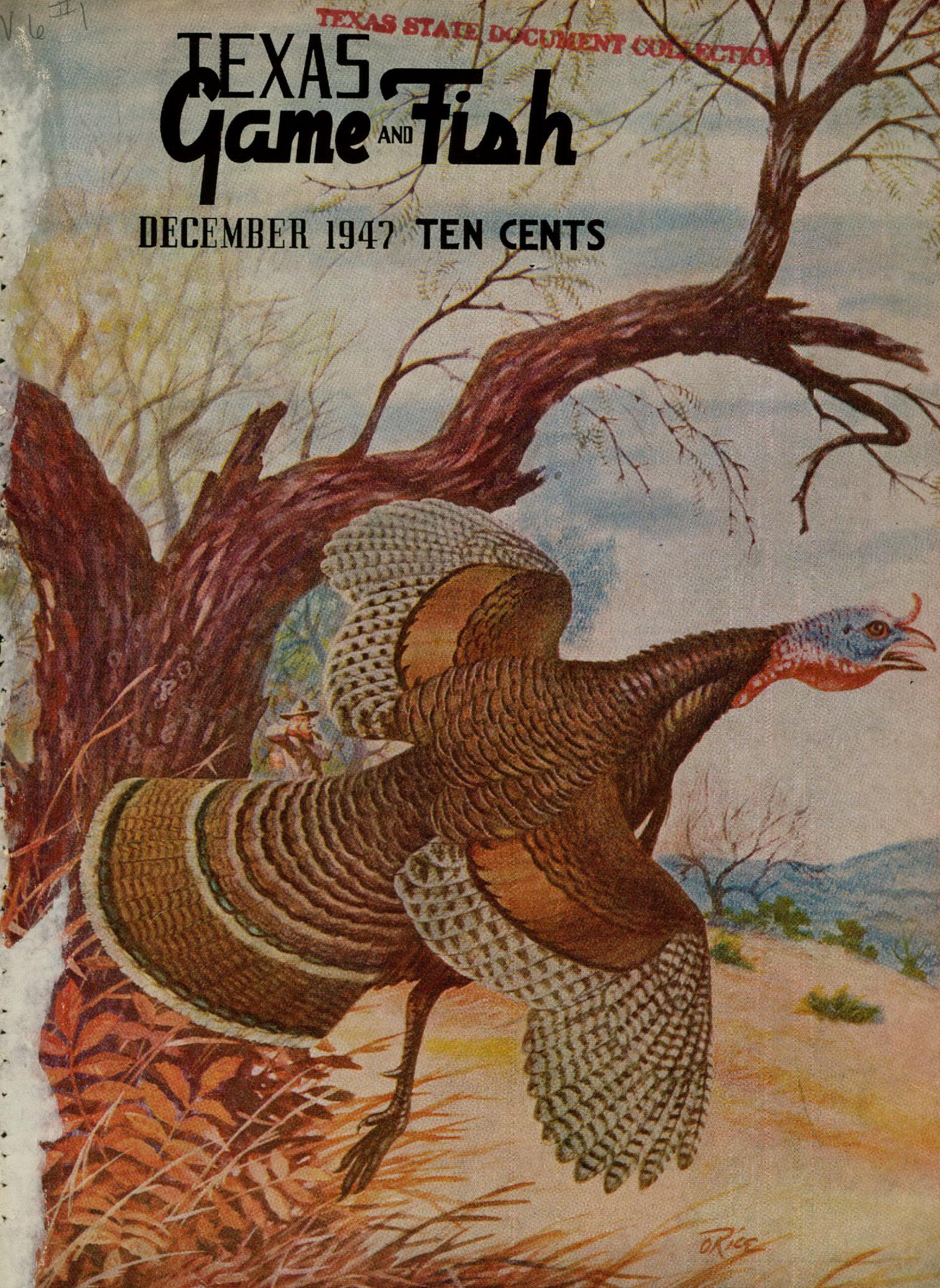


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DECEMBER 1947 TEN CENTS



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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.

△

TEXAS GAME AND FISH is published monthly by the Texas Game, Fish and Oyster Commission. Subscription price \$1.00 per year. Single copies 10 cents each.

TEXAS GAME AND FISH regrets that it cannot continue subscriptions beyond date of expiration. Checks and money orders should be made payable to STATE GAME, FISH AND OYSTER COMMISSION. Editorial and Advertising offices, Walton Building, Austin, Texas. Published at 209 W. 9th Street, Austin, Texas. Entered as second class matter May 19, 1943, at the postoffice at Austin, Texas, under the Act of March 3, 1879.

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

Members of the Game, Fish and Oyster Commission: Murrell L. Buckner, Dallas, *chairman*; Gene Howe, Amarillo; Dr. Will E. Watt, Austin; A. T. McDannald, Houston; Gordon Stewart, Sonora; Frank Jones, Marfa; H. D. Dodgen, *Executive Secretary*; H. E. Faubion, *Assistant Executive Secretary and Director of Sand, Shell and Gravel Division*.

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

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COVER—By Orville O. Rice

DECEMBER, 1947

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ROGER M. BUSFIELD
Editor

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D 1

White tail deer buck with new antlers developed at base. This buck had shed its antlers during March.

Antlers Are Not Horns

A mistake that is quite commonly made by uninformed persons is that they refer to the male deer's cranial adornment as horns, when, of course, these attachments are not horns as possessed by bison or cattle, but antlers. Horns are permanent fixtures, while antlers are shed and renewed annually.

Unlike caribou or reindeer, the white-tailed or Virginia female deer do not have horns; only the males are so protected. The males are terrible fighters during the mating season, often suffering severe wounds as a result of their headlong,

slashing thrusts of antlers and sharp jabs. Many odd antler formations, commonly known as "cactus," are directly traceable

to an injury which occurred when head-on rushes met in mid-air. Not infrequently the brute force of impact forces the tines of the antlers asunder, later to spring back in a vise-like grip from which the combined strength of both combatants is unable to release them. Consequently both deer die a slow, agonizing death from starvation and exposure unless found earlier by wolves or the merciful bullet of a hunter.

Prongs are not indicative of age, as is commonly supposed, but the number of tines on the antlers does furnish a reliable means of indicating a buck deer's age. Many factors, such as illness, periods of poor forage, and injury to body or antlers determine the number and size of the antler tines.

It is definitely known that not all deer shed their antlers each season, since occasionally deer in a semi-wild state have been known to carry a set through two seasons. However, it is a fact that the vast majority of bucks do shed their antlers in January, since only in extremely rare instances are they viewed during the spring months with last season's equipment in place.

Each spring season sees the development of two mossy-appearing lumps on the buck's head. These soon develop into a full set of new antlers, covered with a pulpy, fleshy tissue supplied with nerves and blood vessels. These new rubber-like formations are tender and sensitive to injury; thus at such times the owner exercises utmost care in selecting his trails, lest he suffer unnecessary pain and discomfort.

Later in mid-season (as the antlers harden) the fleshy tissue dries off to reveal the new antlers. At such times the buck assists nature by vigorous rubbing of the antlers



A white tail deer buck in velvet. The new antlers have taken shape and are covered with a moss-like growth laced with blood vessels and nerves.

This buck is ready for the fray. He has rubbed the velvet off his antlers which are now of a flint-like bony substance.



against small trees. Such bark-denuded trees are everywhere in evidence in deer country.

It is really remarkable to note the adeptness and skill with which bucks are able to traverse a seemingly impenetrable mass of brush and timber at top speed without apparently being hindered in the least by a veritable "rocking chair" set of antlers. The secret, of course, lies in the fact that the deer has wondrously keen sight at close range and can choose a path with split-second precision. Then, too, he tilts his head upward at an angle of 45 degrees, thereby throwing the tines of antlers rear-ward onto his shoulders, and thus presents only the smooth, curved bows to the interfering limbs and twigs, and these glance harmlessly aside.

Once thoroughly seasoned, these antlers provide Mr. Buck with formidable defense equipment. On one rare occasion the writer was privileged to witness a mature buck easily defend himself against two large wolves by his lightning-like thrusts with lowered head and slashing forefeet.

The fight ended suddenly when a deft and rapier-like upward thrust of the buck's head sent several sharp tines deeply into the more aggressive wolf's throat, while his companion turned tail and quit the contest.

In answer to the oft-repeated inquiry why the forest floor is not literally covered with antlers discarded through the years, let it be known that quite a variety of animals consider them an especial tidbit; especially so once the contact with the rains and the moist coverage of the forest floor has softened them to some degree. Squirrels, mice, porcupines, and other rodents have been observed industriously chewing the handles of the various tools and implements used about forest habitations, even to the extent of gnawing the wooden bowls of malodorous tobacco pipes for the salt they contain, so it is not surprising that deer antlers are likewise consumed.

A chemical analysis of antler substances recently completed by F. E. W. Adler, chemist for the Wisconsin Conservation Department, disclosed that in all probability it is not the infinitesimal quantity of salt (.16 per cent) that attracts the ani-

mals, but several other components which are listed here:

Ash 47.01%, protein-like substances (calculated) 34.50%, nitrogen 5.57%, oil .97%, magnesium oxide 73%, fiber .70%, total solubles (in ash) .16%, iron and

aluminum oxides .09%, silica .04%, and carbohydrates .00%.

This list of figures should end the controversy that has heretofore existed regarding the belief that antlers were con-

★ *Continued on page 27*

TYPES OF HORNS

THIS INFORMATION WAS COMPILED BY A. F. C. GREENE, WYOMING STATE FISH WARDEN

Type	Example	Structure	Point of Attachment	Permanence	Other Characteristics
Keratin.	Rhinoceros.	A mass of matted hair with no bony core.	Nasal bones.	Permanent.	Unbranched and unpaired.
Antlers.	Deer family.	Solid bone, covered by a sheath of vascular skin during growth.	Frontal bones.	Both the sheath of skin and the horns themselves are shed.	Paired and much branching. Normally carried only by males.
Prong horn.	Pronghorn antelope.	A cap-like sheath over a bony core.	Frontal bones.	The sheath is shed, but the core is not.	A single branch; present in both sexes.
Hollow horn.	Cows, Goats and true Antelope.	A horny sheath, covering a bony core.	Frontal bones.	Neither the sheath nor the core is shed.	Unbranched.

Mr. Bobwhite is deserting many sections of the State because he can no longer find food for his family. A game biologist tells us how we can help Mr. Bobwhite to re-establish himself and to restock his larder.

By Robert W. Murray

Food for Quail

EACH year brings louder and louder moans from sportsmen that "quail hunting is worse than it was a year ago"—a justifiable complaint, too, because it paints a picture of a critical situation. Many of us have taken away the quail's food supply—his boarding-house—and driven him away in search of a more satisfying bill-of-fare.

The machine age which developed modern methods of farming every inch of available space, slowly but too surely is removing the last reminders of tangled brier patches and nearly every other former source of bird food and quiet cover. Today's undernourished turnip-patch has replaced last year's hidout for a covey of satisfied quail.

However the quail situation isn't exactly a lost cause, but supplying his larder does pose a problem that can be solved only by our best friend—the American Farmer.

If we succeed in convincing our farmers that they have everything to gain and nothing to lose by giving up the turnip-patch idea and get them to plant fast-growing border plants in the infertile areas, then we are well on the way to bringing back the welcome quail again next spring.

The true value of the so-called "wildlife border" generally isn't fully appreciated throughout much of the country. Great numbers of farmers and sportsmen have received the impression that borders are nothing more than quail "food-patches" and many of them see no particular advantage in maintaining them.

Says Farmer Jones: "Yes, they brought me some seed and plants a few years ago and asked me to plant them so that I would have more quail on my place; they even gave me fertilizer. So, I planted the stuff but I didn't have time to fool with it. I finally plowed it up this spring. Anyway, it took up a lot of room and I don't care too much about having quail around my place. If I had quail, hunters would come from town, shoot them up, climb my fences and, maybe, kill some of my cattle."

The trouble with Farmer Jones is that

he does not realize what value the border would be to him.

Wildlife borders are actually field border. For instance, there is a strip of land around the edge of Farmer Jones' field next to the woods that he can't profitably cultivate, but he doesn't know this. He plows to the very edge of the woods and plants crops there, expecting them to produce. But, the trees shade the crops, sap the soil moisture and fertility, and he raises nothing. Invariably, he will repeat the operation year after year rather than maintain a strip of idle land. Despite his time, labor and money invested in plowing and seeding the strip, it produces nothing in return. Yet, it could be made into one of the most profitable strips of land on Farmer Jones' property if he only knew how to utilize it!

The Soil Conservation Service has classified such land as "wildlife land" in their farm planning. It is set aside for the propagation of wildlife since it cannot be utilized profitably in any other way. The Service tries to establish a system of "balanced farming" in each of its farm plans. The conservation-minded farmer has come to understand the importance of wildlife in this balanced farming plan. There must be birds on the farm to keep insects and noxious weeds in balance and control. The

more song birds and game birds the better. Most of these birds are truly a farmer's friends. A single one of them will eat dozens of insects and thousands of weed seeds each day. To what better use could Farmer Jones devote that strip of land around his field?

Hence, the term "wildlife border" was born. Just how does it function and of what does it consist?

It serves as a place where birds can feed without being molested by their natural enemies and must consist of plants valuable as bird foods. By bordering the woods it furnishes the birds a place where they can dart into cover if an enemy approaches. Most birds, especially quail, will not feed more than 200 yards from natural cover. They don't like to be harassed by their enemies while eating. By establishing this border of food plants, a bird habitat has been created that formerly didn't exist. There was cover in the woods but no nearby food and naturally there were very few birds present.

Plants that are selected for borders are not adversely affected by being next to timber. In fact, borders often are planted in the woods. They tolerate the shade and usually do not require a high soil moisture content. These plants are largely legumes and manufacture their own source of nitrogen. Thus, a high soil fertility is not required. And, at the same time, they are among the best bird foods known. A wide variety of them are classified as valuable bird foods.

Borders usually have a recommended length of around 400 feet and a width of 30 feet. This furnishes plenty of food for a covey of quail and needs to be no longer. However, borders may be placed at various sites over the farm and furnish food for several coveys. For a border to be a good one it must be planted and maintained properly. The seed bed should be well prepared and fertilized. Maintenance requires a minimal amount of effort. The plants are usually cultivated the first year until they become established. If perennials are used, the only maintenance required in successive years is disking and fertilizing every third year to keep weeds

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Store Gives Quail Refuge

The dove season opened so furiously in the fields and pastures around Mathis that doves and quail found the downtown section the only safe hiding place. Red London, operator of a grocery store, opened his place of business the morning after the dove season opened and found a frightened bobwhite that had spent the night in the building. London believes the bombardment in the fields caused the bird to fly to the business section and through an open door into his store.

When it came to shooting squirrels or at a target, Johnnie was right on the beam but whenever he saw a deer he got "Buck Fever"

"Johnnie's Lucky Day"

By W. E. Anderson

JOHNNIE was the clown of our party. Truly, we never had a dull moment when he was around. When it came to shooting squirrels or at a target, Johnnie was right on the beam; but, whenever he saw a deer, he invariably got "buck fever"!

I remember the first time Johnnie was in my party four or five years earlier. I had wounded a buck which fell, then recovering, plunged into the brush before I could finish him. It finally stopped about twenty feet from where Johnnie was stationed on a big rock some four hundred yards from my original position.

In telling us about it at dinner that noon, Johnnie said: "He was so close I could hear him breathe, but when I raised my gun, it wiggled up and down just like a see-saw. I let it down, then tried again, holding on tight so it would quit going up and down; but this time I'd see first his nose and then his tail, and besides, I nearly fell off the rock. Finally, I decided to start it in a circle and shoot as it went by his body. The first shot kicked up dust between his legs; the second hit ground in front of his nose. By this time, he had started to run and the third shot hit a tree behind his tail. He wasn't going very fast and it was fairly open shooting most

of the time but it seemed I couldn't EVER pull the trigger in the middle of that circle. I shot seven times and I know I saw him fall the last time but I couldn't find him when I got over there. I want all of you to help me look after dinner, and when we find him he'll have at least ONE bullet hole in his hide beside Andy's."

Later, we found the buck all right, but, sad to say, we found only one bullet wound in his body!

Later years had not improved Johnnie's jitters or his luck; nor did they lessen his determination to try again the following year. Only the day before when he had a chance at a fine buck AND a tree handy to steady his aim, the hammer clicked—but nothing happened. Poor Johnnie had forgotten to load his gun that morning! But do you think that caused him to be despondent? Not on your life! And the very next morning he was up to his old tricks again.

You see, Doc had decided that his feet didn't get enough air in his sleeping bag (it being rather warm Fall weather), so that night he grabbed his knife and, with the proper accompanying remarks (to the surprise of us all), he slit a hole about a foot long in the end of his bag so, as Johnnie said, his "tootsies could breathe." Doc was still "pounding his ear" early next morning after the cook called us to dress when Johnnie spied those big feet still sticking out through the hole in the bottom of the sleeping bag. This gave him one of his bright ideas and he immediately proceeded to put it to action. Taking a couple of pieces of clothes-line rope we used to hang up deer, he very carefully (in order not to disturb Doc) tied it around each protruding foot, then to the bottom of the cot on each side, after which Johnnie told the cook to call Doc again and *innocently* went about the business of washing up for breakfast, meanwhile keeping a sharp "watch" out of the corner of his eye.

"Hey, Doc, it's time to eat!" yelled the cook.

"Rummph—ugh—ugh," said Doc, beginning to come to life. About that time he tried to pull his feet back through the hole in his sleeping bag but, for some

"... a glance back over my shoulder showed me the head and horns of a big buck outlined against the fading light."



Johnnie's prize — a nice six point buck.

reason, they didn't come. He pulled first one foot and next the other—then suddenly sat up in bed, wide awake, and gave another hard pull which only resulted in lifting the bottom of the cot off the floor.

This brought forth a howl of mirth that had been pent up among the boys, followed by lurid remarks befitting the occasion, and more struggling on Doc's part, much to the glee of the unsympathetic on-lookers who were profuse with words of advice but strangely uncooperative in assisting the disgruntled victim.

After a breakfast of fruit juice, ham and eggs, grits, and coffee, we scattered to the different parts of the pasture where each intended to hunt. Johnnie chose what we call the "red stake stand" and vowed he would bring in a deer that day.

Just after dawn (before sunrise), I heard three shots in the southwest pasture where Homer had gone. Later, I heard a single shot from the west pasture where Ernest should be, and, at different times through the forenoon (spaced an hour or so apart), two shots, then one, and again two more rang out from Johnnie's direction. I hoped,

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King Ranch Solves The Game Problem

By R. H. Dorf

President, Bobwhite, Inc.

DOWN Texas way where so many things are "largest" and "best" is the King Ranch. The King Ranch is the largest in North America, comprising approximately 900,000 acres. It is located in seven counties: Nueces, Kleberg, Jim Wells, Kenedy, Brooks, Willacy, and Jim Hogg.

This ranch was established in 1852 by Capt. King, who was the grandfather of the present owners and operators of the ranch. Like all other visitors we asked many questions and learned that the ranch supports about 75,000 cattle, several thousand horses and some sheep and goats. No farming operations are carried on except the cultivation of range grasses and grain for the ranch animals.

The cattle were of special interest to us because the King Ranch is the home of the Santa Gertrudis breed. The Santa Gertrudis cattle, developed by the Klebergs to withstand heat, insect pests and drought, yield large quantities of choice beef. Santa Gertrudis cattle are exceptionally large; some of the steers weigh up to 2600 pounds on the hoof. The average cow weighs about 1050 pounds in range condition. Santa Gertrudis cattle are red in color and are a cross between the shorthorn ($\frac{5}{8}$) and Brahman ($\frac{3}{8}$) breeds.

