or disturbed before returning to their roosting lake. This was observed on numerous occasions on the Mount Pleasant City lakes, where the old lake containing the most food is open to hunting and the new lake is closed. These lakes are only a half mile apart, and the ring-necks would commute between them,

feeding on the open lake but roosting on the protected lake.

The winter sex ratio of our ringnecked duck in East Texas is unbalanced, since during the winter months there is a preponderance of males of this species. This was noted in both small and large flocks, and persists until early in March, when migrant flocks arrive from the south. Some of these flocks consist entirely of females. No cases of mating activity for the ringneck duck were recorded during these studies.

The wood duck or "squealer" is as much a part of eastern Texas as are corn bread and blackeyed peas. They are found along several thousand miles of river bottom, on cypress covered Caddo, and on numerous shallow lakes where dead trees form an attractive environment. In their daily activities and in their food habits they resemble the common mallard, but here the similarity ceases. Shortly before sunrise on roosting lakes one can hear their squealing, which resembles the screeching of children at play, mixed with the incessant quacking of mallards. When still too dark to be plainly seen, singles, pairs, and small wisps of wood ducks leave their roosting lake for the heavy timber of the river bottoms.

This morning departure was timed on one refuge where about 75 wood ducks roosted nightly. On July 3, they left between 6:12 and 6:17 A.M.; on October 6, between 6:00 and 6:10 A.M.; and on November 29, between 6:25 and 6:35 A.M. Their flight was generally at tree top level, although they also maneuvered dextrously through heavy growths of timber along the shore.

Like the mallard, during the winter months their preferred food is acorns, with a preference for the smaller acorns of the water oak (*Quercus nigra*). As a rule they do not concentrate in as large flocks as does the mallard. However, one exception to this was noted on a small river bottom slough in Houston County. Here, between January 5 and 15, 1944, over two thousand wood ducks fed on the unusually heavy acorn crop of that year. As a rule, however, they are flushed from streams and bottoms in pairs or in small flocks seldom exceeding ten.

On some days, the lakes which serve as roosting grounds are empty of wood ducks throughout the entire day; on other days small groups may come and go all day long. Most of the wood ducks roosting on any one lake, however, spend the day in the river bottoms. Here small groups fly from one slough to another, or are found in pairs paddling along the river's edge. At times, one may find larger concentrations, usually where there are button willows (*Cephalanthus occidentalis*). Sometimes individuals may be found roosting in trees. Flocks of wood ducks have been observed at dawn and dusk walking up a hillside through an oak grove, feeding on acorns together with hundreds of mallards.

At night, wood ducks return to their

roosting ground as suddenly as they left it in the morning, the return assembly being completed within fifteen or twenty minutes immediately preceding night-fall. Generally, they fly in low just above the tree tops as they make directly for their roosts. In eastern Texas wood ducks roost to a great extent in clumps of button willow. One clump of this common shrub about fifty feet in diameter was observed to hold some forty roosting wood ducks every night. Squealing and calling generally lasts about 15 to 30 minutes before they settle down on their roost for the night. On some moonlight nights, however, they will squeal and splash late at night.

As the winter rains in eastern Texas begin to fill up the river bottoms, wood duck flocks gradually begin to dwindle on the lakes. Attractive roosting spots then become available in closer proximity to their feeding grounds as water reaches the proper level around button willow clumps which abound in river bottom sloughs.

Wood ducks begin their mating activities early in this region, some active mating taking place in February and the peak of the mating season occurring in the first two weeks of March. One brood of 13 chicks about three days old was observed by Biologist D. W. Lay on March 14 in Montgomery County. Since incubation lasts from 28 to 31 days, copulation in this case may have taken place in January.

In general, however, it is the first week in April before wood duck broods are commonly seen in East Texas.

In addition to the three duck species on which attention has been concentrated, the winter activities of others have been casually observed. Species which begin their mating activities in eastern Texas before their flight to northern nesting grounds include:

a. American Coot (*Fulica americana*)—observed in vigorous mating activity as early as February 16.

b. Pie-billed Grebe (*Podilymbus podiceps podiceps*)—observed copulating in late March.

c. Blue-winged Teal (*Querquedula discors*)—observed copulating the last week in March.

