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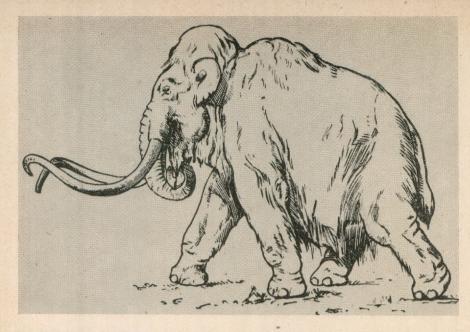
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ROGER M. BUSFIELD



THE IMPERIAL ELEPHANT once roamed the ranges of Texas until great sheets of ice pushed him far to the South some 25,000 or 30,000 years ago.

By J. L. BAUGHAM

small, and in general the beast sloped rapidly to the stern from a high humped pair of shoulders, while from its head, which looked higher and rounder than that of either an Indian or African elephant, jutted a huge and inspiring pair of tusks, curling up and out in a vast crescent that often reached nine or ten feet in length.

This is the mammoth of the story books, the enormous hairy animal most often drawn in the midst of a snowy landscape with a hangdog mob of Neanderthal men attached to its flanks like wolves. Distributed throughout Europe and Asia, it reached North America by way of the land that once bridged the Bering Straits. Generally preferring the colder lands, the two Texas occurrences are far south of its usual range.

Associated with the elephants and mammoths in this prehistoric circus parade was a whole menagerie, none of it in cages.

BIG GAME In Early Jexas

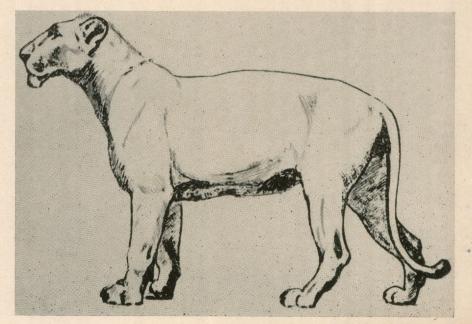
EARLY Texans had a tough time of it. They were more apt to find a saber-toothed tiger at their garbage pail than they were a house cat, and instead of the familiar Brahmans that dot our prairies today, they had to be content with camels and wild horses. Huge ground sloths fed on the smaller trees along the bayous, competing with the herds of elephants that were so plentiful that Prof. E. W. Shuler of Southern Methodist University has said that it is far easier to prove that vast herds of these animals once roamed Texas than it is to show that they were succeeded by countless buffalo. It is actually easier for a Texan to find an elephant skull than it is that of a buffalo.

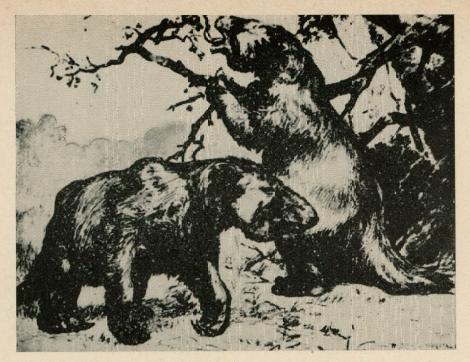
Largest of all was the Imperial elephant, whose 13 or 14 feet of height and 10 or 15 tons of weight put him definitely in the heavyweight class. This lumbering pachyderm roamed the prairies and open country from Nebraska to Mexico City, taking Texas in his stride. Dallas, Fort Worth, San Angelo and Bryan have all turned up his remains, but nowhere was he as numerous as his forest loving relative, the Columbian elephant, teeth of which were found some years ago when the excavation was being made for the Masonic building in Houston. Both of them were more plentiful than the woolly mammoth, old Elephas primigenius himself, which is reported from only two places in Texas, Bulverde in Bexar County and from a gravel pit near Temple, where mammoth remains were found associated with those of tapirs, horses and camels.

This mammoth was one of the Texas

animals to be pushed far to the south by the great ice sheets of the glacial age some 25,000 or 30,000 years ago. Not so tall as either of the elephants, measuring only $9\frac{1}{2}$ feet at the shoulder, nevertheless it was of tremendous bulk, and this appearance was augmented by the thick coat of brownish wool, which was overlaid with long black guard hairs, giving it a bulky and formidable appearance. Its ears were smaller than those of a modern elephant, its tail was short, the eyes were Exceedingly odd were the ground sloths; as much greater in stature than the present tree sloth of South America, as is the tiger than the tabby-cat. Megatherium, the largest, could well compare with an elephant, for though not so tall, these animals reached a length of 20 feet, and a weight of several tons. Covered with coarse hair, they had still another protection against attack, for imbedded in their skins was a series of heavy bony

NOT SO POWERFUL as the saber-toothed tiger but yet a powerful animal of destruction was the American lion, once numerous in Texas.





THESE GROUND SLOTHS, 20 feet long and weighing several tons, once roamed the forests of Washington, Fort Bend and Brazos counties.

plates that acted as an armor. Secure in its possession, they wended their leisurely way through the forests of Washington, Fort Bend and Brazos counties, where many of their skeletons have been found.