The ranch is the home of many fine race horses — Bold Venture, Stymie, Assault, Ciencia, Bridal Flower, But Why Not, Better Value, Better Self, Flash Burn, Miss Princess and many others. Bold Venture and his son, Assault, are both Kentucky Derby winners and both have won other major races in the United States. Miss Princess is a thoroughbred of quarter-horse type (a horse specially developed to run a quarter mile race). There are many other quarterhorses on the property; the King Ranch is probably the largest breeder of quarterhorses in the world.

Fortunate indeed is the person who is privileged to be entertained on the magnificent ranch. Mr. Kleberg learned of Bobwhite, Inc., from his game manager, V. W. Lehmann, and through him extended us the invitation to be a guest of the ranch and inspect their game and game management practices. Mr. Robert Kleberg and his brother, Mr. Richard Kleberg, are both thoroughgoing sportsmen, bird hunters, and very much interested in game management.

We left Houston Friday afternoon for our 237-mile drive to Kingsville and arrived there at 6 P.M. where we were met by Mr. Lehmann. To our delight we were

informed that we were to be housed in the Santa Gertrudis Ranch House, which is the headquarters establishment located a few miles out of Kingsville. Arriving there we were introduced to the charming hostess, Mrs. Beulah S. Moseley, and there assigned our rooms. This ranch house is a large ranch style building of stucco with a patio in the center containing a beautiful fountain and lawn. All rooms open on the patio and the outside veranda.

A bountiful dinner was served in the main dining room adorned with pictures of winning cattle and horses. All of the pictures have the trophy or award on the table or pedestal under the picture. Not all of the awards won are there because of lack of space. One of the most interesting was the Kentucky Derby cup won by Assault.

During dinner there developed a discussion relative to the respective merits of setters versus pointers and of the group there was one pure setter man, several who liked either, and the rest were straight pointer men. The argument got in high gear and many humorous stories were told by both sides. In the opinion of the writer, the facts and figures and the better of the argument went to the setter men. Yes, you guessed it, he keeps three setters! Mr. Lehmann must not have thought so because he announced that in the morning he would provide the lone setter man with reinforcement in the person of Dr. J. R. Scales, one of the Kingsville doctors.

After dinner we were treated to some moving pictures of Assault's victories in the Derby, Preakness, and Belmont stakes, and then came the best picture the group



had ever seen — a wild game picture taken on the ranch by Dick Borden of The Audubon Society and Mr. Lehmann. Although this picture was unedited, to describe with adjectives used by the Hollywood folks would be inadequate. It is simply out of this world from every standpoint. In it are almost every kind of game bird and animal of South Texas sporting in their native habitat, doing the things they do in everyday life. We hope this picture may be distributed widely as it is an education on game birds and animals.

From the time we had left El Campo, 175 miles north of the ranch, we traveled through constant heavy rainfall and by morning four inches had fallen at the Santa Gertrudis and seven inches at the Norias subdivision to the South. By Sunday morning parts of the ranch had received nine inches of rain! It was the largest rain since 1941, this being a semi-arid country.

After breakfast we gathered for the trip around the ranch and in the party was Dr. Scales, whom we found to be a gentleman and scholar (and a setter man) of the Coolidge type, whose words were few but full of meaning and the setter cause scored a smashing victory (in the writer's opinion).

We were full of questions regarding Mr. Lehmann's program and learned that the ranch has improved food and/or cover for quail on approximately 200,000 acres since January, 1945 and that cover improvement by half-cutting trees, strip plowing, transplanting, etc. has been conducted at the rate of approximately 1,000 acres a day. We believe this to be the world's largest quail management program and from the amount of game on the ranch it would seem logical that Mr. Lehmann has more game under his management than any other man in the world. The ranch has many thousands of acres which are not appropriate for quail management because of topography, soils, or grazing conditions. About 400,000 acres are basically suitable, however, and Lehmann expects to have most of that acreage in top production consistent with rainfall and livestock considerations by 1948.

The first pasture where we observed quail work was mesquite semi-prairie country with a few scattered grejmeno, (*Celtis pallida*) and huisache. Hundreds of "covey headquarters" had been constructed by "half-cutting" the native shrubs which in their natural state provided inferior shelter. We had an opportunity to examine closely some of the brush shelters created by cutting mesquite trees; the low branches had been partially chopped about 18" to 36" above the ground and only cut so that they would drop to the ground and there continue growing, providing a fine shelter from predators and a shady resting place for the heat of the day. As we drove along we noted many coveys of quail gathered under these shelters. We

★ Continued on page 23

An "umbrella" tree makes an ideal brush shelter for quail on the King Ranch.

The Perils of a Non-Stop Flight

By Albert M. Day, Director

U. S. Fish and Wildlife Service

MR. Duck Hunter—You have had or will have a chance to enjoy your favorite sport for not more than 30 or 35 days this year, depending upon whether your state has a continuous or split season, and whether you are in the eastern half of the United States, or the western. That isn't much, compared to past years. You feel sorry for yourself and quietly, some of you noisily, complain about those datted regulations and what they have done to you.

How about pausing for a moment to give thought to the duck? For the past four years he has been plagued first with drouths that sucked his northern potholes and sloughs dust dry, and then with floods. This year an unusually late cold spring was followed by heavy rains that flooded vast areas of marsh nesting lands in the eastern half of Canada.

As he began the long migration southward, could he contemplate—if ducks do contemplate—becoming the center of attention in the sporting world for 30 or 35 days only? Not by a long shot. He had to keep a sharp eye peeled for blinds, decoys, and guns beginning September 1, if he spent the summer in eastern British Columbia, Manitoba, or the Northwest Territories. Other provinces opened from September 6 to October 1. This makes a maximum of 36 open days before he crossed the line into the United States on his southward journey.

Then what happens? This year he is being met by the greatest army of U. S. hunters in history. Duck stamp sales last year amounted to more than 2,000,000; and this figure is probably being equaled or exceeded this fall. Think of it! Three times the number of hunters this year that were in the blinds when the recent duck decline began.

Does Mr. Duck face this army of hunters for only 30 or 35 days in the United States? He does not. Some hopeful and enthusiastic hunter is on the watch for him from October 7 in the northern tier of states to January 6 in the southern. This makes another 92 days of blazing guns, or a total of 128 by the time he reaches the Gulf or the Mexican border.



What Does Mere Man Know About The Perils Of A Non-Stop Flight?

Then if he has survived the gauntlet and decides to go on into the Caribbean or Mexico or Central America, he faces more hunters. In some spots hunting continues until the migration urge sends the birds winging back to the nesting grounds. Add the rest of January and all of February for such areas and we bring the total period of shotgun hazard to 181 days. Thus, those hardy birds that travel the perilous route down the West Coast from British Columbia to Yucatan, or through the Mississippi Valley from Manitoba to Cuba, spend just half of the year avoiding hunters, to say nothing of illegal trappers, poachers, predators, and botulism. No wonder the birds squawk appreciatively as they dive into the safety of the all-too-few Federal and State refuges set apart to provide food and protection for them.

So you, Mr. Duck Hunter, when

you indulge in that gripe about the season this year being too short, too early, or too late for your own particular spot, remember this: For the ducks the season runs from September 1 to March 1—six months—with 2,000,000 hunters in the United States lying in wait, plus the hunters of Canada, Mexico, Cuba and Central America, augmented by many visitors from the United States.

As Ding so aptly put it, "What Does Mere Man Know About the Perils of a Non-stop Flight?"

Nine Million for Wildlife

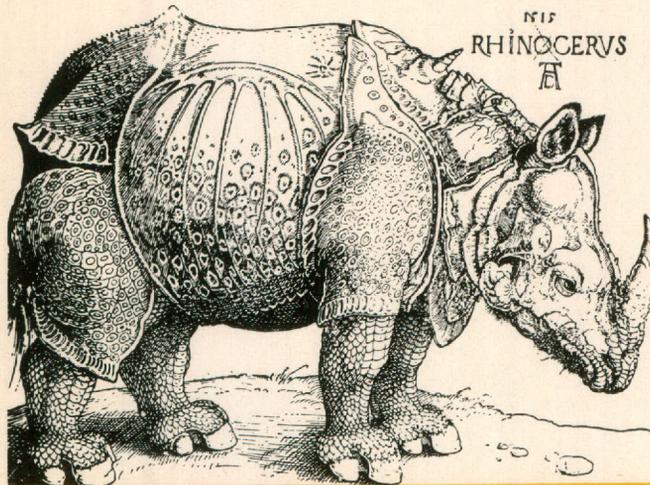
The greatest single impetus in history to the cause of national wildlife restoration is the appropriation of \$9,031,273.51 of Pittman-Robertson funds by Congress for use in the various states during the fiscal year 1948.

4-Footed Pharmacopeias

By J. L. Baughman

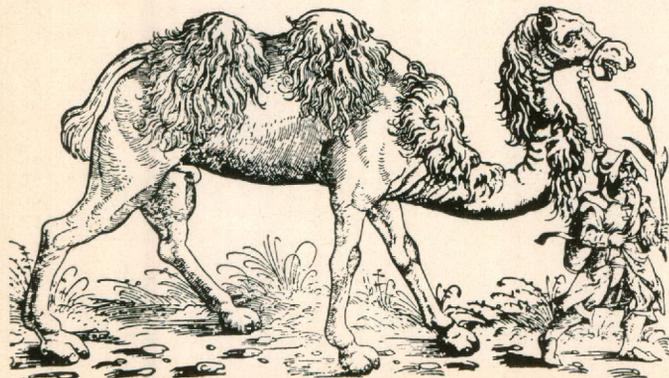
PROBABLY none of us would think of going to the zoo to get a prescription filled, but to judge from some of the earlier writings on medicine there was a time when this would not have been amiss. For instance an Egyptian prescription for gout was comprised of the grease of oryx (antelope), centipede, hippopotamus, lion, ass, crocodile, mouse, lizard, and snake, all melted together and mixed with the juices of certain herbs. Every ailment had its remedy and from every animal, as well as man, medicines could be prepared.

Some animals, such as the hyenas, were walking pharmacopeias. From this "garbage can on legs" no less than 79 remedies were available. The skin of the head, worn as a cap, protected the wearer from headaches, and the gall applied to the forehead

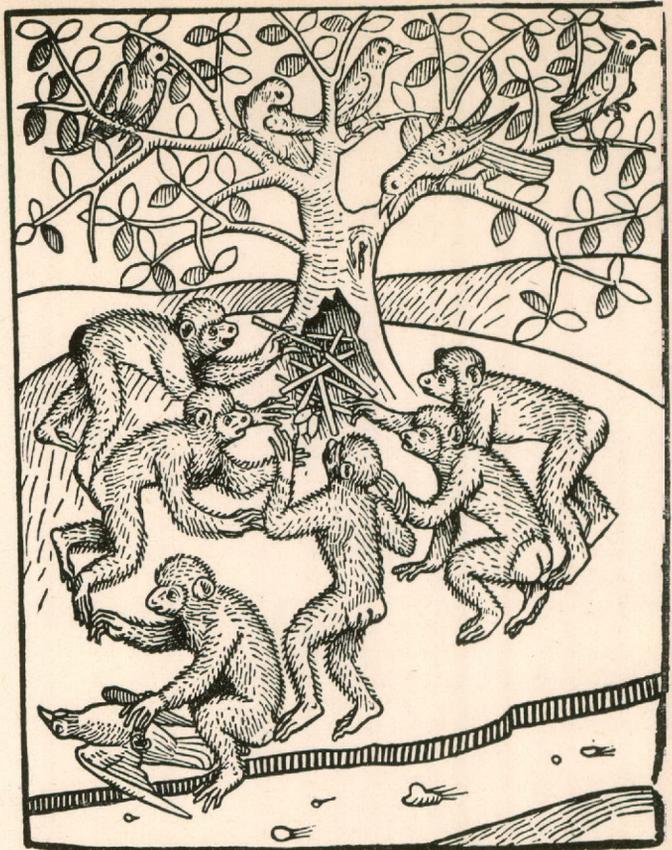


The Renaissance saw the rise of menageries in princely courts. These importations enabled artists to portray exotic animals in a realistic manner. An interesting result of this fresh stimulation is the drawing by Albrecht Durer, a German painter, of this rhinoceros, made in 1515.

cured ophthalmia, as well as being an effective preservative against disease, when boiled with honey and saffron. Their teeth took the place of oil of cloves and the dentist, the aching tooth being touched with one of the hyena's. Or the same result could be obtained by wearing all its teeth, arranged in their proper order, as a necklace. Various parts of the beasts were used in



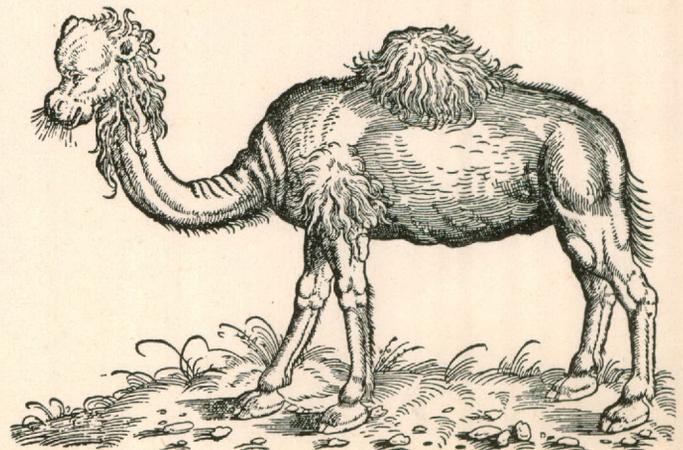
Upper. The two-hump camel or dromedary as depicted by Conrad Gesner, an early zoologist. Right. Conrad Gesner in his early book on animals shows this supercilious beast, the dromedary, or single-humped camel.



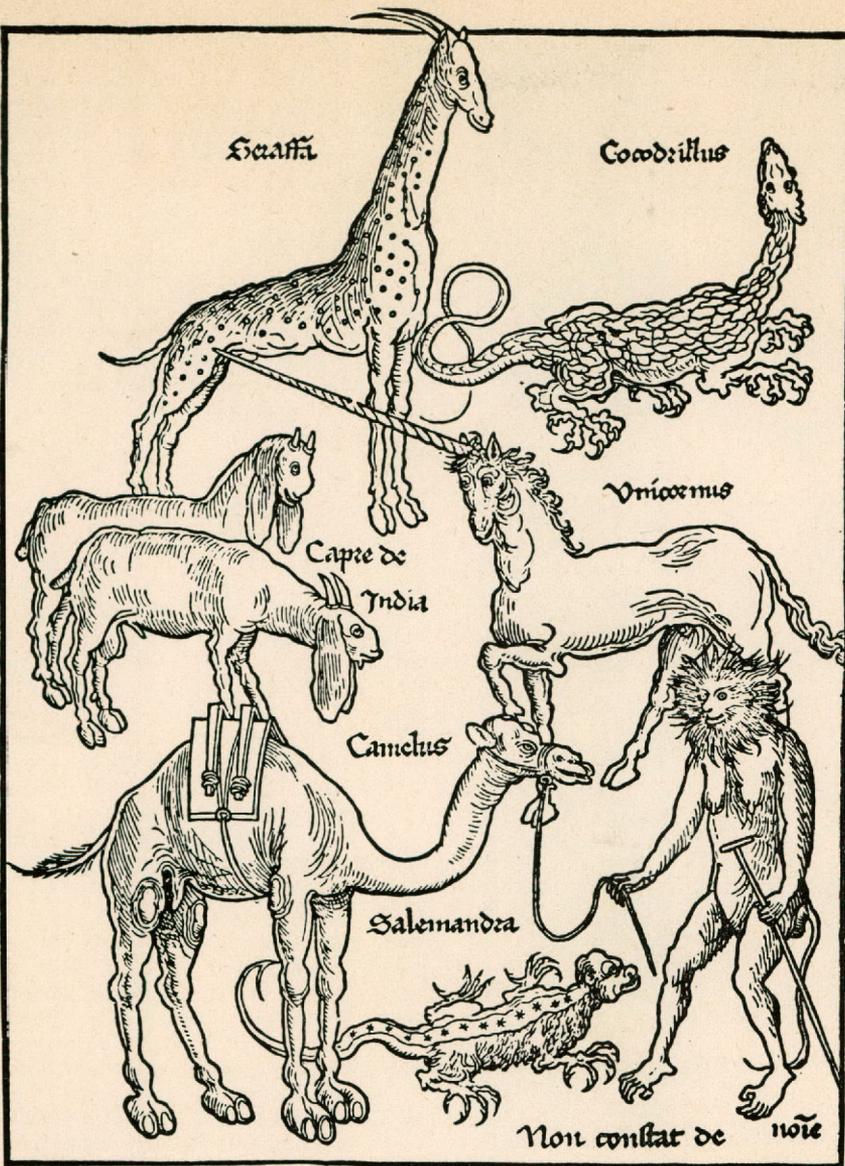
A party of apes, becoming very cold in the high mountains, caught a glow worm and tried to kindle a fire by its light. Their unsuccessful efforts were derided by the birds, which so irritated the apes that they began to strangle the birds. Natural history of this kind is on a par with the pharmaceutical lore of the Middle Ages, when all beasts were thought to possess medicinal or magic powers.

the cure of stomach aches, quartan fevers, spasms, and palpitations of the heart, and the marrow of the backbone mixed with old oil and gall, was thought to be strengthening to the sinews. Nightmares and bad dreams could be abolished by wearing one of the teeth as an amulet, and fumigation with smoke from a tooth was efficacious in cases of delirium. Fumes from the burnt fat would put serpents to flight and the gall bladder was used as a heart remedy.

Camels were of less value to the ancient surgeon than was the hyena. Nevertheless a camel's brains, dried and taken in vinegar, were a cure for epilepsy or the falling sickness, as was the gall, taken with honey. Dried camel's tail acted as a physic and the dung, mixed with oil, made the hair curl. Ashes of the tail were good for epilepsy and dysentery, and the hairs of the same appendage, twisted into a wreath or cord and worn about the left arm in the manner of a bracelet, were a cure for the



Each of these beasts possessed, according to the ancient doctors and pharmacists, medicinal properties, valuable in healing everything from housemaid's knee to halitosis.



quartan ague. The eyelashes were used as a love potion, first being burnt and the ashes inserted by stealth in the food or drink of the object of one's affection.

The rhinoceros also played his part in the early pharmacopeias as one of the bases of the early legends of the beautiful and fabulous unicorn. This marvelous beast possessed a horn for which princes were willing to pay its weight in fine gold. "Alicorn," as it was called, was the peculiar treasure of kings, for a man drinking from a cup made from this substance was not subject to epilepsy. Most of all, no poison affected him if, before or after swallowing it, he drank from a cup made from this horn. Oddly enough, when the first rhinoceros was depicted by some early traveler, so greatly did it differ from the legends that all the doctors denied its authenticity and sharply differentiated between "Unicornum verum" and "Unicornum falsum." The first was actually the fossil tusks of extinct mammoths and the second came from the tusks of the narwhal and the horn of the rhinoceros.

An early zoo in America founded by the Indian rulers of Mexico before the time of Cortez. This botanical park and zoological garden was a fount of learning for the Aztec medicine men.