In addition to the ring-necked duck, unbalanced sex ratios in winter flocks have been noted in the Pintail duck (*Dafila acuta tzizihoa*). Although both sexes are present during the winter, occasionally entire flocks consists of one sex or the other.

Wildlife Management

★ Continued from page 7

great shooting preserves in this country. I'd hatch birds and release them ahead of the guns. However, I would not do this until after the other measures had assured the best possible production of birds by working with Mother Nature.

In the average state—working on limited budgets—the best long-time program would undoubtedly follow the same general pattern. Because of their historical sequence and sportsman-pressure, however, many states have spent and often wasted much of their limited funds raising or buying and releasing birds in areas totally unsuited for them.

Good quail land, in suitable quail country, normally will have an adequate breeding stock. Occasional exceptions may be areas under too heavy gunning pressure or areas subjected to several successive poor breeding seasons or extraordinarily adverse weather conditions. *The quail naturally produced on these lands must of necessity furnish the backbone of the huntable population.* There will inevitably be good, mediocre and poor years, the frequency of each type depending upon cumulative effects of good and bad factors operating upon the quail population. These ups and downs would inevitably occur even if there were no shooting. Too much shooting in poor years or too little shooting in good years may make these swings more pronounced but shooting pressure alone is seldom entirely responsible for the swing; sometimes it is a negligible factor.

Whenever a stocking program is undertaken the individual cost *per quail* to state game funds begins to go up. When stocking ahead of the guns comes into the picture, the cost in terms of return in the harvest begins to skyrocket.

Any sportsman can figure for himself by computing the cost per quail or pheasant (the two upland game birds that so far are successfully bred on a mass production basis) and figuring the number his annual license fee would cover, even if the entire sum went into quail production with nothing for protection or any other necessary elements in management. (*Editor's Note*—Current market price for game-farm quail ranges from \$2 per bird up.)

The inevitable conclusion under present conditions must be that bag limits and seasons will be drastically reduced, or the cost of licenses will go up and up if extensive stocking ahead of the guns is to be carried out.

The plain truth is that under the American concept of public hunting for a nominal fee to all who care to buy a license, it is economically impossible.

The equally inevitable conclusion is that restoration and maintenance of environment will, with present knowledge, produce the greatest number of quail over a five-year period for the money available for quail production for public hunting.

Only where cost becomes a secondary consideration can extensive propagation and release ahead of the guns become feasible. Perchance it will not always be so. The experience of shooting preserves indicates definitely that additional shooting can be provided *at a cost*. It also indicates definitely that natural production even on the most intensively man-

aged areas is the basis of a population big enough to furnish sport shooting. Get it first before indulging in the higher cost projects and remember that there is a definite limit beyond which land cannot produce more of any kind of life. At some future time that production may be raised by new knowledge, new methods, or the expenditures of greater and greater sums of money, but it is not possible now.

I don't insist on the impossible, but I do expect the greatest possible wildlife population for the amount of money available might be a good motto for every hunter. After all, the price of his annual license is the sole contribution the average hunter or fisherman expends for production and protection of wildlife; the balance expended in pursuing his favorite recreation is for harvesting the crop. It is a badly unbalanced picture which only the basic, cheap, *natural production* of game and fish makes possible. It would seem only good sense to build that natural production to the highest possible level and spend the necessary money and effort to keep it there. Fortunate indeed the newly-awakened American understanding of and support for a soil conservation program; it gives powerful help in carrying out a good wildlife program. In fact it is impossible to do a good soil conservation job on any land without helping wildlife. With some aid from wildlife interests the wildlife end can be helped still more.

The average hunter ought to get behind such work—knowing that it is surely working toward the greatest possible production of game from land which must necessarily be used primarily for other purposes. Such work does not produce spectacular results. It is hard to build big ballyhoo publicity around such simple things as planting patches of feed-cover, of filling a gully with growing plants, of preventing bad soil erosion by stopping runoff on the land where the rain falls. But when these things are properly done, each covert and food patch will go on each year producing its tiny quota of quail, pheasants, rabbits and other life—something that all the publicity in the world cannot accomplish. Isn't it time that those of us who like to hunt and fish quit looking for a quick, easy and painless way of producing game and get to work on a sound fundamental program?