Their bones are often mingled with

have been found in San Felipe and El Paso.

Another animal that we have now that changed in little but size is the peccary. The pig is as American as the turkey, and the remains of both have come down from these Pleistocene times, those of

Early Texans were more apt to find a saber-toothed tiger prowling in the back yard than they were a house cat. Camels were around, too.

those of horses, of which Texas had many species, ranging in size from pigmies of 18 inches to giants greater than anv present day draft horse. One kind was much the same size and shape as a zebra; another was similar to the "desert canary." So numerous are the bones of all of them, and so widely spread, that the geological formation in which they are found is known as the "Eguus" or "horse" beds, and although none was left when the first white man came to Texas, surely we cannot be far wrong in believing that it was near here that, "Said the little Eohippus, I'm going to be a horse, and on my middle toe-nails, I'll run my earthly course."

As has been said, the Temple gravel pit produced the bones of camels and of a close relative of the horse, the tapir, forms of which are found in the tropics today, little charged, inhabiting marshy places and water courses. Curiously enough, there are no bones of the giant beaver, large as a black bear, that was scattered about the country in those days, and for this fellow we have to go to Dallas again, although other tapirs the turkey especially scattered over the entire state

"Incidentally, this may explain why a wild turkey does such a wonderful job of taking care of himself. He has had 25,000 or 30,000 years of experience to guide him, and it is easily possible to

imagine some old gobbler sitting back and telling the youngsters about the time when great-great-great-grandpappy lived and dodged the mud-colored Texans of an elder day, along with such minor inconveniences as foxes and their cousins, the great dire wolves whose remains have been found in Briscoe County.

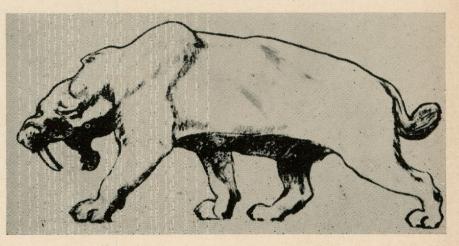
Of all the animals that have ever lived, few beside the saber-toothed tiger have so captured the imagination as the dire wolves, and the greatest, most terrible and most awe-inspiring of all the wolves might well have been named "The Grim Death."

Ranging throughout the Mississippi Valley, and on to California, the dire wolf competed in Texas with the sabertoothed tigers, whose remains have been found at Dallas, Crawford and Sour Lake. These tigers, says Scott, were terrible beasts of prey.

The neck was heavy and powerful, the back and loins were stout and in the largest species much heavier than either those of the lion or tiger, and it was bobtailed like the lynx. The limbs were shorter and much heavier in relation to the size of the body than are those of the great cats today and must have been heavily muscled and enormously powerful. Their appearance was much like that of a lion or tiger, aside from the unknown facts of mane and color, but different from them in the great tusks, the short tail and the shorter and more massive feet and legs," Scott says.

Both the wolves and saber-tooths shared their territory with giant shortfaced bear, larger than any grizzly, which ranged over most of North and South America, and is almost certain to have been in Texas, along with the American lion, Felix Atrox, which was distributed over the southern half of our continent. Taller and more slender Smilodon, as the saber-tooth was known, Atrox was at least a fourth larger than any cat today and although not so powerful as the saber-tooth was, nevertheless, a terrible engine of destruction. He lived as did the others, off the grass eaters with which the plains were populated, among which were bison antelopes, as well as the camels and horses. ★ Continued on page 22

A TERRIBLE BEAST OF PREY was the saber-toothed tiger



The old professor learns a few things about fishing

Tub o' Fish

By Mildred Cooke Clopton

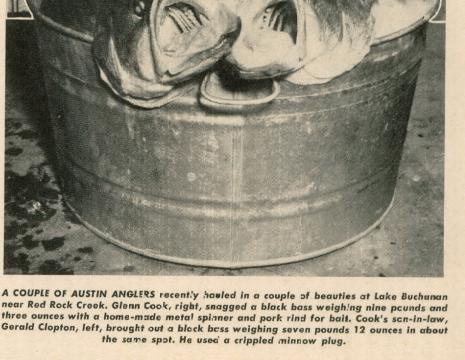
AN "A double-plus" on their fishing report cards for Sunday, February 17, 1946, was turned in by veteran "teacher" and fisherman Lawrence Parker of Austin for his apt pupils, Glenn Cooke and Gerald M. Clopton, brother-in-laws, also of Austin. Parker demonstrated his one-easy-lesson technique by relating detailed instructions on "how to catch the whoppers," as the trio was riding that rainy, dreary Sunday morning to their fishing destination on Lake Buchanan.

But to begin at the very first of this not-to-be forgotten fishing trip, come along with these three eager fishermen on this drizzly but quite fortunate day.

Before the three left Austin, Cooke, rather pessimistic about the trip, remarked that he had thought the trip might be called off because of the bad weather. His remark, however, was easily overlooked by his two companions, who remained unperturbed over Old Sol's hiding.