Beavers were also "heap big medicine," producing 66 more nostrums, all of which were good for man or beast. Castoreum (from the scent glands), mixed with oil of roses and peucedanum, was used as a narcotic, applied to the head, but the same result could be produced by swallowing the nauseous mess with a little water. It was a treatment for sciatica, vertigo, epilepsy, and in alleviating the stings and bites of spiders, insects, scorpions, and snakes it had no equal. Mixed with oil, it was used for toothache, being poured into the ear on the side of the face which was affected.

Ashes from the skin of a crocodile, applied with vinegar to any portion of the

body, rendered the patient insensible to the pain of the knife when an operation was necessary, and the body, eaten boiled, was supposed to cure lumbago and sciatica. The flesh of tortoises was considered an antidote for poisons and a repeller of magic. Eaten as soup, they were a sure cure for scrofula, or king's evil, as it was called in medieval times, when the disease was thought to be curable by the touch of a king's hand. Their blood was also medicine for asthma, while that of elephants was used as a treatment for consumption.

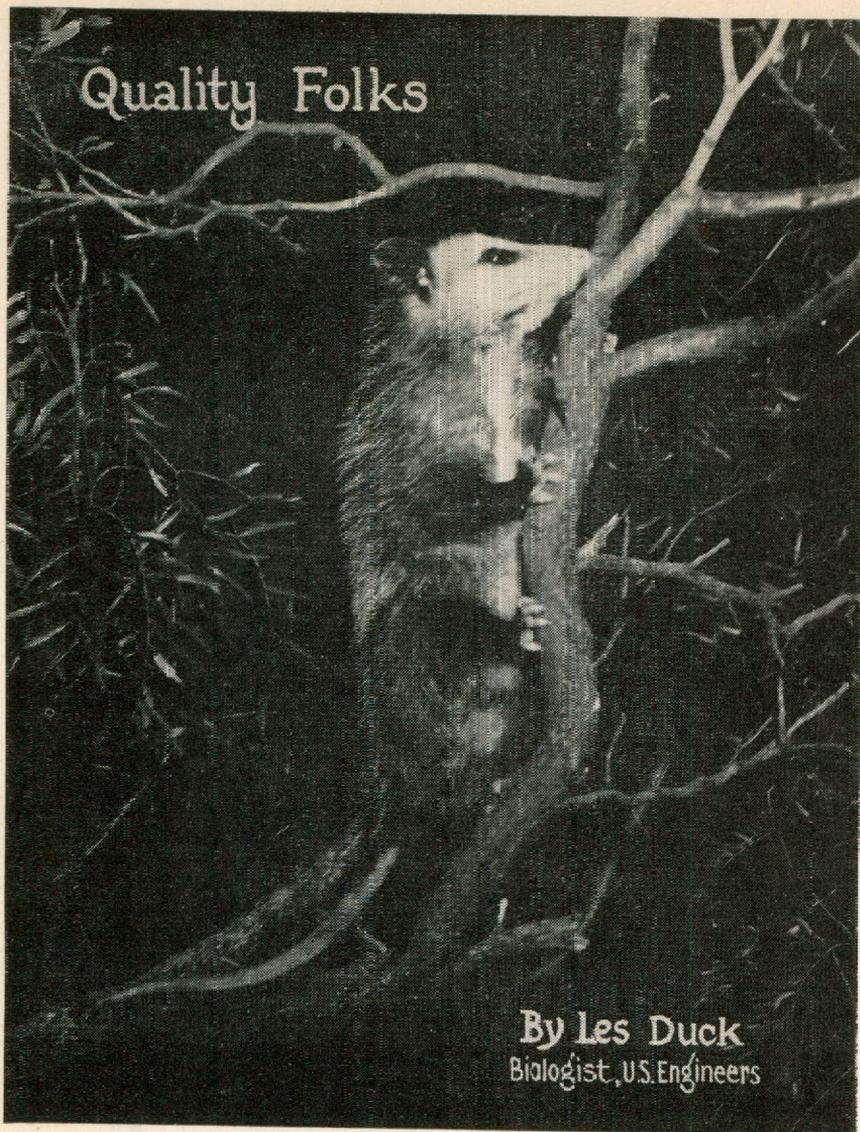
An interesting belief was one chronicled by Democritus, a writer of ancient Greece. He made the statement that if the tongue be extracted from a live frog, with no other part of the body adhering to it, and is applied — the frog first being placed in the water — to a woman while asleep, just at the spot where the heart is felt to palpitate, she will be sure to give a truthful answer to any question that may be put to her. It was also believed that certain frogs had the power, when carried into the midst of a crowd, to still the speech of every person there. One is forced to the conclusion that Democritus was a bachelor, and that he never had seen a modern bridge club in action.

The fat of a sea-calf, mixed with hyena's marrow, was used as an antidote for hydrophobia; sea-horses, sting rays and crabs were made into antidotes for various poisons. Oysters were prescribed for cathartics, and also as remedies for burns and rheumatism. Their ashes were used as a toothpaste, and whale's flesh, mixed with an equal quantity of salt, was a specific for pyorrhea.

Fish glue — mixed with sulphur, alkanet and litharge — was the ancient equivalent of the plastic surgeon, and instead of having their faces lifted, ladies flounced into a beauty shop, where the mixture was applied "to efface the wrinkles and plump out the skin." Freckles were removed by the use of cuttlebone (taken from a species of octopus), while for a depilatory, hyena's heart, burnt to ashes and mixed with the brains, was applied to the spot from which it was desired to remove the hair. If this did not do the trick, then it was always possible to fall back on the fat from a crocodile, which was also highly recommended. As for that schoolgirl com-

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Quality Folks

By Les Duck
Biologist, U.S. Engineers

THE mere sight of a grizzled opossum ambling down the forest path is of course nothing to set one's poetic wards to turning out deathless prose—but then there's a good deal more to this 'possum critter than meets the eye. Folks have long overlooked the remarkable nature of *Didelphis virginiana*, as he is known in scientific company. As a matter of fact, you almost never hear anyone say things like "brave as a 'possum," "sharp as a 'possum," or "wise as a 'possum." Yes, and there are those among us who would point to the 'possum's small brain cavity and proclaim him stupid. Others would say that his great reluctance to meet the foe in battle adds nothing to his stature.

Now we hold otherwise and it is our opinion that in the 'possum we find demonstrated the very admirable character trait of emotional maturity—"grown-upness," if you please. It just happens to be a matter of good taste and dignity that the 'possum chooses to ignore life's many and minor difficulties. Why?

Because somewhere around 70 million years ago—back during the times scientists call the Mesozoic—the great, great granddaddy of all 'possums roamed parts of the United States in company with as fantastic an assemblage of beasts as one's mind could

conjure up. The 'possums were a family of consequence way back there when Brontosaurus, Tyrannosaurus, Triceratops, and other equally astonishing dinosaurs were quality folks. It certainly called for some very persistent begetting to get the opossums through this 70 million years into what we are now tentatively calling modern times.

So if there are occasions when opossums appear more bored than impressed with human presence, let us not, in our hasty ignorance, credit such an attitude to stupidity, but recall that this 'possum fellow has lived in uninterrupted lineage from the times of the forty-ton Bronto on through its decline and disappearance from the earth, into the following Tertiary and Pleistocene times when such mammalian creatures as the saber-tooth tiger, the mastodon, giant hyena, and the three-horned rhinoceros came, flourished and died out.

Thus the opossum family surpasses in antiquity any other family of mammals and viewing such constant coming and going of the unusual in animals is bound to dull one's enthusiasm for excitement. Like Hollywood movies—when everything is colossal—colossal merely becomes boringly commonplace and lol we look around and find something so commonplace as the

'possum, so excitingly uncolossal—well, that's unusual.

Unfortunately, 'possums, like a lot of very interesting people in this world, being emotionally mature and having dignity and good taste, are seldom noticed because so many people are making so much noise being colossal.

So the opossums were conservative folks and avoided such excitement as might contribute to the breakdown of their arteries. They didn't go in much for the fads of the times. They were quiet folks and didn't take to fancy changes. While other mammals were getting progressive ideas about their social organization, birth and habits, and while they were trying out longer legs for running around and then getting longer necks so they could reach their food, and while they were experimenting with longer and sharper teeth for tearing flesh and having to drop berries and fruit from their diet, while they were trying larger and bulkier bodies and fancy bumps on their noses and forgetting all the while to get bigger brains to put all this specialized equipment together—the opossums just stuck to the few skills and talents nature gave them in the beginning, fixed themselves to a narrow environment by specialization, and simply took up their life wherever nature left them.

Everything about the opossum illustrates this conservatism. Teeth, for instance. The 'possums have one set of teeth throughout a lifetime. Unlike most other animals, these first teeth, or milk teeth, are not shed for the adult set. However, they have given the matter long and serious thought, since a second set is formed as mere tooth buds and never erupt except for one in each upper jaw. Possibly in another 20 million years 'possums may get around to using a second set of teeth—that is, if such an arrangement appears to have advantages.

Moreover, they show no liking whatsoever for adopting the modern ways of mammalian birth. It is characteristic of mammals to deliver their young wrapped in the placenta, a tissue specially developed for enclosing the young during embryonic life. But the opossums apparently have never felt the necessity of such fetal care because, after a period of pregnancy lasting about twelve days, the young—about the size of navy beans, and in a very undeveloped state—make their way unattended by either a placenta or mother care, with a clumsy hand-over-hand motion, from the vaginal orifice into the Marsupium.

The Marsupium, after which this group of animals gets its name (Marsupials), is one of the most practical gifts nature gave Mrs. Opossum back there in the Mesozoic. It is that very ingenious shopping bag she has on her belly to carry young 'possums in. The Marsupium, or pouch, contains the teats where the twelve-day-old 'possums find their way, attach themselves, and settle cozily down for about sixty days more growth and development before venturing out in the world.

Humans have long been prone to make much of the opposable thumb, a characteristic common to all primates. Some have even gone so far as to explain man's superiority on the basis of the fact that on our

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Odd is the Octopus

AN OCTOPUS uses its head for a foot, has eight snakelike arms, a beak like a parrot, and a mean disposition.

A member of one of the first families of the sea, the octopus can trace his ancestry in an unbroken line back to Ordovician times, at least 225,000,000 years ago, and for the last few million years the 200 species of the order have been going along, undisturbed and perfectly content to use model T bodies in a streamlined world.

The best known of the cephalopods (meaning head-foot animals), is the common octopus from the temperate parts of the Atlantic, whose range extends from the Mediterranean on the east to the Gulf of Mexico on the west. Some of these are occasionally taken at Freeport and Galveston, by boats fishing for snapper. Most of them are not large, but I have seen two which were taken at the "Thirty-Two Mile" Bank off Freeport that would measure about four feet from tip to tip of their arms.

These beasts have three methods of propulsion. They may swim through the water with an oar-like motion of their tentacles, or they may move over the bottom, walking on the tips of their arms, and much resembling a spider. But when they really get in a hurry they utilize a mode of progression that reminds one of the futuristic comic strips. If you examine one closely, you will find a short tube projecting underneath.

This is the end of the siphon, an organ through which the water passing from the gills is discharged. It also has another function, for by a sudden hard expulsion of water through this tube the octopus may shoot backward 30 or 40 feet, the stream acting just as does the exhaust or a rocket. This pounce is so quick and so tiger-like that the unfortunate fish at which it is aimed is helpless, and the rubbery tentacles, with ivory-colored suction cups, have enveloped it before it has had time to stir a fin.

Under stress of emotion, octopi change color, running the entire scale from the usual yellow-brown mottlings on through violet, green, blue and all the rest, even breaking in stripes occasionally. Partly this is to aid it in stalking its prey, enabling the cephalopod to harmonize its colors with that of the bottom over which it may be at the moment, but the color changes are carried even farther and especially under the influence of excitement may change with almost kaleidoscopic rapidity.

Joining the tentacles is a thin membrane reaching about half their length. This is not generally expanded, and for that reason is not so noticeable, except when the mol-

lusk (for the octopus is a remote cousin of the clam) makes use of this membrane to capture crabs, on which it also feeds. In this action, the tentacles are extended, stretching the membrane to its fullest. With the body in this umbrella-shaped position, it drops over the crab, enfolding it in the membrane and tentacles and carrying it on to the mouth, which is situated in the center of its head, on the underneath. In this mouth the octopus has a horny, parrot-like beak, sufficiently strong to crush the shells of crabs, clams and oysters, which form part of its food, along with fish.

Ordinarily octopi are reef or rock dwellers, and in front of the cave or crevice in which they live, breastworks of pebbles and shell fragments may be formed by the movements of their bodies, thus giving to the experienced eye a clue to their presence. Many are not taken from the crevices, however, but are enticed by a bit of red rag with a hook hidden in the midst of it. Attacking this with their usual bad-tempered fury, they are brought to the surface.

The uses of this hideous monster are quite numerous. Roasted, they are relished as an article of food by most of the primitive island peoples. One species is sold on the Italian and Greek markets for food, and our common octopus here is much liked by many of the fishermen of the shrimp fleets. India ink, or sepia, is made from the fluid which members of the family

are able to discharge as a smoke screen when frightened and attempting to escape from danger. Cuttlebone, the interior shell of some species, is a familiar sight to most of us, being the same cuttlebone attached to the canary's cage for beak-honing.

Extraordinary forms of this mammal are often found. Baird's octopus, a deep-sea form, has horns above its eyes, and is a pale bluish-grey in color. The Bermuda, or dancing octopus, is a dainty little brown and white fellow, which trips along on the tips of its toes, for all the world like a ballet dancer. Size of the various species varies from a few inches to as much as 28 or 30 feet from tip to tip, these last measurements being taken from the great octopus of the Pacific, which inhabits the deep waters of that ocean, coming into the shallows only to spawn, and to live while young.

Wherever octopi are found they are the subjects of a great amount of curiosity, revulsion and fear. Even where they furnish an article of food, and so should be well known, tales of their size, their ferocity, and of their attacks on man are so numerous that there must be some basis for them, although after some years of watching people's reactions, the writer has come to the conclusion that in the popular imagination any shark over 3 feet long is a maneater, and that all octopi are extremely dangerous, even tiny ones of an inch or two being entirely capable of pulling a man under water and drowning him.

This is ridiculous. Even a lion cub can do no more than scratch, and outside of a possible nip from their beaks, small octopi are harmless. However, it is not an especially attractive feeling to have one of them wrap his tentacles around your arm. The action of the suctorial disc, the sliminess of the beast, and its cold, intelligent stare, engender repugnance which it is hard to overcome, but there is no danger, even with two or three footers. With an increase in size, however, there is undoubtedly an increase in danger to any prey, even man, which might come within reach of the tentacles, but this mollusk does not hunt man, any more than sharks do.

Closely related to the octopi are the squids, the one common on the Texas coast being used for bait by the snapper fishermen and, off the coast of Chile, by anglers fishing for broadbill swordfish. On the northeast coast, about Maine, squid are used to bait the cod-trawls. This species is harmless, although occasionally you may get a startling nip from the tiny beak

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There's a Moral To This Story

Two Midland hunters recently were too obliging.

As they hunted in an area near the Midland-Upton county line a less lucky stranger came along, minus birds. When he admitted to poor luck they invited him to follow them, for they knew where plenty of birds were to be had.

The obliging hunters shot a number of in-season and perfectly legal doves, but got mixed up and shot a dozen or so quail. It was then that their companion turned out to be Ed Schnaubert, Fort Stockton game warden.

Because they had been so nice about it all, Mr. Schnaubert filed on them for only six of the forbidden birds, and the fine in a Midland JP court was \$100 for each bird, plus costs, a grand total of \$666.



ARMS AND AMMUNITION

By Adam Wilson III
Gun Editor

Old Reliable — The 30-06

IF THERE were ever a rifle made—factory or custom built—which could be rightfully called a truly all-round rifle, it would be the celebrated 30-06. The majority of our better known firearm authorities, including those who are not “30-06 men,” readily admit that it certainly would be a strong candidate for all-round rifle honors for use on all game found on this continent. Even though some of the experts rate it as a medium-game arm, many thousands of shooters all over the globe have branded the .30-06 as “my favorite rifle,” and use it exclusively, whether they are shooting squirrels or moose for meat, monkeys or grizzly bears for sport.

There are a few calibers which possess some of its numerous advantages, but there will be plenty of days to come before any one has them all.

The flat-shooting, long range .270 caliber has given the .30-06 the only real competition it has ever known for hunting American game—therefore, I think it appropriate enough to compare a few points of these two very popular calibers. As I see the situation, this competition was brought on by the increased number of new hunters—those not accustomed to shooting a lot who have been hoodooed by recoil, and the opposite extreme, by seasoned hunters who have the ability and patience to place their bullet. The first group are kidding themselves a bit, because, according to Mert Robinson, Winchester's ballistic engineer, the .270 (with 130-gr. bullet) gives only 2.5 foot pounds less of free recoil than the .30-06 (with 180-gr. bullet). True, the thirty-caliber jar is slightly more noticeable on the target range than that of the twenty-seven caliber, but I have always contended that “getting hurt” by recoil is mostly in the mind. I cannot recall that I have ever

heard a gunner complain of being “kicked” when he was concentrating on putting a slug into a big buck. I do know there are people who are “scared to death” of a gun's rear punch, and in their case, I say use an arm with a milder recoil, because it is a cinch they are not going to do good work with something they are afraid of.

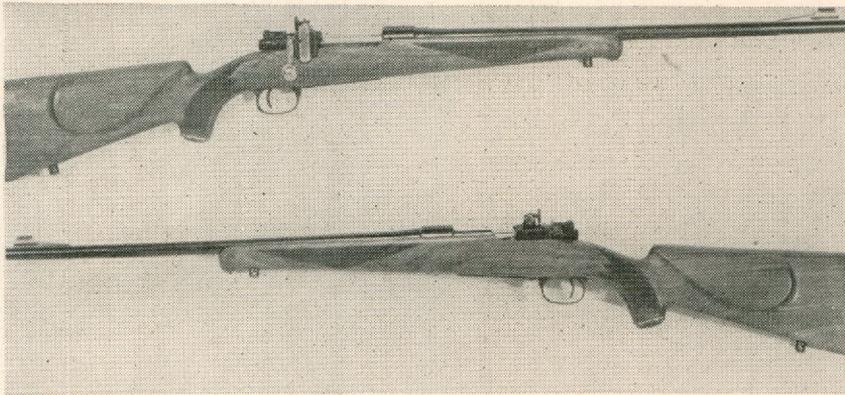
Magnum with accuracy and without a flinch.

The second group who were instrumental in causing the '06 to lose a few votes, fell for the .270 caliber's flat trajectory and high velocity with the 130-grain and lighter bullets. They—a part of these folks at least—go so far as to make claims that

the .270 is a *big-game* rifle and recommend it as such. As before-mentioned, the cool and collected shooters can perform wonders with this caliber; but under my observation, the .270 lacks in knockdown power for taking our largest game when used by the tyro.

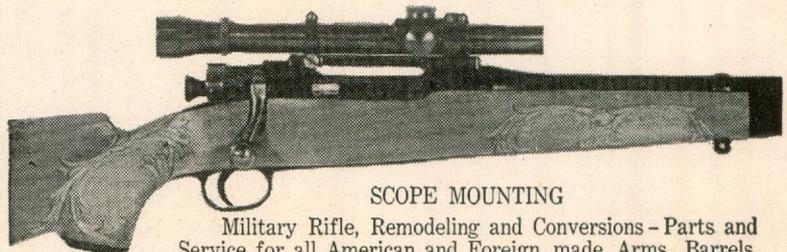
Last year while on a hunt in Wyoming, a member of the J. B. Johnson party fired fourteen 150-grain .270 bullets into a silvertip bear. The enraged beast charged, but fortunately was

stopped by a 250-grain .348 caliber slug. A lesser number of the smaller caliber rifle's bullets could have downed the animal—if a part of them had been properly placed, even though I think a 150-grain



Two views of the author's custom-built .30-06 on a Mauser action showing the twin cheek pieces. The two cheek rests are an uncommon feature on modern arms, but are very convenient for the ambidextrous rifleman. The rifle was made by “Ad Forkey of Texas,” San Antonio.