Aid for Blister

Blisters have spoiled many a hunting trip. Here is a sure preventive. The minute you feel a blister starting, stop and remove your shoe and sock. Rub the sore place with a bar of soap. Any kind will do but don't wet it. The coating of soap will stop the pain at once and prevents further friction between the foot, sock and boot which caused the trouble.

★

Three or four rabbit skins are used to make one felt hat.

Skinning a Fox

★ Continued from page 9

sary to split a fox tail clear to the tip or the hair will slip if there are any warm days, and there is always a drop of blood in the very tip of the tail.

Now by grasping the skin of the hind legs up next to the body, after the carcass is hung up with hooks under the tendons of the hind legs, you should be able to pull the skin down over the body to the front legs. It is usually necessary to use the knife to get the flesh loose from the hide back of the front legs. Pull the front legs through and cut the pads and toes loose as with the hind legs. After the front legs are out it is often possible to pull the skin on down over the neck to the base of the skull. Sometimes it is necessary to use the knife.

Most trappers continue with the skinning from here with the body in the same hanging position, but I have made a change that I think is better. I have always had trouble with blood running down over the skin when I cut the ears loose from the skull with the body in this position, so I reverse the position. I have a rope with a loop in it hanging from the rafter. I slip the part of the skin that is already loose up through the noose and tighten it, then release the hooks in the hind legs and let the body hang down. You will have to wrap the skin, tail and hind legs around the rope to keep it from being in the way. Then cut the ears loose from the skull, being careful to leave all the ear on the skin. No blood runs down over the skin when it is done this way. The weight of the carcass hanging down is about all the pressure needed to keep the skin tight for the use of the knife. It is necessary to use the knife from here on. With a small blade, very sharp, cut the skin from around the eye being careful to leave the hole no larger than the eye was, if possible. Knife it on down over the nose leaving all the lips on the skin, both upper and lower. If this method is used there should be no blood on the skin, but if there is, wipe it off good at this point and you are ready to stretch it.

One of the important things in having a fox hide look good is the shape of the board used. Pull the skin down over the board, hair inside, until the small end of the board sticks out several inches though the opening made by the mouth. Watch that the middle of the forehead and the root of the tail are stretched *in the middle* and not to one side of the board. Now take hold of the tip of the nose and pull it up and just over the end of the board. Then stretch the skin all the way down. Don't try to make it too big (it can be stretched out of its natural shape) but make it reasonably tight and stick a tack in the skin of each hind leg down by the foot. Turn the board over and put another tack in the root of the tail and another tack near the end of the tail. I flatten the skin of the tail open at this point and tack a narrow

strip on each side running the full length on each side. In this way the skin of the tail is always open and cures better.

Now stick a narrow strip down through the front leg to the beard and put a tack through the skin near the foot into this strip. This will hold the front leg out from the skin and give the skin a chance to dry under the front leg. I neglected to mention that just before the tacking is done any surplus flesh left on the skin should be scraped off with something like an old table-spoon. A hide should only be stretched until there are no wrinkles in it. Don't try to make a big one out of one that is naturally a small skin.

Leave a red fox on the board, hair side in, about two days and then turn it with the hair out and put it back on the same board two days more; then it should be dry enough to hold its shape. Remove it from the board and hang up by the tip of the nose. It takes usually two times as long to dry a gray fox as it does a red. Be sure not to let it dry too long before turning or the skin cannot be turned. Don't leave it on the board with the hair side out too long or it will shrink and may be hard to take from the board. A wet cloth wrapped around the skin a few minutes will usually loosen it up enough to remove it if you should happen to forget it too long.

The following is a description of a medium size fox board. You should have a few larger and some smaller ones.

The board should be at least 50 inches long, thicker at the wide end and planed off thinner tapering toward the narrow end. About 5 inches from the point the board should be about 5 inches wide. A gentle arc should be the outside of the board on each side from the ear point (5 inches from the tip) to the tip of the board. From the ear point the board should widen on an even taper until at the widest end where it should be $7\frac{3}{4}$ inches wide.—Pennsylvania Game News.