Certainly the '60's jab is inconsequential to shooters who have trained themselves to handle a rifle—not let the rifle handle them! Women who shoot regularly fire .30-06's and even the hefty .375 H.&H.

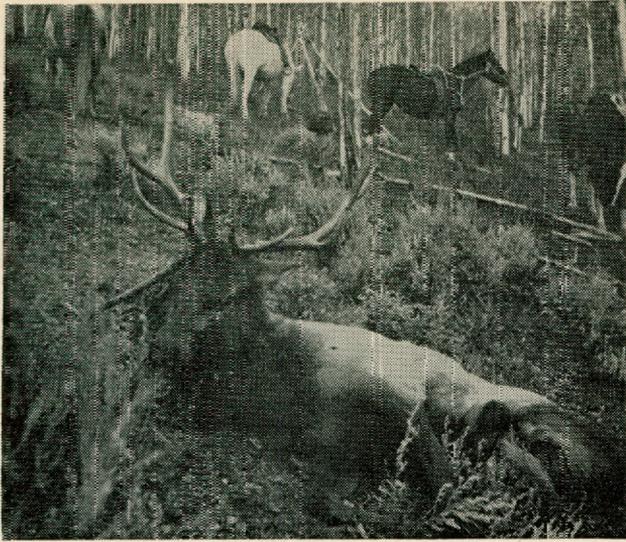


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Elk can absorb a lot of lead—unless bullet is properly placed, or rifle of adequate power employed. For sure kills, rifles with lesser killing power than those in the .30-06 class *should not* be used on these majestic beasts. Wilson brought this young bull down with a smashed spine as the animal ran at 200 yards.

bullet lacks a lot in being a big-bear stopper.

True, the *coverage* .270 will shoot tighter groups than the *average* .30-06; however, I have seen several .30-06's do anything that any .270 can do as far as accuracy is concerned—and do a lot better when a heavier bullet is needed. It is interesting to note that the 150-grain .30-06 bullet has less drop than the long-winded 150-grain .270 missile at 400 yards.

I know a fellow in South Texas who paid for his Winchester M-70 .30-06 and Smith mounted Weaver K-4 scope in a matter of minutes last season by betting hunters fifty dollars a shot that he could hit empty thirty caliber cases at 100 yards. The worst I heard of him doing was missing *one* out of *five*. He can also make five shot groups at 200 yards which could be covered with a fifty-cent piece.

A good friend of mine, Colonel M. M. Penny, once owned an '06 that was truly a rare specimen. With this arm the colonel could lay all bullets available as loaded into factory ammunition (110-grain to 225-grain) well inside the two-inch 10-Fing at 100 yards—without a change of sights!

The .30-06 caliber rifle can be accurate!

The .270 loses an important edge on the larger caliber when bullet weights are concerned. There are too many instances when a heavier bullet than the .270 caliber's heaviest—150-grain factory-load, 160-grain handload—is needed to get the job done on big bone and tough muscle. A 150-grain missile driven at any given muzzle velocity certainly is not a bone crusher when used on our larger game, and traveling at a high velocity, it definitely will not plow through thick brush as well as a 180, 220, or 225-grain slug.

I positively do not condemn the .270 rifle, because, as I have stated previously in this department, it is one of the finest calibers on the market for long range shooting within its limits; it should not be used by the novice on game the size of our larger species of elk. The 130-grain bullet at 3140 f.p.s. is a poison pill for deer and antelope. I have seen it seemingly to paralyze both of these game animals on numerous occasions; however, the first of these rifles I saw used on deer ripped a hole

through which all the contents of the animal's abdomen fell to the ground, yet the old boy ran like a scalded cat for 175 yards before diving into a scrubby cedar bush where a finishing shot was necessary to put the animal out of its misery. Of course an occasional occurrence of this kind should not be held against any good sporting arm, as any chosen caliber will sometimes disappoint its admirers.

The man who owns more than one high-powered rifle should possess one .270, as it is a useful addition to anybody's gun rack. But, its light bullets are not reliable enough under average conditions on *all* American big game animals for the majority of our present day hunters.

He who can afford a "young" armory containing many different calibers of rifles—one for every occasion—usually has the opportunity to cut more notches on his stock (if we could bear seeing a fine stock notched) and make cleaner kills than the man shooting only one rifle. For example, the man-of-many-guns probably lists his



arms thusly: A .22 Long Rifle for cottontails and squirrels (close range small game), a .220 Swift for hawks and woodchucks (long range small game), a .35 Remington for brush deer and black bear (close range medium game), a .270 for antelope and mountain deer (long range medium game), a .375 H.&H. for moose and Alaskan bear (close and medium range large game), a .300 H.&H. for big horn sheep and largest elk (long range big game), and so on. Since all of us are not as fortunate, sometimes one, maybe two, rifles have to perform many duties.

Here is where the versatility of the .30-06 comes in. The choice of the one-gun man continues to boost the sales of this caliber. And we may enumerate a few of the reasons for his selection. He can have any type of action he wishes, with the exception of pump-action which cannot stand '06 pressures. If he is partial to a certain make of arm, there are Winchester, Remingtons, Springfields, Enfields, Mausers, and Mannlicher-Schoenauers to choose from—besides the custom-built jobs. He has at his disposal practically every imaginable bullet weight and type in the book.

Often referred to as "the handloader's delight," because of the vast variety of bullets and hundreds of loading combinations, the .30-06 cartridge is one of the most versatile and flexible ever designed. Here is a sample of the bullets, their weights, and their muzzle velocities, which are available for the '06 handloader to play around with:

.32 Auto. cal.—74-gr.—2000 to 3800 f.s.; .32-20 cal.—80, 90, 115, 120-gr.—1090 to 3680 f.s.; 7.65 m/m Luger cal.—93-gr.—2200 to 3500 f.s.; .30-30 cal.—125, 140, 145, 150, 165, 169, 170-gr.—1130 to 3200 f.s. Then there is the regular .30-06 line with bullets weighing 110, 145, 150, 172, 180, 193, 196, 200, 207, 220, 225, 230 grains having muzzle-velocities up to 3300 f.s. for the best results. Bullets measuring .307 (thick jacket) to .312 (thin jacket or lead) in diameter are usable. (Actual measurement of the .32 Auto. and .32-20, for example, does not exceed .312.)

The handloader, or custom-loader, has the great advantage of being able to make special loads for particular purposes, and, just as important, to suit his individual rifle; therefore, he can get much better results from his arm than can the chap who buys his fodder over the counter—factory loaded. "Rollers of their own" can drop a grain, or add a grain and a half of powder, and obtain almost duplicate performances in accuracy with two or more different bullet weights—a feat not always easily accomplished with handloads, much less with factory ammunition, especially when the arms have light barrels.

Shooters of the .30-06 hang up more meat in the ol' meathouse, enjoy more sport, and the once-a-year hunter becomes amazed, when they choose carefully the

★ Continued on page 27

Mrs. T. B. Roberts, of El Paso, who has been farming and ranching in West Texas for 90 years, is proudly holding what the natives out there call a "cactus cat." The big fellow was caught in the Rio Grande near El Paso.

DO NOT read this stag story if you think it is too old for repetition. Some things are improved when properly aged. Let us hope that this recital will prove that a good story can challenge the wear and tear of time.

One of the oldest and most successful hunts in history was an ass hunt. Saul and his servant on being unable to find the animals, appealed to the prophet Samuel. Samuel not only located the beasts but anointed Saul as the future ruler of the Israelites. Saul got more than he had started out to find.

The Knight of Snowdown went stag hunting and found The Lady of the Lake. What he found was of more importance than a stag. Many of you may still remember an opening couplet of the hunting story of Sir Walter Scott which ran like this:

"The stag at eve had drunk his fill

Where danced the moon on Monan's rill."

Then your memory broke down in its effort to recall another line, and yet, in the next paragraph there is a picture that tingles the blood of any hunter, as the noise of the whoop and halloo reached the startled ear of the stag. Believe me, it was a kickoff, and at the sound of a hundred hunters and their hounds,

"The antler'd monarch of the waste

Sprung from his heathery couch in haste . . .

A moment gazed adown the dale,

A moment snuffed the tainted gale, . . .

Then as the headmost foes appeared,

With one brave bound the copse he cleared;

And, stretching forward free and far,

Sought the wild heaths of Uam Var."

As the stag and hunters pass from view we pause briefly for identification of the ethics of that kind of a hunt. Without glorifying the ancient art of the chase it is interesting to compare methods used in those days with the hunting methods of today. The writer finds no fault with the poetical story of Scott (he had a poetic license, you know) and it is even proper to justify, to a degree, some of the tactics of that time, which would be frowned upon by most civilized hunters of today. Scott correctly pictured the practices of that era, and the practices, not the story, may be subject to criticism.

In the Highlands of Scotland Hunter Found the Lady of the Lake

Note that the poem was published first in the year 1810, portraying the feuds and social habits of Scottish Highlanders in a remote past. In the general purpose of the poem the stag hunt was only incidental. The hunt was used as a means of getting the Scots out in the open and into an environment which would fit the nature of the story. As already stated, one of the hunters found "The Lady of the Lake" about whom were the legends of that era.

Such being the purpose of Sir Walter, his poetic fancy created and organized that colossal chase of the "antler'd monarch." To the Highlanders it was a joyous occasion, having the rank of a football game in the estimation of sport lovers. In taste and refinement it was vastly superior to the Spanish bull fight, and in the few that I have seen in Mexico my sympathy was always with the bull. Also I have sensed a similar sympathy for the stag when too many dogs tried to pile on him.

Looking at the affair with that cold, analytical eye, one is shocked at the unethical, heartless attack on a single stag by 100 hunters astride 100 horses accompanied by 100 bloodhounds, and the wild music of the horns and hounds. To convince the reader, just read the exact lines of the story:

"A hundred dogs bayed deep and strong,
Clattered a hundred steeds along,
Their peal the merry horns rung out,
A hundred voices joined the shout,
With hark and whoop and wild halloo."

One might suppose that the purpose of the gallant knights, (for Knighthood was in flower then), was to scare the stag into helpless confusion, but it didn't work. The stag knew that he could outrun and outwit the whole pack and *he did just that*. He had been chased before. He knew his habitat, the tactics he would use, and the darksome glen where he would hide when horses and dogs gave up the chase.

There was a logical reason why bloodhounds were used in the chase. They are not as swift as the greyhounds, but they can better follow a trail spattered with blood; and that is where the bloodhound got his name. Marksmen of that day with their crude weapons were more apt to



wound a deer than to make an outright kill, which made the bloodhound a necessity.

In the high class hunting under discussion it does not appear that any shooting was to take place. It was one of those desperate field sports where the dogs should bring the stag to bay for the kill. The hunter would then do the rest. The following lines clearly indicate that a knife of some kind was to be used: The hunter "Already glorying in the prize,
Measured his antlers with his eyes;
For the death wound and death halloo,
Mustered his breath, his *whinyard* drew;
But thundering as he came prepared,
With ready arm and *weapon bared*,"
They thought they had him cornered but,

The Stag always could outrun and outwit 100 hunters astride 100 horses and a pack of 100 baying bloodhounds.

and a of the Lake

By J. G. Burr

Coyote, 24 m.p.h.; Foxhound, 22 m.p.h.; American gray wolf, 20 m.p.h.

The speed of the deer is not given but it is known that in open country a greyhound can outrun a deer.

So the stag of our story took to the Highlands and the "heights of Uam Var" on the bold cliffs of Benvenue. When the hunters reached the mountain ridge of Benladi, pursuers fell out. Others had shunned to stem the flooded Teith, for "twice that day, from shore to shore the gallant stag swam stoutly o'er." It was not long before the headmost hunter rode alone. This lone hunter still urged onward his steed as the noble animal was giving up his last ounce of energy, and now, with the stag gone from their view,

"Close on the hounds the hunter came,
To cheer them on the vanished game;
But stumbling in the rugged dell,
The gallant horse exhausted fell,
And the good steed, his labors o'er,
Stretched his stiff limbs to rise no more.
Then touched with pity and remorse,
He sorrowed o'er the expiring horse."

There was pathos in the scene as the hunter voiced his lament

"That Highland eagle e'er should feed
On thy fleet limbs, my matchless steed."

The stag in safe retreat heard the baffled dogs rave through the hollow pass in fruitless quest. It was time for the curtain to drop. The chase had ended. The lone horseman was afoot and it was time to call the dogs in.

"Then through the dell the horn re-sounds,

From vain pursuit to call the hounds.
Back limped with slow and crippled
pace,

The sulky leaders of the chase;
Close to their master's side they pressed
With drooping tail and humbled crest."

Poor dogs, they knew when they were whipped, even though they had played a proud role in the classic event of the day. Deer hunting with dogs in our day is not of the kind that calls for honorable mention. The general law in Texas forbids the use of a dog or dogs in the taking of deer, but a special law in eleven counties allows the use of any number of dogs. In forty-four counties the use of one dog for trailing wounded deer is provided for. The forty-four counties are in the best deer territories, and the law is really

in the interest of conserving the herd. It is better to retrieve a wounded deer than to wound and lose others that might ultimately succumb to wounds. Most of the counties where dogs may be used in the taking of deer are not among the best hunting grounds, and there is a strong suspicion that persistent hunting with dogs may run most of the deer out of a territory, and also cause pregnant does to lose their young. Scott, in his story, is careful not to involve the doe in the chase. Aside from the conservation angle, to do such a thing would violate the rules of gallantry. In one short line he takes care of this:

"Close in her covert covered the doe."

Terrified by the sounds of sylvan war her greatest safety was in hiding. But the Texas doe in the eleven counties probably does not understand the doubtful benefit of hiding from a pack of hounds when hunters are not particularly concerned about sex.

Reverting to the Highlands where the *hors de combat* hunter is wandering around on foot with his horn and hounds, with the daylight nearly gone, he was evidently in need of a place to sleep. Then he came upon the shores of Lake Katrine, one of the most famous lakes of Scotland, and the rendezvous of rebel clans. In this lake was an island where lived Ellen Douglas, whom the poet called "The Lady of the Lake," together with others of her household. In order to attract attention the stranger blew his horn and fair Ellen, supposing it was her father, came out in her light skiff to ferry him over.

Surprised by a stranger, she backed off a little to question the visitor. As he was a courteous gentleman of quality she offered him a place in the skiff, and he gallantly took the oars. Arriving at the lodge, where he was received with gracious hospitality, he introduced himself with these laconic lines:

"This morning, with Lord Moray's train

He chased a stalwart stag in vain,

Outstripped his comrades, missed the deer

Lost his good steed and wandered here.

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"The will quarry shunned the shock,
And turned him from the opposing rock;
Then dashing down a darksome glen,
Soon lost to hound and hunter's ken. . .
His solitary refuge took."

The stag was now at home on the brow of the mountain where high jumping was of more importance than speed. On a level track a racehorse can outrun a deer or even an antelope but in broken terrain a deer has every advantage over the horse and dog. In this connection we mention the following racing powers of animals, whether domestic or wild:

Racehorse speed, for a mile, 34 miles per hour; Pronghorned antelope, speed for a mile, 32 m.p.h., though there are claims of 43 m.p.h.; Greyhound, 30 m.p.h.; Jack Rabbit, 28 m.p.h.; Common fox, 26 m.p.h.;

Crude weapons which only wounded animal made use of hounds necessary to bring quarry to bay for the kill.



The Crappie

WHEN the weather is hot and fishing is off generally, when bass and pike are sulky and you do not want to go home empty-handed, which fish is most likely to give you a battle at a moment's notice?

The crappie.

When the mercury is huddled down at the bottom of the thermometer and your minnow is swimming about beneath ten inches of ice, what is most likely to go after it?

The crappie.

When you want a fish that displays a willingness to take all kinds of bait in all kinds of weather at all times of the day, a fish you are sure to find in ponds or rivers nearby, a fish that often comes in large schools and is good eating besides, what do you go after?

You guessed it—the crappie.

The crappie is the fish of all seasons, the fish of all classes, a down-to-earth, democratic kind of fish. The absolute dub can catch himself a mess of crappies. The crappie, in fact, is excellent for the beginning angler. The lad with the simplest equipment can take home a string as easily as the man laden down with a trunkful of fancy tackle. What is more, the crappie can be caught almost anywhere east of the Rockies any time of the year, day or night.

Inhabiting the same water generally as the bass, it makes up for its lack of size in activity. Why stay home when the bass are not biting if there is a ready biter like the crappie at hand, a toothsome fish that operates in large and active schools? What more could anyone ask?

It is no wonder that the crappie is so popular. Its all-round appeal is the reason so many ponds are now being stocked with "speckled bass." In many instances the crappie is the first choice for stocking a pond.

About the only thing against the crappie is its size—or lack of it, rather—and in some cases even that complaint cannot be made. It is the largest of the "panfish," a term embracing the smaller fresh-water fishes of America. Although eight inches is probably a good average for crappies, twelve inches are not uncommon, and occasionally a whopper of more than two pounds is captured. A two-pound crappie is a fish no one need be ashamed of, especially when it is spread out, hot and

sputtering, on the dinner table. The large crappie is just as good eating as is the smaller, something that cannot be said for all game fish.

Although there are two kinds of crappies, the distinction between them is perhaps not of great importance. The black crappie, commonly known as the calico bass, is darker and more spotted than the white crappie and has a somewhat higher, more rounded back. These differences, however, are not always pronounced enough to distinguish between them, especially if the fish are caught separately. In that case count the dorsal spines: five or six for the white crappie, seven or eight for the calico bass.

As for distinguishing between the crappie and the other members of the sunfish tribe, that is relatively simple. Besides the size and coloring of the crappie, the most prominent feature is its protruding mouth. This protrusion is accentuated by the dented-in shape of the crappie's head just above the eyes, a sure identification feature. And, although generally large, the crappie is somewhat thinner in proportion to its size than the other panfish. Large in size, thinner in body, lighter in color, a large protruding mouth, and a dented-in head—these are the distinguishing characteristics of the crappie.

Both species of crappie often inhabit the same water, although the black crappie is usually a bit fussier about its surroundings, demanding water a little cleaner and a bottom with less mud. The calico bass is not a bit temperamental about its reaction to a minnow swimming slowly past. In fact, both species seem to take bait equally well and from all areas of the water. Neither leaves anything to be desired on that score. Both species bite all year around, being two of the few members of the sunfish family which do not hibernate. That fact is just another reason for the crappie's popularity with anglers east of the Rockies.

The crappie begins to get serious about family obligations in May or early June. Even the yearlings often take up parenthood. The male makes the nest: the black crappie in five or six feet of water on a gravel bottom, the white crappie in two or three feet of water near sunken brush or logs. In seven to ten days the eggs hatch. Until the fry are able to fend for themselves the male crappies discharge their parental obligations by standing

close guard over their offspring. This fact, undoubtedly, is one of the reasons why the crappie population in a pond increases so rapidly.

Like other members of the sunfish tribe, the crappie is a hearty eater. A healthy appetite promotes swift growth, and the crappie grows rapidly to maturity. Almost anything is accepted as food, provided that the intended meal is alive and is not too big. And in some instances almost nothing is too large.

All kinds of natural water creatures—minnows, crawfish, nymphs, larvae, small fish—are relished by the crappie as delicacies. All other forms of outside animal life which accidentally get into the water are eagerly snapped up, as are dry flies, wet flies, spinners, popping bugs, and even plugs. Practically nothing is ruled out except doughballs. At that, if a doughball could squirm, a crappie would probably hit it.

From the standpoint of the angler, the crappie's eagerness to bite is greatly in the crappie's favor. The angler loves action, and the crappie gives it to him.

Although crappies are ready biters, and although complicated angling technique is not required to capture them, a few important details must be kept in mind when fishing for these "speckled bass," the same as for any other fish.

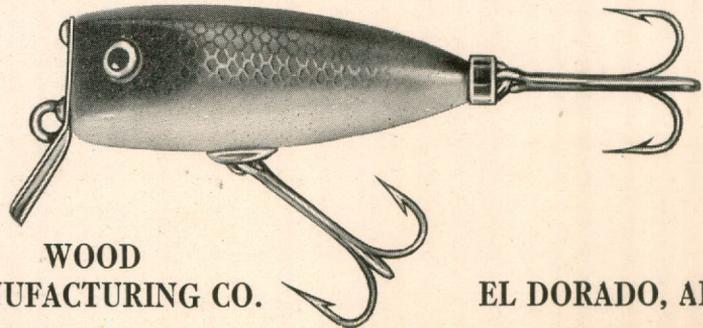
For one thing, you do not just throw out your line just anywhere you please. All species of fish have favorite living quarters. The crappie is no exception. Unlike the trout, his habitat is not narrowly restricted, yet the crappie does display certain preferences. In the first place, this fish is generally found in somewhat deeper water than the other sunfishes. If the pond or river is less than eight feet in depth, then the deepest hole is the most likely place to find them. If the water is more than eight feet deep, then the crappie will usually be found at a depth of about ten or twelve feet. Usually, but unfortunately not always.

During the daytime crappies will be

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Shark Suckers

THE remora, a streamlined shark accessory, was well known to Columbus, who thought that it had the power to hold back his ship.

A little fish, rarely exceeding two feet in length, the remora is a good example of what can be done when nature makes up her mind to fit an animal or fish to an environment. Shaped so that its body fits in with the streamlining of the sharks, it is able to attach itself to these great fish by the sucking disc on its head, and then rides lazily along wherever the shark goes, feeding on the crumbs from the shark's dinners.

The strange form of the shark-sucker, its sucking disc, and its association with sharks, other large fishes, and ships, have all led to a great mass of superstitions and legends. Known among the Arabs of the early days as the "shark louse," or the "louse of the terrible one," to the Greeks as Echeneis (the ship holder), and to the Romans as remora (the holder back), fact and fancy have become so closely interwoven about this fish that it is hard to tell where one leaves off and the other begins.

Certain it is that Echeneis was early accused of having the power to hold back or delay ships by attaching itself to them, and one of the earliest pictures of this fish shows a number of them attached to the keel of a boat whose progress has been halted.

Just how this myth arose it is hard to determine, but even today Florida fishermen aver that these suckers often attach themselves to the keels of small sailing boats in such manner that they act as a brake. At any rate the belief was so firmly established by the time of Columbus that another name had been added to the list, that of "reverso," and it is by this name he makes first mention of it in American waters, and tells of one of the most curious uses to which any fish has ever been put.

He says, "In one of these channels they spied a canoe of Indian fishermen. Their manner of fishing was so strange and new to our men (that they watched). It was thus: They had tied some small fishes they call "reverso" by the tail, which run themselves against the other fish, and stick fast; and when the Indians perceive it, they hand them both in together. And it was a tortoise our men saw so taken by those fishermen."

Whatever may be the truth of the belief in their shipholding powers, there is no question about the accuracy of his statement, for even today remoras are still used in this fashion, the method having been



Here's evidence that the Black Bass are biting. These two beauties were caught by Mrs. C. J. Menn, of San Antonio, near Boat Haven, Dodd City, on November 1. Helping Mrs. Menn display her prize catch is her husband, C. J. Menn.

reported from places as far apart as Mozambique, in Portuguese East Africa, to the Cape of Good Hope, and the West Indies.

Fish used in this manner have an iron band placed around their bodies just above the tail. Some of them live so long in captivity that these bands become

embedded in their flesh. When they are used, the fisherman lifts them from the live-box in which they are kept, attaches a line to the band, and then the fish is placed in the sea. Seeing their prey, they swim towards it, and in the case of a turtle, they generally attach themselves to the neck, where they are safe from bites.—J.L.B.

What's In A Name?

"SPORTSMAN" is just a word, in itself, a label like "college professor" or "Communist," with a thousand shades of meaning. But a new understanding has come into the term, with recent years.

Lexicographers define a Sportsman as "one who pursues the sports of the field, as hunting, fishing." But language is what users say it is, and the manufacturers of dictionaries trail along behind, rationalizing. The word now has overtones synonymous with "gentleman."

A sportsman today is that man who hunts and fishes within the limits prescribed for him by the demands of the common good. His ranking is not dependent upon the skill with which he wields a flyrod or levels his sights, but upon his innate good manner in not imposing his personal bag desires upon a community-owned game total. He's a man of ethics, a friend of the landowner, a courteous co-operator.

He (or she) pays his own way, taxing himself willingly to meet the costs, never howling for a subsidy. He doesn't organize a pressure group to loot state or federal treasury for his own gain but assumes that his permit fee is just a way of paying admission to the grandest show on earth, bar none; the sight and sound of a quail

bursting from cover, or of a fish smashing at the lure.

Conservation agents were not created AGAINST the sportsman but BY him. He's convinced that violations of the code are wrong; he polices himself and demands others do the same.

Genus Sportensis is like no other species. A baseball fan pays his way but doesn't go out on the field. Movie addicts buy tickets to watch someone else enjoy. A golfer isn't dicing with destiny; he can always get his 18 holes. The gambler hopes for tangible benefits—but not the sportsman. He can't win financially; there's no way of measuring what he gains—except self-respect.

Because the sportsman, today, is that man who realizes he must share available wildlife with his fellows, who restrains his trigger finger and puts away the rod because there are those who come after, and they must find something in turn. He is the true co-operator, not because an agent of vengeance might lurk behind a bush, but because he would preserve for others the sport he himself loves. Let quibblers call this, too, selfishness—it is an enlightened variety more needed in the world.—Dan Saults in the Missouri Conservationist.

The Crappie

★ *Continued from page 18*

found near the bottom. They do not essentially require cover, although they prefer bottom weeds to hover over or a sunken log to congregate around. Being school fish, they display a tendency to wander about, yet good crappie water is generally found around sunken brush, around stumps and logs in deep water, over deep weeds, and near bridges, piers, and dams in moderately deep water.

Expensive equipment is not a necessity for crappie fishing. In fact, many fishermen prefer to use simply a long cane pole for daytime fishing from a boat or from a bridge, dam, or any other high place where the crappies may be expected to be in reasonably close. A suitable length of light line, a pencil-type bobber, two or three split shot, a few feet of leader, and a hook complete the outfit.

Because the crappie has a larger mouth than the other sunfish, a somewhat larger hook can be used. Hooks up to Size 1 will prove to be satisfactory. The leader need not be very heavy. Neither should the bobber be heavy and clumsy. The crappie is at times a delicate biter; therefore the bobber should offer as little resistance to the water as possible to keep the crappies from becoming suspicious. The fish should be able to pull the bobber under with ease. When the crappie starts to run with the bait, set the hook. That's all there is to it. The split shot pinched on the line or leader serve to keep the bait down to the desired depth. Minnows in particular have a tendency to swim up if danger threatens from below.

With the cane pole outfit, all kinds of live bait can be used. The best by far is the minnow, and the minnow of about two inches in length or slightly less is the best of them all, be it shiner, chub, or mud minnow. The minnow hooked through the lip is perhaps the livelier, but the minnow hooked through the back above the spine produces a greater percentage of hooked fish. The minnow must be kept frisky, however. The crappie is partial to lively bait.

Worms will sometimes take crappies, although they seem to prefer all kinds of insects as well as crawfish. A small spinner made to flutter by raising and lowering the line is an added inducement to the crappie when fishing with these more somber-colored baits. The jiggling of the line also imparts a little life to a drowned insect.

Action is the thing. In fact, a natural bait is not always necessary. Many a crappie has been tempted with an artificial fly attached to a jiggling spinner. A white streamer fly is as good as any other, if not actually better than all others for this type of fishing.

When the crappies rise closer to the surface, as they generally do late in the day, the line below the bobber should be shortened accordingly. If the crappies start breaking water for an evening meal of insects, the cane pole artist can pick up many an overly eager fish by dappling a fly on the surface to simulate the action of an insect trying to rise off the water. The hungry crappie makes no nice

distinction between a struggling insect and an artistically manipulated dry fly. He grabs anything. In fact, sometimes the manipulating of the fly can be frightfully messy without making the least bit of difference to a school of surfacing crappies. Each one seems afraid that one of the others will get to it first. Etiquette is not taught in crappie school.

What a cane pole fisherman can do with a fly, a fly rod angler can duplicate, of course. In fact, he can do it better because his equipment is more flexible. He has greater reach and better control of fly and fish. Although the crappie may not be the scrappiest of fish, a fly fisherman can have a great time with popping bugs, dry flies, or wet flies fished close to the top when crappies are surfacing. A good crappie provides all the sport the angler could ask. The best time for the fly fisherman to practice his tricks is at dusk and sometimes early in the morning.

The fly rod angler can even fish deep with a bobber during the day if he does not consider it beneath his dignity or too rough on his rod. Many a fly rod has been used in this way.

The bait rod angler is somewhat at a disadvantage in crappie fishing, yet the short rod need not be too much of a handicap. At times it can be adapted quite successfully. If a sliding bobber is attached to the line, the bait rod angler can set it to the desired depth and still fish from boat or pier as successfully as those with longer poles. He can even cast out with this rigging to reach places inaccessible to others using a fixed length of line.

When the crappies are starting to rise the bait rod angler should replace his bobber with a casting sinker. Attaching three or four feet of leader behind the sinker and to the leader attaching a spinner as large as No. 3 and down through the smaller sizes, a bait rod fisherman can work through a school of crappies with good results. If the sinker is not a keel sinker, a swivel will be necessary to keep the line from twisting. Minnows, streamer flies, and small pork rind strips are the best additions to the spinner. To keep the minnow of the hook for casting, the hook should be run through the minnow's gills and through its back. Even dead minnows can be used in this manner, although they tear apart rather easily.

Finding the crappies is sometimes relatively simple. If the top of a sunken log is poking out of deep water, then around it is a good place to try. Any log, in fact, in fairly deep water is a good bet. So are underwater weed beds and other forms of cover. Sometimes, however, the crappies seem to have deserted their favorite haunts, traveling in schools as they do. Sometimes, too, these underwater characteristics cannot be readily determined, especially if the pond is a new one to the angler or if the water is murky. In that event, drift fishing is the best technique. This type of fishing is done, of course, from a boat. Drifting slowly before the wind, the angler probes to bottom with his bait as he moves along. To get one fish is to anchor and try for more. Unless too much disturbance has been created,

the chances should be good. If nothing further develops, up comes the anchor and the drift fishing starts again.

Because the crappie is not generally a large fish, the baits used should not be too big. Inch-and-a-half minnows are about right. Occasionally a large crappie will hit a bass plug or a chub. Once in awhile a small crappie will become ambitious and outdo himself but these cases are the exception rather than the rule.

More than usual care should be exercised after the crappie has been hooked. The membranes between the bony parts of the mouth are paper thin, transparent. A lightly hooked fish easily tears itself loose. Even a solidly hooked fish can readily wear a large hole in its mouth and shake the hook.

For these reasons a crappie that is being lifted out of the water by the line has a better chance of freeing itself than other fish. Especially is this true of the bigger ones. A net should be used, if possible, because to grab a struggling crappie is to risk grabbing a handful of sharp spines. But perhaps this danger is not too prominent if a little care is used in handling the fish.

The crappie is a clean, pretty fish, a catch no angler need be ashamed of taking home. And when its table qualities are considered, no angler need be ashamed of making a special point of going crappie fishing.

Whatever name it goes by—speckled bass, speckled perch, strawberry bass, calico bass, papermouth—the crappie is destined to become one of the most popular fish in America. Winter or summer the crappie will get its share of attention from all anglers.—John W. Korda in the *Pennsylvania Angler*.

Johnnie's Lucky Day

★ *Continued from page 7*

if it WERE Johnnie, that he had finally killed a deer, but five shots in one morning were rather unusual unless he had wounded a buck and was following him and getting an occasional snapshot.

About noon I returned to camp and found Ernest examining a fine nine-point buck which he had bagged with the shot I had earlier surmised was his. On a tree nearby in a "deer sack" was another. As I went over to examine it, Homer came up and excitedly told his story.

Just before sunrise, he had been carefully making his way up a hill to a stand he had in mind, when he saw a slight movement some fifty yards away behind some bushes. Easing down to one knee, he put his glasses on the spot to help clarify the object in the dim, early morning light. Immediately, he saw a big rack of horns but couldn't see the head; however, he could see part of the body, and, estimating the proper spot, he prepared to fire. His hands began to waver and shake, though, and he had a pronounced case of "Johnnie-itis" himself.

Letting his gun down, he took a deep breath, then tried again. At the shot, the buck fell but struggled to rise and he fired twice more as the deer attempted to get up. Suddenly, everything was still

★ *Continued on page 22*

Letters

Training Dogs

I don't know where you get the stories for your magazine, but they are most interesting, especially where they depict actual experiences.

The first thing I look for in them is the picture of Bird Dogs at point. I am now 69 years old, and have laid away the gun, and no longer own any dogs, but from the time I was 17 years old up to a few years ago, I imagine I owned and trained as many bird dogs as any ordinary person who did not do it for a living. During that long period of time, I learned a lot of things about bird dogs that might be useful to the novice. One thing I learned was that the old axiom of "It's better far to rule by love than fear" holds as well with dogs as with human beings, and that dogs have a lot more sense than they are sometimes given credit for having. If you can teach them what you want them to do they are not only willing, but anxious to do just that thing. However, if they are started out in the wrong direction it is extremely difficult to break them of bad habits after they have acquired them.

I have been hunting birds up to about 10 years ago, since I was large enough to hold a gun. I owned my first bird dog when I was 17 years old, a pointer who looked more like a curl than a pointer, having a perfect curl in his tail. I don't think he had any particular family tree of which he could boast, but he was one of the most energetic hunters I ever saw, and didn't know what it meant to flush a bird purposely. Of course his name was Pat. He had none of the modern polish, like steady to shoot nor would he retrieve, but he would find your dead birds for you and if they happened to be in a briar thicket, you were in for the job of getting them out. I am just as sure that Pat had the instinct of hunting with the wind as I am that I am living. Too many times have I seen him enter a field when the wind was blowing against him, and circle the outside to the other side then hunt back to you with the wind. More than once I have lost Pat in the sage grass common to Tennessee where I lived, after a long wait have him come back and rear up on me whining, then turn back to where he had been on point, and after following him locate the birds.

After having used him for a couple of years, I had occasion to take him to Illinois with me where a bird dog was almost unknown, most of the inhabitants being German who objected to your shooting their rabbits, but didn't care for the quail. I had occasion to take a doctor friend out hunting one day, and after seeing Pat perform, he wanted to trade me a young Irish setter he owned for him and give me \$10.00 difference. That was a lot of money, so I let Pat go. I took the young dog out a few days later, and he started out wonderfully, finally coming to point on a covey. I noticed he was extremely nervous as I walked up behind him. I flushed the birds and fired three times and when I looked around my newly acquired setter was headed to

ward town in a dead run. The next I saw of him was in the doctor's yard from which he came. I just told the doctor to keep him. He was gun shy.

Since then I have owned many dogs, among them one I bought from a farmer who wanted me to go into the field for a demonstration of his hunting prowess. He was so poor you could easily have counted his ribs, but when he hit the field, he started out in a dead run, and I don't believe I ever saw a dog who covered space faster than he did. Finally he came to point, we approached, and when in about 50 yards of him, he burst right into birds, and when I made inquiry of the farmer, he said he had taught him to do that. I kept him a year or more, but was never able to break him. When I beat him for it he didn't know what the beating was for as he had been taught to do just that thing. I, likewise, was never able to break him from running rabbits. The proper training must come when they are young or they will never perform properly in later years.

But here is the real story I wanted to relate. It was in 1917 when I decided to go in for some real bird dogs. I bought two Rip Rap pointer male pups from a man in Sherman, Texas, named Melton, who raised dogs as a business. They were subject to registration and were later registered under the name of Dautless Dan and Peerless Pat. They were only six weeks old when I got them, and I began immediately to teach them obedience, and what was wanted of them. To avoid the possibility of their becoming gun shy, I began early to shoot a little .22 rifle around them about which they were a little nervous at first, but soon got to where they didn't notice it. I taught them steadiness to point, by using a fishing cane with a string attached thereto with a bunch of feathers on the end of the string. By the time they were first taken into the field, they were well trained so far as obedience was concerned and the rest came naturally. I developed two of the most talked of dogs in East Texas from them, both became perfect retrievers, and I am sure neither of them ever flushed a bird purposely. They were so concerned with holding that when birds flushed, they would drop to the ground and stay there until I said something to them. They backed perfectly, and I taught them at the command of "hold" to freeze in their tracks. This became a valuable asset as often one would be on point and the other, perhaps advancing toward him against the wind with the probability of flushing the birds before he smelled them.

I could relate some almost unbelievable tales about them, but one remark I heard a fellow huntsman make was that Dan actually was so careful when he was creeping up on birds that he took his front foot and moved the grass or weeds to one side so he wouldn't make any fuss that might cause them to flush.

They were exceedingly fast, and I have often found them in almost unbelievable positions where they had suddenly come

to point. Dan was somewhat steadier than Pat, but both were plenty good. I recall two distinct occasions where I shot into birds and for all I could tell did no harm, but saw Dan start in a dead run after the birds, which was not his custom, and before long come back with a crippled bird in his mouth. Some instinct of some nature told him the bird had been hit.

In 1923 I moved to a different part of town where it was not very popular to have dogs, and had considerable difficulty in keeping them penned up. I finally realized that I must part with my two pals, which was almost like parting with members of the family.

I sold them to Walter Bennett, who was then living at Breckenridge and who is now the Ford dealer at Gladewater, Texas. The price was unbelievable, but I still didn't like to see them go.

One more little bit of comment: These dogs paid absolutely no attention to rabbits, although now and then they would point one and when he ran off they would merely raise their head and look at him.

I remember Dan trailing a covey of quail one day, and he ran right onto a rabbit who jumped up and scampered away, Dan only turning his head to one side then going on about his quail business.

Start their training early, be patient, and don't quit a task until you are sure the dog knows what you want it to do, and I will almost guarantee they will never develop any bad habits in later life.—A. M. Brown, Dallas, Texas.