Arms

★ Continued from page 15

with them, and doubles were so frequent they became commonplace. Shooting from pits on pass where the standing position was used, the tiny guns proved even more dependable and on quail and other upland game the results were still happier. So very satisfactory were they that I had the Parker Co. build for me another lighter weight, double gun and also invested in an over and under Charles Daly 28 gauge and a Sauer and Shon over and under of the same gauge.

"Splendid and dependable 28 bores, such as Parker, Ithaca, Winchester and Remington, may be procured in America at very reasonable prices. For the sportsman who wishes to give the birds a break and who is seeking new thrills I respectfully urge a trial of these artistic little masterpieces."

—North Dakota Outdoors

Popular Sporting Myths Exploded

THE mistaken idea that full-choke guns are best for hunting, has been the greatest boon to conservation this country has ever seen. Wiser sportsmen have profited by the mistakes of these brethren by using opener bored guns. The latter get the game while the former support the ammunition companies. The average gunner with his long barreled, full choke pump or automatic is hopelessly over-gunned. He has a weapon suited only for expert use on long range game. Only post-graduates in the art of wing-shooting are qualified to use such a gun.

What game does our average gunner expect to kill? More often than not his forays afield will be in pursuit of rabbits, with side dishes in the north of grouse, woodcock, pheasants and squirrels. In the south, his principal game is likely to be quail, with occasional chances of other game. A couple of tries a season on ducks will probably fit our average Rebel as well as the Yankee. Is our man well armed for this kind of hunting? Definitely not! He has saddled himself with a hopeless handicap to start with—one which even the most expert shot could not hope to overcome. He has a slow handling gun, too long and too heavy for the kind of hunting he will do. The only exception may be the chap in a prairie or desert locale, where all his shots are likely to be at 40 yards and up, but even there a modified choke will kill more game than a full choke.

His shots will be at relatively short ranges—20 yards up to perhaps 35 yards. Any good improved-cylinder gun with an ounce of shot will kill any kind of game up to that distance. Its wider pattern at short ranges will give its user a chance to hit where he will otherwise almost surely miss. None of us shoot so well that we can disdain the demonstrated advantage of the widest patterns we can use without undue crippling. Yet most of those who need wider patterns are using full choked guns!

The fetish for "long-range" guns is the worst error the inexperienced shooter can make. He had better start with a sawed-off "sprinkling-pot" and kill himself some game, get a bit of confidence in this ability to HIT and go on from there to closer bores and longer ranges.—Stan B. Wade in *Colorado Conservation Comments*.

★

"Precocial" birds are those which are able to run about shortly after being hatched from the shell and are not cared for in the nest by their parents. Examples are the bobwhite quail, ring-necked pheasant, Hungarian partridge, ruffed grouse, prairie chicken, woodcock, jack-snipe and killdeer.

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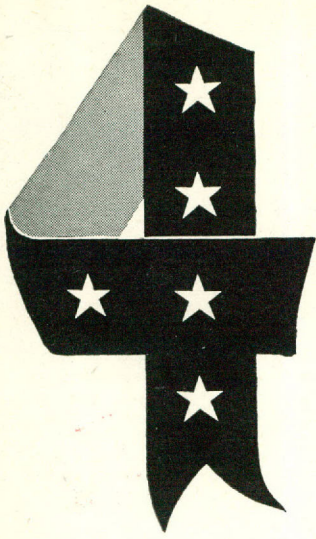
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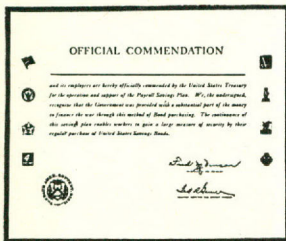
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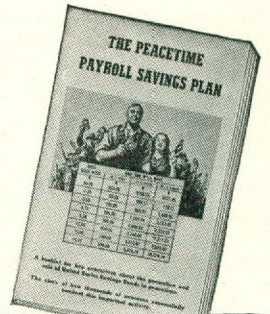
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