About the Coot

Under "Things You May Not Know" in the August, 1947, issue of Texas Game & Fish magazine appeared the above relative to the fact that a coot cannot take off to fly from land. This may be the general rule but certainly is not always the case, particularly in one instance. One morning last winter I went out my back door and to my surprise found a coot walking around in my back yard, which is fenced with a five-foot cyclone fence. The coot was about as unconcerned and apparently as much at home as if he had been raised there. He or she, whatever it was, walked around the yard with me about 25 paces back, and finally after getting enough of that, took off with about as much effort as a sparrow. He was about 15 feet from the fence, and in that distance had to rise more than 5 feet to miss the fence. What kind of an exception to the rule is this?—H. Dillon Culver, Houston, Texas.

P.S. I forgot to state that I live in a thickly populated residential district in Houston.

P.S. Again: Will also state that there were two witnesses to the above besides myself.—H.D.C.

Wall-eyed Pike

Personally I think it's time we try to introduce a few more varieties of fish into our Texas lakes and my number one nomination goes to the Walleyed Pike.

I thought this would be an opportune time to make this suggestion, now that

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Johnnie's Lucky Day

★ *Continued from page 20*

behind the bushes. Scarcely daring to breathe and wondering if the buck had run off, he crept up to the side of the bushes and—whoopee!—there he was—a magnificent nine-pointer with a big, heavy rack! As I examined him there hanging on the tree, I said, "Boy! *That's* a buck anyone could be proud of!"

Just then, here came Johnnie up to camp. I looked at his hands and his clothes, neither of which were bloody.

"What's the matter, Johnnie," I said (remembering the shots I had heard from his direction that morning), "did you run out of ammunition?"

"Aw, h—," said Johnnie disgustedly, "I just *can't hit one!*"

The others gathered around and Johnnie told his story:

"Well, I saw the first buck between me and the fence, standing still, less than one hundred yards away. I tried not to get nervous, but I just couldn't hold the gun steady. When I did fire, he started to run and I fired again. But I missed both times.

"About an hour later, another buck came running across south of me but slowed up when he saw some does. I shot once but I missed him, too.

"Awhile later, another buck came from the west end (I think he was the one I first saw) and I just knew I was going to get *him* with this gun I borrowed from Ernest, but, shucks, I shot twice more and—away he went! I can't blame it on the gun, I guess, because Ernest never misses."

... Later that evening, just about sundown, as I was easing slowly along toward camp, with my senses on the alert, a glance back over my right shoulder showed me the head and horns of a big buck outlined against the fading light. I was in a difficult position, my body facing exactly away from where I must shoot if the deer didn't move beforehand.

Turning very slowly to my right, I raised my rifle while turning, and purposely aiming low in the dim light so as not to overshoot, I fired and—immediately, the buck disappeared.

Not being able to believe I had missed him, I hurried over to look around and found spots of blood. Walking a few steps further, I saw him up ahead, hobbling along, favoring his left front leg. Upon raising my rifle, however, it proved too dark to see my sights.

Hoping to get closer or give him a

chance to lie down, I stopped, but later was unable to locate him again.

That night at camp, we planned concerted action for the next morning to get the wounded buck. Our plan was for several men to get on stands before daylight while others drove toward these pre-arranged places after sunrise.

The action took place in a long, narrow neck of our pasture, and shortly after daylight (as one of the drivers), I was moving cautiously along through the brush near where I had shot at the deer the evening before when, suddenly, I saw a buck off through the bushes watching me intently. Taking quick aim, I fired, and, with a bound he was away, but I knew he was hard hit so I didn't fire again. He fell about forty yards from the place he had been when first seen.

Doc and Jim, hearing the shot, came over to see what it was all about and Doc took my picture—the first I had ever had taken with a buck in the *exact* spot where he had fallen.

But this was not the wounded deer we were looking for, so we picked up Ernest and Berry from their stands and held a "council of war." Doc had gotten a good six-pointer two days before and Jim had his on the first day, so they decided to leave at once for home. The rest of us made another try for the wounded buck.

We didn't find him that morning, but at noon, Johnnie vowed he *must* get a buck that afternoon as we planned to go home the next day. We therefore gave him his choice: would he take a stand or try the "drive"? Johnnie preferred to "drive" and he asked the cook to go along to help. The rest of us took stands and awaited developments.

In about thirty minutes, we heard a shot... then another... a slight pause, then two more! Johnnie surely must be getting plenty of action! Finally... a fifth shot... then, a long silence.

Meanwhile, does and fawns kept coming by my stand, then two spike bucks, until twenty or thirty animals had passed me. The action died down and I saw Berry and Ernest conversing at a distance. They had left their stands. Looking the other way, I saw Johnnie rushing toward me as if the Devil himself were after him!

I started to meet him when, suddenly, a buck hobbled across a little clearing, and, as Johnnie shouted "Get him, Andy, it's your wounded buck!" I realized that what he said was true and wasted no time in firing. Then I hurried over to examine

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the buck, mentally thankful, meanwhile, that I had been able to find him and relieve his suffering. Upon examination, I saw that my bullet of the evening before had broken the left foreleg just below the shoulder. In my care to aim low and not overshoot in the near dark, I had unexpectedly placed my shot *exactly where I had aimed!*

Just then, Johnnie charged up and I could tell by the expression on his face that he had FINALLY DONE IT! He took just a glance at my buck, and, as the others joined us, I said, "Johnnie, what happened?"

"Andy," he said excitedly, "I finally got him, but I'll swear I thought I was going to lose him even at that! The cook and I jumped him over on the west side and the first time I fired, I knocked him down and broke his right front leg. He got up to run, then I fired again and missed. I ran after him a little way, then shot and broke his left hind leg at the hip. He fell in a heap, but, believe it or not, he got up and started to run on the two legs across from each other! I missed again and then tried to run him down, but he could still go as fast as I could and was about to run *me* down!

"When I stopped to get my breath, he stopped too and looked back over his shoulder. I just *had* to make the next shot count as I was nearly out of ammunition. The last one caught him behind the right eye and scattered his brains all over the country, but, man! I got him that time, dead to rights!"

"Well," said Ernest, "Why didn't you bring him along? Couldn't you carry him?"

Just then, the cook came over the hill dragging Johnnie's prize—a nice six-pointer buck.

"Johnnie, are you going to have him

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mounted whole, or just his head?" somebody cracked.

"Ah don't think he'll mount de haid," interrupted the cook.

"Why not?" exclaimed Johnnie, turning on him.

"Cuz you done shot a hole clean through 'is haid right 'tween de horns an' you kin pick 'em up and push 'em together in de middle," he answered.

"Well, I'll be darned," said Johnnie, "what do you think of that!!"

Letters

★ *Continued from page 21*

several new lakes are in the process of construction in Texas. I might add, in case the state fish experts aren't aware of it, that walleyes must not be placed in the same lake with crappie, or the crappie will become a la carte orders on the walleye menu.—F. P. Davis, Jr., 3903 West Lovers Lane, Dallas, Texas.

The Inland Fishery Division of the Commission made a thorough check on the advisability of stocking yellow pike perch (Walleye pike) in Texas after a request was made by the Fort Worth Anglers Club for the Commission to place some yellow pike perch in Eagle Mountain Lake.

During this investigation Lake Travis (Marshall Ford) was the only lake that seemed to provide the proper habitat for yellow pike perch since these fish will not be successful in lakes having muddy bottoms. The investigation also revealed that the introduction of yellow pike perch would cause crappie fishing to become practically non-existent. This was pointed out by Dr. R. W. Eschmeyer of the T. V. A. Lake Norris was an excellent crappie lake until the yellow pike perch became established, at which time fishermen almost deserted the lake.

All of this information has been carried by the various newspaper wire services and requests were made for anglers to write to the Commission telling us of their desires in the matter. Arrangements have been made by the Commission to procure a start of yellow pike perch if it is the desire of the fishing public.

Coming Up!

How about a nice long article on how to catch fish in our Texas lakes using artificial lures? I've worn out a new Langley reel in the past three months and all I've caught was a bunch of YAK YAK from my wife on these so-called fishing trips when I don't bring anything home but a bill from some more Whopper Stoppers and Heddon lures which I have left in Texoma, Possum Kingdom, Mountain Creek and Lake Dallas. I could tell you I enjoy your magazine but you know that because of this 2-year subscription.—Jim Andrews, 3206 W. Colorado, Rt. 8, Dallas, Texas.

Food For Quail

★ *Continued from page 6*

and brush down and stimulate reproduction. To assure seed production the borders should not be grazed by livestock.

Back in the proverbial "good old days" that we have heard grandpa tell about,

when quail were plentiful, conditions were ideal for the birds. His system of clearing small patches of timber plus diversified farming made a very suitable environment for farm game such as the bobwhite.

Grandpa planted grains in small patches and surrounded them with rail fence borders. Every rail fence was a natural wildlife border and a paradise for quail. The quail population jumped to an all-time high!

Then came the large-scale clean method of tractor farming and overgrazing. The natural borders of food and cover were destroyed. The quail population dropped. The farm was not "balanced" and we began fighting destructive insect outbreaks. Now, after restocking and law enforcement have failed to restore the birds, we are attempting to restore the environment with the old "border" idea and a conservative, balanced system of farming. We have realized that we can't upset the "balance of nature" and continue to prosper. Don't be like Farmer Jones and believe that you can. If you own a farm enter into a cooperative agreement with your Soil Conservation Service work-unit conservationist. Tell him you are interested in a wildlife border. Let's offer the quail a new boarding-house next year!—Florida Wildlife.

King Ranch Solves

★ *Continued from page 8*

stopped and examined the grassy ground cover. Mr. Lehmann explained that regardless of the quality of woody cover, high populations of quail could not be produced in areas lacking a good turf of grass. In South Texas three perennial grasses—i.e. big bluestem (*Andropogon*), joint grass (*Elyonurus*) and cord grass (*Spartina spartinae*)—are especially important because of their value as nesting, escape, and roosting cover, and the ability to withstand drought. Woody cover or food improvement are never attempted in localities where these key grasses are absent. If grassy cover conditions are suitable, but feed is scarce (none of the grasses mentioned are important as food) feed is increased by disking strips six feet wide through the deficient territory. Disturbing the soil causes such important quail foods as goatweed, ragweed, skunk daisy, and partridge pea to spring up. Cattle do not eat the weeds and they grow just by disturbing the soil. Mr. Lehmann emphasized the importance of ragweed, goatweed, sunflower and other native feeds because of their high nutritional qualities, ability to withstand drought, and low palatability to cattle which makes fencing unnecessary. The King Ranch plowed 284 miles of food strips in 1947.

As we passed into another pasture, which had very little mesquite, we noted another type of cover improvement. This was done by pruning grenjeno, a species of hackberry indigenous to this territory. Grenjeno plants generally provide good cover when young, but decrease in value as they age and grow tall. Hundreds too old and tall for quality quail cover had been pruned down to about 36", causing them to bush out near the ground. The effectiveness of the "shelters" as

cover was demonstrated by the large number of coveys observed resting under them.

At this point we left our cars and walked to a small lake to observe the results of planting sesbania, or danglepod. This is a tall green weedlike plant valuable as a soil builder and because it is not eaten by cattle. It can be grown around the margins of ponds or lakes and similar marshy places. If the season be a wet one the ducks feed on it and in a dry year the quail get the seed which is available in late winter when most seed foods are relatively scarce. In another depression we noted some planting of cord grass and noted four coveys of birds feeding on grasshoppers among it. Near this were a few mottes of mesquite, grenjeno and huisache. Huisache had also been cut to make shelters 4' to 8' in diameter; it too survived half-cutting well.

During our trip we noticed that the ranch fences were grown up or growing up in prickly pear cactus and we were told that the cactus retarded vibration and absorbed much of the strain of holding up the net wire, thus reducing fence maintenance as well as providing quail cover. The ranch records show that fences with such growths last much longer than plain fences, an important fact that "clean fence" addicts might well consider.

Just before noon we arrived at the Headquarters of the Norias subdivision, located about 55 miles south of Kingsville. From the highway to the ranch house we were always in sight of game of some kind—deer, turkey, quail, doves, etc.

Here we met Mr. Robert J. Kleberg, Jr. and his charming wife, "Miss" Helen. Mr. Kleberg is the general manager of this vast ranch and on his capable shoulders falls responsibility of coordinating the efforts of the hundreds of employees and improving the quality and quantity of the livestock and the land.

As we sat in the spacious living room, discussion was centered around game and game management. We were surprised and pleased to note Mr. Kleberg's up-to-the-minute knowledge of quail and other game, its habitat, feeding habits, and of things important to its restoration. He stressed an important fact that sportsmen sometimes overlook, that is, game production may be a liability rather than an asset on ranch lands. Research, for example, has indicated that six deer consume about as much food as one cow; deer consume an appalling amount of forage when present in large numbers. An abundance of deer is an economic loss to the land operator, therefore, unless there is a compensation in the direct relation to the cost of production. In short, if game is to be increased, there must be adequate economic or other incentive for land owners to produce it. Under the philosophy and regulations now applying, incentives are inadequate; investigation to make game production attractive to land operators would seem appropriate.

Just at this point lunch was announced and we adjourned to the dining room where lunch was served that was out of this world. The part that caught our fancy was a typical Texas dish, Cabrito

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★ *Continued from page 23*

or young goat. I (the setter man) was much pained to learn that Mr. Kleberg was a pointer man, but that did not deter Dr. Scales and me from advancing the setter cause. The Norias headquarters maintains a kennel of fifteen pointers with a professional trainer to train and care for them.

After lunch we loaded up in a station wagon and two jeeps, with Mr. Kleberg driving the station wagon leading the party. Hardly had we left the ranch house before we began to see many deer and turkeys; at this time we were not in quail territory, but were heading for a coastal plain pasture which Mr. Lehmann has under management. This plain was about twelve miles long and three miles wide and fronted right out on the Laguna Madre. There were very few trees or bushes growing there. When surveyed for quail management two years ago only two coveys were found. Lots of food was present, but little woody cover. Ninety shelters were constructed by building a pole rack about ten inches off the ground, and piling cut live oak brush on top to provide shade. Eighty birds were released in January, 1946, and the predators were closely controlled. In November the area had thirteen coveys. An additional one hundred and twenty birds were released in February, 1946; the area now has fifty coveys by actual count. It is very possible to count nearly 100% as during the heat of the day the birds are all under the shelters and it is only necessary to drive from one shelter to the other and peep under. During the course of our trip we saw many of the coveys and at all times we could see herds of deer and flocks of turkeys leisurely feeding out in the open pasture. We counted two turkey hens with twenty-six young and they paid less attention to us than would domestic chickens.

We were informed that deer and turkey restoration on the King Ranch had been accomplished by rigid control of predators and carefully supervised hunting. Mr. Kleberg told us that thirty years ago he

and a party hunted a week in this same area and killed one small deer. The native turkey stock was never exterminated, but reached a seriously low point. We estimated that we saw at least two hundred deer and five hundred turkey on the one afternoon and weather conditions were deplorable. A previous party in an afternoon trip had counted approximately nine hundred deer and eleven hundred turkey.

All during the drive Mr. Kleberg told us of the ranch and its work to increase game. They have spent and are spending many thousands of dollars annually to increase their crop of game and to experiment with methods calculated to raise the game population. Aside from our primary purpose we had an opportunity to observe firsthand the famous cattle on this ranch and were told of their development. At one point we stopped to admire a fine young bull calf. With us were several experienced cattlemen and not one would remember having ever seen a finer specimen.

We drove back to Santa Gertrudis Ranch House for dinner and were introduced to Mr. Richard Kleberg and his splendid family. After dinner Mr. Kleberg led the discussion regarding game and game management and we were delighted at his store of knowledge on game and especially the game on the ranch. It is easy to see why the Klebergs are so successful in ranching and game management, for they have a perfect knowledge of the details of the business.

After breakfast Sunday we loaded up in two jeeps and a hunting car, a cutdown Ford, and started off for a look at quail. The sun was shining, but it had rained most of the night and the terrain was flooded. First we went to an area of fifteen hundred acres where no shooting was ever allowed; nearby was a study area of five hundred acres which supported only twenty-seven quail in the winter of 1945. With cover improvement and predator control, the population increased to two hundred and seventy-nine quail in the winter of 1946. That is really increasing supply when you realize that the average covey contains only twelve birds.

It is a fair sample of what can be done by applying game management methods which have been determined by common sense and years of field research and experimentation. So much of the literature on predators is largely the product of library rather than field research and for that reason is little more than armchair conjecture that it was a privilege to talk predators and predator control with Lehmann, who has a vast store of firsthand information. From him we learned that quail have a host of enemies: predators in South Texas including coyote, skunk, opossum, fire ant, acrobatic ant, rattlesnake, white racer, Cooper's hawk, sharp-shinned hawk, marsh hawk, and great horned owl. The main offender is the coyote, which delights to feast on quail eggs; in fact, all predators except birds prey mainly on nests and chicks rather than on juveniles and adults. You will wonder about the lowly armadillo; he is not a predator of any consequence himself

but his living habits are his downfall. He lives in a main burrow and has four or five short burrows nearby used for escape and feeding. In these burrows often live skunks and other fur animals. Since the armadillo is the landlord for more serious predators, he too is eliminated when dens are periodically treated with sodium cyanide, as they are in the quail country of the King Ranch. Mr. Lehmann believes that at least two predators i.e., coyote and skunk, must be controlled closely for good annual production in South Texas, and without control the quail crop will be relatively small except in "wet" years which will allow frequent renestings.

We visited two other management areas of 18,000 and 42,000 acres and observed the work of restoring quail and other game. The same methods are being employed, but the birds are under constant study and many new management techniques are being tried.

The writer started the morning by making a count of every covey observed and in about two or three hours of travel we counted forty-five coveys. There were many likely spots which could not be reached because of the rain-soaked land. In fact, we learned that Mr. Lehmann is the world's best quail manager and the world's worst hunting car driver. If he was not throwing water all over us from some pothole, we were stuck up to the axles in the soft soil. When you stick a jeep to where "grandma" (four-wheel drive) can't get it out you are really stuck. We spent most of our time lifting the hunting car or one of the jeeps out of a rut. Some of the party who are strictly office workers knew all about it Monday morning.

When you sum it all up, it seems so simple that you wonder why quail ever become scarce. Here we have nothing but natural seed stock, predator control, feed and cover improvement consistent with good land use, and quail are present in numbers equaled nowhere else. Perhaps Mr. Kleberg put his hand on the trouble when he pointed out the cost of raising wild game in comparison to the return afforded the land owner. Others might also produce a crop of quail as readily as a crop of cotton, corn or anything else — if they had the knowledge to do so and if legal restrictions were not such as to make game production economically unsound. In any event, never had any of our party seen so much game or so much being done to increase game as on the King Ranch and never had we spent such an enjoyable week-end or been on the receiving end of so much genuine hospitality. When other land operators do as much for wildlife as has the King Ranch, resident game will be restored. Until they do, no amount of government effort is likely to stem the general downward trend.

4-Footed Pharmacopeias

★ *Continued from page 11*

plexion, lion's fat, mixed with oil of roses, was believed to cure spots of the skin and to enhance the whiteness and clearness of the complexion. If you were bald, the

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blood of a sea tortoise served as a hair tonic, and the gall was used to produce synthetic blonds, taking the place of peroxide, and leaving the ringlets a golden color. Manicurists removed hangnails with ivory sawdust.

Diseases of the heart, the kidneys, the body; love potions, preventatives of intoxication, pains in the feet, housemaid's knee, or halitosis, all were one to the ancient doctor and beauty specialist. All he did was take down his pharmacopeia, look up the proper animal, fish or bird from which to get his remedy, and then, gun on shoulder or fishing rod in hand, go looking for the ingredients to his prescription.

Sometimes the patient survived.

Odd is the Octopus

★ Continued from page 13

when you pick up a live specimen. Some species of squid are taken from half a mile or more beneath the surface, and these nearly all have luminescent organs scattered over their bodies in various patterns. Another relative of both species is the chambered nautilus, of which the poet has said;

"This is the ship of pearl, which, poets feign,

Sails the unshadowed main,
The venturous bark that flings

On the sweet summer wind its purpled wings

In gulfs enchanted, where the siren sings,

And the coral reefs lie bare,
Where the cold sea-maids rise to sun
their streaming hair."

Still another member of the family, the paper nautilus, constructs a boat. Actually the delicate shell is not part of the nautilus at all, but rather the egg case in which the female lays her eggs. She does not always stay with it, however, often leaving to swim at some distance in the search of food, returning at the first sign of danger to defend her brood. The males do not form a shell and it seems probable that they are carried as parasites, necessary for the proper functioning of the reproductive organs and nothing else.

Squid, like octopi, propel themselves by the use of their siphons. Unlike them, however, they have a rather strong internal stiffening of calcareous material, generally known as the "pen," because of its resemblance to an old-fashioned quill. This enables them to travel much faster, as it gives the siphon a better resistance to act against. Furthermore, by turning the siphon they may dart from one side to the other, and even go forward, although in this case the movement is not nearly so rapid as is that to the rear.

Another difference between squid and octopi is the fact that squid have 10 arms. Two of these are much longer than the other eight, and are armed with suckorial cups only at their tips. This pair of arms may be suddenly shot out to seize a victim, holding it till it can be drawn within reach of the eight shorter arms, which are covered with suckers their entire length. These latter serve to hold the fish or other prey

within reach of the horny beak and file-like tongue.

To this family belong the two greatest of all cephalopods, squids so huge that their arms may measure more than 40 feet in length. These are fairly common on the Newfoundland Banks and are often washed ashore by storms. A specimen belonging to the American Museum of Natural History measured nine and a half feet over the body, while the arms were 30 feet long. These two species appear to be fairly widely distributed.

Norwegians call them the Kraken, and it is probable that the snaky arms appearing above the sea have given rise to many a tale of the sea serpent. Huge as they are, these squid furnish food to animals even greater, for beaks and portions of their tentacles have been taken from the stomachs of sperm whales, which are among the largest of the animals to inhabit the earth.—J. L. Baughman.

Nine Million for Wildlife

The greatest single impetus in history to the cause of national wildlife restoration is the appropriation of \$9,031,273.51 of Pittman-Robertson funds by Congress for use in the various states during the fiscal year 1948.

This sum is the amount accruing to the Fund through the Federal tax on sporting firearms and ammunition for the year ended June 30, 1947, and is more than three and one-half times the appropriation for the fiscal year 1947.

The congressional action marks the first time an amount equal to the annual tax has been appropriated in any single year. In the past, the Congress has annually appropriated out of the accumulated funds that amount which it deemed the U. S. Fish and Wildlife Service, in cooperation with the states, could wisely expend the following year.

All of the appropriated funds, with the exception of 8 per cent for administration, will be allocated to the states for wildlife restoration projects. The funds are apportioned to the states on the basis of land area and the number of paid hunting licenses. No state, however, may receive

more than 5 per cent nor less than one-half per cent of the total amount apportioned to all the states.

Topping the list are Michigan and Texas which are apportioned \$413,188.58 each, while under the minimum formula, Connecticut, Delaware, Rhode Island and Vermont are allotted \$41,318.86 each.

A considerable portion of the funds will be used by the various states in land acquisition for wildlife management areas and on which the conclusions of recent research may be applied.

Sportsmen Plan Statewide Meet

Sportsmen from all sections of the state will gather in Fredericksburg on January 26 for a meeting which has for its purpose the organization of a statewide association of what the sponsors call the "grass roots hunters and fishermen of Texas."

The statewide meeting is being sponsored by the Gillespie County Game Protective Association. Active in planning the meeting is State Representative Tom Martin, of Fredericksburg, chairman of the House Game and Fish Committee.

Invitations are being sent to every organized sportsmen's group in the state and to unaffiliated sportsmen who have at heart the welfare of the state's wildlife resources. Arrangements are being made to provide accommodations for those who attend the meeting.

Governor Beauford Jester has accepted an invitation to appear on the program. Other speakers will include outstanding state and federal conservationists.

A huge barbecue is being planned on one of the nearby ranches.

Wildlife problems will be discussed at the meeting and those attending will be given an opportunity to express their views. It is hoped that out of the discussions will come a well defined program for the conservation of the state's game and fish resources.

For more detailed information about the meeting drop a card to Ad. Kneese, Secretary, Gillespie County Game Protection Association, Fredericksburg, Texas.

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In the Highlands

★ Continued from page 17

At length his rank the stranger names:
The knight of Snowdown, James Fitz-James."

The dwelling appeared to be a hunting lodge, or typical hunter's home adorned with trophies and the weapons used in their capture. The Knight, needless to say, surveyed the collection with interest and took note of the huge antlers of a stag; then,

"All around the walls to grace,
Hung trophies of the fight or chase;
A target there, a bugle here,
A battle-ax, a hunting-spear,
And broadswords, bows and arrows store,
With the tusked trophies of the boar.

★ Continued on page 27

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MOSQUITO FISH

FOUND in countless billions throughout the waters of Texas and the South, the mosquito fish (*Gambusia affinis*) is one of man's most powerful allies in the fight against the malarial mosquito.

A little fellow, so small that a hundred or more might easily go in a quart jar, he is the familiar "potgut" of our childhood, so insignificant that no one but a boy or a biologist would notice him. Yet this same "potgut" is more valuable than our redfish or our trout, whose worth is calculated in dollars and cents, for the worth of *Gambusia* must be calculated in human lives and suffering.

Since Ross, Grassi and Gorgas first worked out their process of combating the mosquito carriers of yellow fever, malaria and filariasis, scientific knowledge has grown and new methods of attack have been developed. At first it was thought practical to completely eliminate these pests by drainage and by oil applications. This has not been possible, however, and as a result emphasis has been laid on as complete control as possible. It is here that our mosquito fish enters the picture.

As early as 1904 J. R. Scale of the United States Bureau of Fisheries conducted experiments with these fish in New Jersey. In 1919 Dr. S. F. Hildebrand of the bureau conducted experiments at Athens, Groveton and Houston, Texas, as well as numerous other points in the South. He says that this little minnow is particularly fitted for this work, for three reasons. First, because of its habit of feeding at the surface, where mosquito larvae congregate. Second, because of its breeding habits, and third because of its adaptability to a great variety of conditions.

Gambusia bears from four to five broods of extremely active youngsters every year. This enables it to survive in waters where egg-laying species could not, because of the special conditions necessary for the depositing of their eggs. These babies, about one-

half inch long at birth, begin their work at once.

Doctor Hildebrand says that he has seen fishes less than a day old attacking and devouring small larvae. Born in groups of 50 to 100, they attain maturity at about four months, so that the number produced by a single pair of parent fish would reach the enormous total of 127,550 adults in a year's time, if they all lived.

Further than this, they are at home in a wide range of waters. Sluggish creeks, lagoons, ponds and marshes are all one to the species, and it will live in either fresh or brackish water. Ditches, borrow pits, pools, potholes, cisterns, shallow wells, goldfish ponds, and rain barrels will all support these little devourers, and they thrive in ponds visited by domestic animals; will live in sewers, and are found impartially in open water and that covered by vegetation.

Those in a Rice Institute collection came from a small pool on the campus. Moreover, they stand handling and transportation well, and are easily introduced wherever needed.

Laboratory tests have proved that one may consume as many as 225 larvae in one hour, but this is unusual. Doctor Hildebrand says that one ate 165 larvae in 12 hours, and in another instance two half-grown fish ate 5,041 in 78 days, which makes about 34 per day apiece.

Using the figure given above for the young of one pair, and striking an average of 100 per day eaten by each, we reach the astronomical total of 2,743,148,000 mosquitoes destroyed in one year. This is, of course, an excessive estimate, but even if halved the number is still too huge for conception.

All of us know the old saying, "If you write a better book, preach a better sermon, or build a better mouse trap than your neighbor, then the world will make a beaten path to your door, even though you live in the wilderness."

This is certainly true of the mosquito fish.

From the swamps and brackish waters of the South it has been brought in its myriads. Southern cities have established hatcheries and free distributory services for them. San Antonio did have such a hatchery, and at one time there was one projected for Houston. These are instances close to home, but this is only a small part of the work that *Gambusia* has done.

By steamboat, and railway, across the oceans, it has traveled to aid suffering humanity.

In 1920 the International Red Cross appealed to the United States Bureau of Fisheries for plantings of these fishes to be used in Italy and Spain. Shipments to Italy failed, but the Spanish fish thrived. Later, plantings from Spain were sent to Italy, where the conditions were so favorable that they multiplied enormously, and it was reported that some waters into which they were introduced became so heavily populated by them that cattle refused to drink.

Dr. L. W. Hackett, of the Rockefeller Foundation, says, "In an area of about 8 square miles which we have had under observation in (the province of) Istria, the malaria index of a scattered rural population dropped from 98 per cent in 1924 to about 10 per cent in 1930." This is a reduction of 88 percent. He goes on further to say, "Acute epidemic malaria is reduced to sporadic cases."

Although *Gambusia* has been most effective in Italy, it has met with such success elsewhere that it has been introduced into almost every country in Europe south of Germany and Austria. It has also been introduced in Palestine, the Philippines, the West Indies, the Argentine, Abkhazia, Turkestan, India, Java, Indo-China, Algeria, Tunisia, the Caucasus and Southern Ukraine, to name only a few of the countries which have asked for them. A shipment from Texas went to Hawaii, and others are reported to have reached China and Japan.

This is one little American that has received an international welcome.

In the Highlands

★ Continued from page 26

Here grins the wolf as when he died,
And there the wild-cat's brindled hide
The frontlet of the elk adorns,
Or mantles o'er the bison's horns;
And deer skins, dappled, dun and white,
And otter's fur and seal unite,
In rude and uncouth tapestry all,
To garnish forth the sylvan hall."

The description is a catalogue of the hunting equipment together with trophies of the most important big game of Scotland. Of striking interest are the antlers of the elk and those of the bison which in North America once swarmed in the great open spaces of the West. But the bison of the Highlands listed by Scott could hardly have been the American bison, whose range does not include Europe or Scotland. But the Aurochs, a wild ox similar to the American bison, and now found only in Lithuania, and the Caucasus, probably represented the species found in Scotland.

The adventure up to this point is concerned with symbols of the chase. Now that the chase is over, the stag nibbling leaves in the wild heath and the Knight sheltered at the island home, just what are we to do to bring the story to a fitting end? People have a way of starting things they cannot end. Of course I could stop right here and call it quits. It might have made my job easier if the Knight of Snowdown had stayed away from the Lady of the Lake, but he didn't, and in any event it seems to be the role of Knights to come to the rescue of ladies in distress. By all the rules of romance it would be a literary crime to leave that couple to their fate with no explanation of how it turned out, even if this is a game story.

This dilemma recalls the story of the old sea captain who had lost a leg. Being annoyed by so many questions as to how he lost his leg he would counter with the stipulation, "I'll tell you how I lost my leg if you will not ask any more questions." Of course the inquirer would agree to that, and then the captain would say, "my leg was bit off." Such a reply naturally intensified curiosity; and that might be the result if we saw bit off what might look like a romance, in the very middle of it.

One alternative would be to invite the reader to read the remainder of Scott's story, of which there are still sixty pages of small type. But in our time most people find poetry difficult reading; and a good way to hide the treasures of poetic beauty is to bury them in too many stanzas. While fond of metrical beauty in small doses, the writer admits that he gathered and sorted these extracts with some effort, perhaps greater than that of the high school or college students who must pass a difficult quiz.

Not to prolong the controversy, and without boasting, the writer believes he

I have a few pairs of ring neck pheasants which I would like to dispose of between now and December 15th; price \$10.00 a pair; Also mallard ducks, \$7.00 a pair. Will be available only until December 15th. VANCE TERRELL, M.D., Box 371, Stephenville, Texas.

could cover the salient points in the rest of the story in about one page, and if this would help the average reader who under no circumstances could be induced to read sixty pages of verse; or the student who would infinitely prefer to attend a ball game, at the risk of flunking, I am offering a very short sketch of how the story ended.

However, there will be glaring omissions to be bridged if one is to get a rounded story which in all fairness, can be had only by reading to the end. But for our purpose the yarn must be brought to a conclusion with the least possible amplification. And here it is:

As already hinted all is not well with the clansmen. Some of the Highlanders are in disagreement with the king. Among them were Lord James of Douglas and his daughter Ellen who is the Lady of the Lake; also her rival lovers, Sir Roderick Dhu, and young Malcolm Graeme.

The visit of the Knight of Snowdown being ended, he was transported by Ellen and an old servant to the mainland, where the stranger was waved a formal farewell. Feudal strife at the time was increasing and the factional war was making life untenable at the island home, and soon Ellen, with her old servant, sought refuge in a nearby mountain cave.

If knights ever do come to the rescue of ladies in distress here was an opportunity. Naturally, at some peril to himself, the Knight of Snowdown put in an appearance with steeds nearby to transport Ellen to safety. He urged fair Ellen to quit the scenes of feud and war: "His horses wait to bear us soon to Sterling gate," said the Knight.

Suspecting that the Knight sought her hand, Ellen declined the offer of help, explaining that "My father is a man outlawed, and exiled under ban; the price of blood is on his head; with me 'twere infamy to wed." Then she told him of her love for a noble youth:

"Thou hast the secret of my heart;
Forgive, be generous and depart."

The Knight then made one final appeal. He said, "Here is a ring that Scotland's monarch gave to me in gratitude when my poor sword preserved his life. He bade me bring it back and bodily claim any recompense that I could name." And continuing, the Knight said:

"Seek thou the king without delay;
This signet shall secure thy way;
And claim thy suit, whatever it be,
As ransom of his pledge to me.
He placed the golden cirlet on,
Paused,—kissed her hand,—and then was gone."

The grand finale was at the court of King James. Ellen is there with her ring to claim the freedom of her father, Lord James of Douglas, who had been under ban, and also of her lover Malcolm Graeme.

WHO WAS THIS KNIGHT OF THE SNOWDOWN? NONE OTHER THAN KING JAMES of Scotland who, disguised as a wandering Knight and sportsman, had led the unsuccessful stag hunt.

Meanwhile, Lord James of Douglas had made peace with his king.

"Then forth the noble Douglas sprung,

And on his neck his daughter hung.

The monarch drank, that happy hour,
The sweetest, holiest, draught of power."

Then out came Malcolm; and the king, with feigned severity, told the rash youth that as a penalty he was to be bound with fetters and chain.

"His chain of gold the king unstrung,
The links o'er Malcolm's neck he flung,
Then gently drew the glittering band,
And laid the clasp on Ellen's hand."

That was a dainty climax, Sir Walter.

As to the stag, which should not be forgotten, he probably went back to Monan's rill for another drink. It is the habit of wild animals to cling to their native habitat.

Antlers Are Not Horns

★ Continued from page 5

sumed solely for their salt content.

It is interesting to note from the analysis that three important constituents in the deer antlers would be of food value. They are protein, 34.04%, phosphoric oxide 19.28%, and calcium oxide 25.36%.

The chemical composition of deer antlers, of course, may vary in different individuals, as the chemical constituents of the browse will be different in certain areas. It is believed that the ratio of protein calcium, and phosphorus theoretically would be the same regardless of where the specimen was obtained.

It would be readily possible for a rodent to find a food that would be fairly high in protein, such as nuts and grains, but those that are high in available calcium and phosphorus are not abundant. Since rodents are well equipped with excellent sets of incisors, they are capable of devouring these antlers quite easily, while other animals are not.—Paul C. Ziemke in the Tennessee Conservationist.

Old Reliable

★ Continued from page 15

bullet best suited for the game at hand. The lightest weight bullets at high velocity are capable of giving tight groups up to 150 yards, and are excellent pest exterminators. They literally blow small varmints, hawks, owls, et cetera, to bits; and in the event of shooting in a thickly settled country, they will disintegrate on contact with the ground—thus eliminating the danger of ricochets. Slowed down to a muzzle velocity not over 2000 feet per second, these bullets, as well as any of those mentioned above, provide the hunter with an extremely accurate close range load for taking rabbits, squirrels, and grouse for table use since they will destroy only a minimum amount of meat.

I have never liked the blunt-nose, high speed, open-point 110-grain number, as it sheds velocity too rapidly for long range shooting; and for close range work on deer-sized game, it blows a shallow crater in the animal's body—killing like a bolt of lightning sometimes, but often allowing the game to escape badly wounded.

The 145 to 173 grain bullets, with their flat trajectories and high velocities, come into their own for reaching way out yonder across the open country on game

★ Continued on page 28

Old Reliable

★ *Continued from page 27*

the size of pronghorns and deer. The 173-grain M.C. missile, however, is favored by many elephant hunters who depend upon its high penetrating qualities (53 inches in soft pine) to drop the world's largest beast.

I have found the 180-grain number at factory velocities the best for all-round use, as it is an effective killer at long range, a fair brush-buster, and will adequately take care of animals in the bear and elk class when some judgment is used in bullet placement.

For caribou, the larger species of elk, and grizzly bear, I recommend the 190-grain and 220-grain bullets; and for moose and Alaskan brown bear the 220 to 225 grain slugs are recommended. The heavier bullets (190-225-grain) are essential for being sure of reaching any sized animal found in dense and heavy brush. Inexperienced hunters are sometimes bewildered when they find that their light high-speed bullets fail to penetrate the thinnest shrubbery. A limb the size of a lead pencil will often cause a fast moving projectile to disintegrate, or at least change its course—this being truer if the intervening twig is near the muzzle of the firearm.

Sportsmen who use commercial ammunition exclusively are not to be pitied, as there are over fifty factory loads offered in this country for the .30-06, with a choice of six bullet weights—110, 150, 172, 180, 220, 225 grain. An outstanding advantage, commercial '06 cartridges are where ammunition is sold; even the shelves of the most isolated trading-posts display a few boxes marked ".30 Gov't. '06" (or reasonable facsimile) along with the ever-present but fading .30-30's. Before the war, practically every foreign country carried the '06 caliber for visiting and native sportsmen.

As long as our service weapons chamber the .30 M1 and .30 M2 ammunition, there will always be plenty of fodder available for sporting rifles chambered for the .30-06 cartridge. This is no small factor in the enormous popularity of the .30-06 rifle, even though the use of G.I. ammunition requires more cleaning of the bore after each firing, and the metal-cased bullets are not reliable for shooting thin-skinned animals due to the fact that the solid points will not expand on soft bodies. The hard-pointed slugs are very good for practice and target work, and I have been using them successfully for years on turkeys.

There really should not be any mystery as to why so many shooters quickly became incurably wedded, and swore to be true to the .30-06 cartridge. More attention has been devoted to it than any other the world has ever known. During the last forty-seven years, the United States Government has spent millions of dollars in developing it for our war weapons, while commercial companies have spent huge sums of money in perfecting the cartridge for our sporting arms. In the chambers of heavy-barrel rifles, it established many world records on the 1000-yard target range. Not until the advent of the .300 H. & H. Magnum did the .30-06 cease to make and hold these

records. I heard and read predictions to the effect that the cartridge of lesser power would find a place on the obsolete list after the arrival of the Magnum, but the .30-06 still maintains its traditional supremacy as the hunting load—as well as continuing to win a few medals and trophies. The man who thinks the '06 is a "shoulder-cracker" should keep his distance from the big Magnum calibers.

To my knowledge there has never been a firearm made that *somebody* did not have a hatful of uncomplimentary remarks to make about it. I reckon that's human nature though. When I hear and read of objections to .30-06 performance on game found in the United States, I strongly suspect that the objectors have had limited experience with the rifle—consequently, they are no judge of its ability; they have used the wrong load for the game shot—which is a bit like using the all-time popular 12-gauge shotgun loaded with No. 8 shot to bring down a high-flying goose, or loaded with buckshot to kill snipe; they are poor marksmen—in which case no rifle of any caliber will do good work; they have become skilled enough to place a smaller bullet than the tried and tested .30 caliber in a vital area, or have come to realize the value of a still more powerful arm than the .30-06.

The shooter who has not given any type

of arm a fair trial, and because of a couple of unfortunate experiences with it, says, "Damn thing ain't no count," certainly has a lot to learn about all firearms. He is sadly mistaken if he thinks there is a weapon in existence that will give instantaneous kills every shot. Anybody having a moderate amount of experience with many calibers of guns, would be forced to check them *all* off his list as "no good"—if, each time one of them failed sometime or other to give the desired effect on a target. There will always be a time in every hunter's life, if he hunts long enough, when everything seems perfect *except the way an animal reacts after being shot*. A solidly hit buck or bull, with a bullet of ample weight and speed, will one time drop in his tracks, while on another day under similar conditions he will manage to travel an incredibly long distance. This of course is due partly to the various animals differing in tenacity of life and temperament.

Poor bullet construction, or selection of the wrong bullet weight and design for use on the game encountered, has greatly marred the reputation of several good rifles. *When the proper loads were used, I have never known of the .30-06 completely failing to reduce a North American game animal to a relatively helpless state with one shot—if the gunner showed better than fair marksmanship!*

Probably no other firearm in history has enjoyed a career as useful and colorful as the Model 1903 Springfield which was made to handle the .30-06 cartridge shortly after the rifle's appearance. The original Springfield was chambered for the .30-03 cartridge, so called as it was brought out by the Ordnance Department after approximately three years of experimentation in the year 1903. The '03 cartridge was loaded with a flat-base, round-nose, jacketed, 220-grain bullet with a muzzle-velocity of 2200 feet per second. In 1906 the '03 case was shortened one-tenth of an inch, redesigned, and loaded with a 150-grain, flat-base, spitzer-pointed bullet at 2700 f.s.—the new creation being known as "U. S. Cartridge, Ball, Caliber .30 Model of 1906." Also in this year all Springfields were called in and rechambered for the cartridge commonly referred to, as the abbreviated name, ".30-06".* It was the Springfield, officially identified as "U. S. Magazine Rifle .30 Caliber 1903" (shooting the .30-06 cartridge) that went to World War I, and came back a hero among arms.

It was no wonder why this modified Mauser became the prime favorite for restocking and remodeling into plain and fancy sporting rifles. Shooters, as soldiers, learned the great value of the superbly accurate, reliable and strong bolt-action. Without a doubt the Springfield has been subjected to more alterations than any rifle in the world, with the possible exception of the German Mauser.

Another praised rifle and carbine chambering the '06 cartridge is the old Winchester Model 1895. This popular lever-action arm was discontinued in 1936, much

*.30-06 ammunition may be fired in rifles chambered for .30-03 ammunition, but the procedure cannot be reversed; the longer cased .30-03 cartridge will not fit in a .30-06 rifle chamber.

Things You May Not Know

The giraffe is one of our strangest animals. He has no vocal chords, but talks with his tail. He has fewer vertebrae in his neck than a mouse, is faster than a horse, can go longer without water than a camel and can see backwards without turning his head.

* * *

A 200 pound shark has a liver weighing about 30 pounds.

* * *

The cuckoo lays her eggs in other birds' nests, allowing her young to be reared by foster parents. She makes a rasping, cough-like sound which does not remotely resemble the "cuckoo, cuckoo" from which her name is supposed to be derived.

* * *

"Like a duck takes to water" is a familiar expression. Swimming, of course, is a natural instinct with ducks. Young mallard ducks, upon their first venture from the nest, have been known to swim as far as a third of a mile.

* * *

Many consider the beaver quite a harmless animal. When aroused, however, it becomes one of the deadliest of water fighters, easily killing a hunting dog if attacked in the water.

* * *

A pelican five feet long and weighing 25 pounds has a skeleton which weighs only 23 ounces.

to many shooters' regret. It was a handy saddle gun, and the only lever-action made to handle as powerful a cartridge as the .30-06. Discontinuance of the '95 was caused by the careless and foolish persons who fired 8 m/m Mauser ammunition in the rifles chambered for the .30-06 cartridge. Naturally the arms were blown up, since the oversized 8 m/m bullet created too much breech pressure as it attempted to squeeze down the thirty-caliber (7.62 m/m) barrel. Gossip spread the rumor that all .30-06 M-1895's were dangerous. The truth of the matter is, all Winchester '95's will hold all factory-loaded ammunition safely, providing the weapons have not developed excessive headspace—a common trait among lever-action arms that have been used over a long period of time.

Made-to-order rifles are very often, if not generally, fashioned to take some wildcat or noncommercial cartridge. This is understandable, since, if one is going to spend extra money for a special job, he might as well have it made to handle some dream cartridge he has "brewed up." However, I have had the pleasure of handling and shooting a few of the most elaborate creations in the form of custom-built arms, and no small number of them have been built around the .30-06 caliber. They were not only things of beauty, but were very lethal and serviceable pieces. Two or three of the arms that I have in mind at the moment were not extravagantly decorated—their value being high because of the use of finer metals, beautifully figured and durable woods, by masters of the art of gun-making.

When I began drawing plans for my latest custom-built rifle, I decided to have it chambered for the '06 cartridge. Why? I had gotten good service out of my Winchester Model -54 in that caliber, but the M-54 stock did not suit me exactly and I knew I could get a better performance with a "tailor-made" arm. Having spent the greater part of every fall and winter hunting and guiding other hunters—many of whom shouldered the most popular so-called all-round rifles, I became convinced that .30-06 would come nearer to being all-rounder for bagging animals weighing less than 1000 pounds than any other I had ever dealt with—and my experience with many different calibers of firearms has not been limited.

Since I have always advocated the use of rifles having more power than is actually needed, I consider the '06 "a shade light" for giving the best results at long range on game weighing over 1000 pounds. A flat-shooting magnum caliber is more effective for bringing down the half-tonners, and over, at the longer ranges.

Any good .30-06 rifle should be sighted in to hit the center of the bull's-eye at not less than 200 yards. Sighting it in at a closer range is wasting much of its ability. Winchester gives the following information on their Super-Speed ammunition: Sighted in at 200 yards the 150-grain P.E. bullet at 2960 f.s. rises 2.5 inches at 100 yards, drops nine inches at 300 yards and 26 inches at 400 yards. Sighted in the same range, the 180-grain P.E. bullet with a muzzle-velocity of 2700 f.s. goes three

inches high at 100 yards, falls 9½ at 300 yards, 28 inches at 400 yards. I have found that other brands of ammunition give a very similar performance; however, the length, weight and bedding of barrels, and different brands of ammunition will cause the rise and fall of bullets to vary. Two rifles identical in appearance and make, and using the same weight bullets and brand of fodder, seldom group their bullets in the same place on a target. Many sportsmen who do most of their hunting in the plains and mountains keep their rifles sighted in at 250 yards, which of course permits less guesswork at the longer ranges. It is no great task for a seasoned rifleman to make frequent kills at 500 yards with an accurate scope-sighted .30-06 rifle. Using iron sights I have connected on antelope with my '06 between 450 and 500 yards—and I might add with witnesses present, if there happens to be a doubter following these lines. (I have missed them, however, a lot closer on a few occasions, but it was no fault of the rifle).

He who doubts the efficiency of the .30-06 caliber is opposing the opinions of big game hunters of world-wide fame—hunters who know from repeated experiences that the renowned rifle can be deadly on all walks of life.

I have always said, and I still say so, that the sportsman who invests in a good '06 cannot go far wrong.

Quality Folks

★ *Continued from page 12*

forelimbs the inner digit opposes the other four in such a manner that grasping is possible. Yet eons before nature had begun her big experiment with these progenitors of man, she had not only provided the opossums with an opposable thumb, making a very human-like hind foot, but she gave them also the prehensile tail later used to good advantage by certain lower primates—namely, spider monkeys, etc.

Thus the opossums anticipated the functions of two significant tools—the grasping hand and grasping tail—but remained as yet a conservative and primitive mammal utilizing them only in climbing—no doubt serving a better use than making change, holding pencils, lipstick, or throwing bowling balls.

The real note of conservatism to be found in Mister 'Possum's makeup, though, is in the matter of the brain. Opossums apparently haven't as yet decided that complex mental machinery served any particular advantage. The corpus callosum, a transversely located body between the right and left lobes of the typical mammalian brain which provides for a more highly developed connection between both sides of the neural tube and thus makes for better co-ordination of reflex centers, is an organ they have managed to do without. As respects mental equipment, opossums have tended more to cling to the ways of their reptilian associates of the Mesozoic.

Now from the human standpoint, if we are to look for the real worth of brother 'possum, we must examine him in light of our times and in our somewhat selfish way determine the extent to which he contributes to our way of life.

No one who has lived in the rural South would debate the matter. Here the important place the opossum occupies in the economy and recreation of the people is taken for granted. Here the 'possum means Christmas spending money for farm boys; the 'possum means the object of an exciting sport—the 'possum hunt; a chance to get together with one's neighbors; and lastly, the 'possum means a truly delicious dish when properly prepared for the table.

Workers in Texas have estimated that better than one million 'possum pelts are marketed in that state each year.

Thus the opossum is an ideal resource. It has required no attention to date. No investment has been made. Yet it is a self-renewing resource yielding an annual harvest of millions of dollars. Too, the money received from the raw pelts is spread over a vast population generally in need of such incidental funds.

But when it's all been said, we take off our hats to the 'possum not because of the millions of dollars he might be worth, nor the sport we get when hunting him—and we do enjoy a 'possum hunt—but we stand in awe and respect of Mister 'Possum for other reasons.

While other folks go digging for primitive animals and find only the dry fossilized bones to show they were once alive, we go a-digging for the opossum—a living fossil, whose family dates back even before the age when a good many of our bones lived. We find our live fossil much more exciting and interesting to observe. There is nothing we enjoy more than an opossum "playing 'possum." The way he will roll over and do his dead level best to look dead and uninviting when disturbed or cornered is one of nature's best tricks. He can lie there, with that deadly looking grin on his smug face and, in fact, put on an act which may fool people into thinking he has been dead for several days. He looks positively dried up sometimes.

So we give you—O! Mister 'Possum—let's treat the venerable gentleman with proper respect!—Oklahoma Game and Fish News.

Study Accidents

The American Optometric Association is helping to reduce hunting accidents through the collection of data and the dissemination of educational literature, the Wildlife Management Institute advised today. The Public Health Bureau of that association, 706 Jenkins Building, Pittsburgh 22, Pennsylvania, recently tabulated returns of its survey of the 48 states and Canadian provinces, and the facts are most revealing. Many of the state and provincial game departments were unable to supply information on hunting accidents, but 1,418 accidents were recorded, 315 of which were fatal.

Vision and hunting safety obviously have a definite relationship. Sportsmen and optometrists are mutual benefactors—many shooters need special glasses—to correct faulty vision is to lessen outdoor hazards.



BOOKS



MAMMALS OF NORTH AMERICA

—by Victor H. Cahalane. 682 x pages. Illustrated with 92 dramatic pen portraits of popular mammals by the celebrated outdoor illustrator Francis L. Jaques. Published by the Macmillan Company, 60 Fifth Avenue, New York, 1947. Price \$7.50.

Those who are familiar with the author's previous book "Meeting the Mammals" need not be urged to secure a copy of this complete treatise. The earlier book, although a mere introduction to the principal North American mammals, continues in popularity and here we have a new, much larger volume embracing the entire field. The fascinating and intriguing, often humorous, style that characterizes the writings of Mr. Cahalane, commands reader interest. This is a book every member of the family will enjoy. It tells of the little things, intimate details, happy and tragic events in the lives of the wild creatures.

Under 94 headings, the author discusses the life history, habits, distinguishing characteristics, habitats, and range of all of the species of North American mammals. The clear and appealing animations permit readers to delve into the daily life of even our most elusive outdoor neighbors. None are omitted, the text includes chipmunks and squirrels, the bears and their small cousins, the cats and musk carriers, the original American livestock, and two seafarers. This is an authoritative work and the extensive bibliography of literature relating to mammals is of particular value to scientists.

COMPARATIVE ANALYSIS OF RED FOX FEEDING TRENDS ON TWO CENTRAL IOWA AREAS, by Thos. G. Scott. 60 pages. Illustrated with photographs, graphs, tables and maps. Published by the Agricultural Experiment Station of Iowa State College, Ames, Iowa. Research Bulletin 353, August, 1947. Single copies available free from the Cooperative Wildlife Research Unit.

This splendid treatise contributes much toward a better understanding of age-old questions surrounding the feeding habits of red foxes. A revealing comparison is made of the detailed inside story of the feeding trends of red foxes living in markedly different wildlife habitats. These foxes did not eat whatever they wanted but seemed to be guided in their feeding more by the relative availability of suitable foods and by whether they knew about them. The foxes were found to eat prey that they did not kill, also to kill some

prey that they did not eat. These matters and many other enlightening details are carefully reported upon.

This factual account presents an unusual opportunity for the discerning reader to delve into many intriguing features of the life of the red fox. Here may be found something of what emergencies in the form of severe winter storms and summer droughts may mean to hungry foxes. Much is disclosed about the important relationship of red foxes to such game animals as the ring-necked pheasant and the cottontail. The study reported upon was sponsored by the Iowa State Conservation Commission, Iowa State College, U. S. Fish and Wildlife Service, and Wildlife Management Institute.

THE RING-NECKED PHEASANT AND ITS MANAGEMENT IN OHIO, by Daniel L. Leedy and William B. Hendershot. 16 pages. Illustrations by

Bob Hines. Published by the Ohio Division of Conservation and Natural Resources, Columbus 15, Ohio. Conservation Bulletin No. 1, 1947. Limited quantity available without charge upon individual request.

This is the first of a new series of bulletins to be published by the Ohio Division of Conservation and Natural Resources. It is a report based largely upon pheasant research in northwestern Ohio during the period 1936-1946 by members of the Ohio Cooperative Wildlife Research Unit and the Division of Conservation. Part One of the bulletin presents factual material about pheasants and treats of their importation, establishment and distribution in Ohio, artificial propagation, habitat, nesting, hunting pressure and factors that affect pheasant production.

Part Two consists of a section on the fundamental principles of pheasant management followed by 22 pheasant management suggestions. For the most part these suggestions are aimed at the establishment and maintenance of better food and cover, but include other hints, such as using well-trained bird dogs and avoiding long shots in the hunting of these exotics. On the cover is an attractive painting by Hines, author of last season's federal duck stamp. Each of the 22 management features also are effectively illustrated with line drawings by the celebrated artist Hines. The bulletin is written in a popular style.



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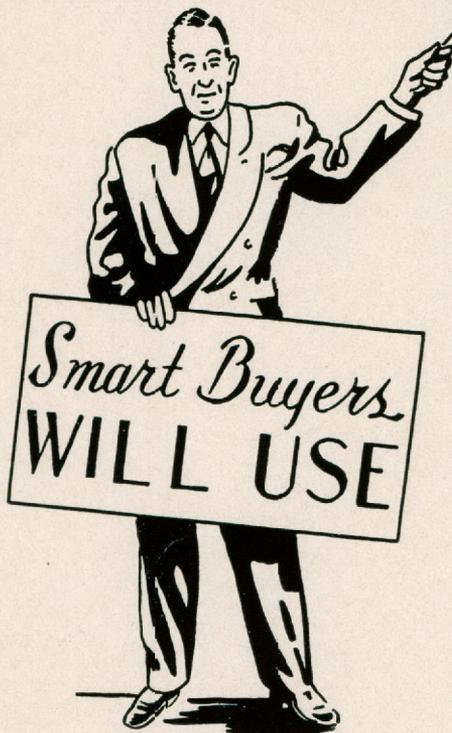
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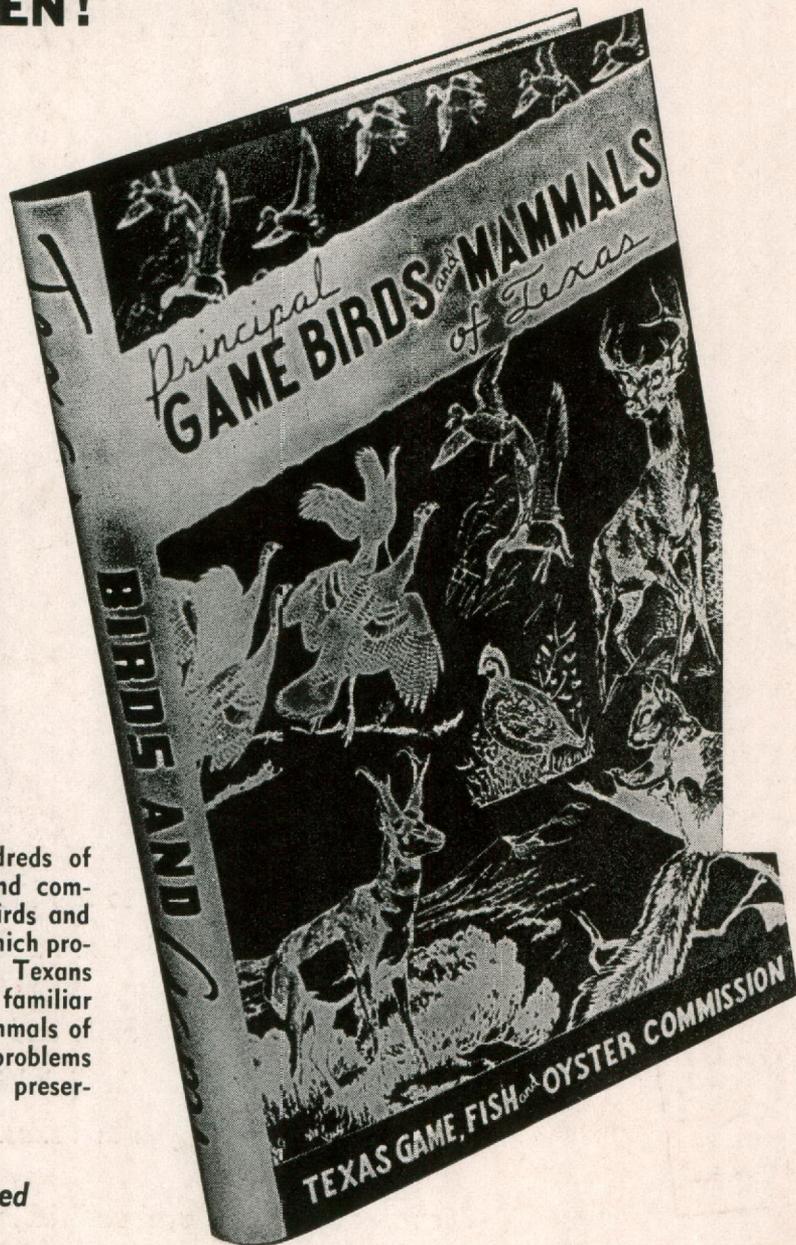
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