Leaving Austin around 8:30 a.m. the jubilant trio began the trip in Clopton's Ford sedan, loaded down with the usual fishing paraphernalia from the proverbial A to Z. Clopton, recently released to inactive duty as a Lieutenant (senior grade), USNR, is known over many states to be quite a sportsman who will fish all the day-any day-even if they aren't biting. Cooke, his brother-in-law, used to haunt the Texas streams and lakes, but for many years gave it all up for his recent true love, dear old golf. Only in the past month or so has Cooke revived his lost interest in chumming around with his rod-and-reel cronies. Now, Lawrence Parker, who has just done a thirty-five year stretch in Uncle Sam's navy, is an angler of the first class and has fished in possibly every type of water on the globe and caught about every kind of fish the catalogs list.

On their way to the lake, Parker defi-



nitely had the floor and related many of his exciting fish adventures, especially those in North Carolina.

"I've caught some whoppers," he modestly admitted, "and always put back the ones under four pounds." "It's all in getting your mind set on just the type and size fish you want to catch," Parker continued.

Open-mouthed and with ears outstretched. Cooke and Clopton sat,

* Continued on page 23

TEXAS GAME AND FISH

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Tally Ho!



THESE BEAGLE MEN weren't very much interested in any cries of "Tally Ho!" when they pitched camp for the field trials of the Southern Beagle Club near Dallas. They were more interested in keeping warm than they were discussing the merits of their respective dogs. A thin sheet of ice covered the trees and ground

and a roaring fire helped a little. But the following day the weather improved and the Eeagle men soon forgot their first day discussions on holding field trials in weather that would freeze a rabbit in its tracks.

MERRY LITTLE HOUNDS

BEAGLING is "catching on" in Texas.

Until recently beagling was looked upon as a sport for folks who needed a little honest recreation after spending a strenucus, back-breaking morning clipping coupons.

Those folks gct a real thrill chasing a bunch of merry little hourds up hill and down hill. They got some muchly needed exercise in the outdoor air. And they liked the color of the hunt usually staged in the autumn when the foliage turns red and gold and the frost begins its work on grass and underbrush, and the scent is good. In fact, they put more color into the sport by dressing up the master of the hounds in a neat green gabardine or whip-cord coat with brass buttons, a clean white stock black velvet cap and white knickerbockers, with green stockings, or long white trousers.

Texas beagiers, however, don't go in for so much color in their beagling. To

LONE STAR WHITE EAGLE with his proud handler, Kay Caillet, is being measured in the 13" cicss by H. D. Brawley at the right. The chap at the left is J. W. Eoles, President of the Southern Beagle Club.





them, beagling is an opportunity for some exercise and fresh air, a chance to see friends, and above all, an opportunity to see the hounds work at their job of hunting cotton-tails. As Pope put it in 1704:

"To plains with well bred Beagles we repair And trace the mazes of the Circling hare."

To those who love hounds and particularly young ones, beagling is marvelous fun. At first only the old hounds take interest in the cotton-tail that hops up to run from one cover to another, but gradually the young join in the sport and it is not long before some real hunting takes place.

The hares hunted in this part of the country are usually jack rabbits. They are much faster and altogether sportier than the modest cotton-tail. The fact that hounds in full pursuit seldom kill them within a period of from forty-five minutes to two hours makes every beggler realize, with conviction and exhaustion, the literalness of the hare and tortoise legend. A Texas jack rabbit, however, does not rely for his humor upon mere speed alone. He will also count upon forcing the beaglers to run almost constantly up hill. He starts from somewhere near a hill-top almost always, certainly always in the grass where he is almost impossible to perceive, and never in woods. He then proceeds quite literally at a breath-taking pace to as many other hilltops as he can find. If faced with an open stretch, where men and hounds might catch a desperate breath or two, he will double back

A PROMISING YOUNG DOG is Caillet's Little Jack being shown by his owner, Joe McNamara, a member of the field trial committee. APRIL, 1946

THE BEAGLES are kept in individual cages while awaiting their turn to be measured and sent out into the fields.

on his tracks to the old up-hill persistence again.

There are a few long-experienced beaglers who are, by dint of study and practice, a little bit smarter than jack rabbits. They are in the field at every opportunity, happier than at any other thing, and wiser than the rabbit, which gives them a double keenness in the sport.

When the rabbit is viewed away, an experienced beagler will sometimes take out his watch. For thirty minutes he follows almost at his leisure. He knows that a pack of thirteen-inch beagles seldom kills its find for at least half an hour. At the end of that time, he moves in a little closer, and gathers himself together for speed when he shall need it, to be in at the kill. He does not, however, rush up a hill, and then rush down again, like the famous king of France, or a jack rabbit, because he is cannier. He anticipates the hills the rabbit is apt to choose, and his constant maneuvering for position gives him the exhilaration of an exaggerated game of chess across the countryside. Such a strategist is, of course, invaluable on a hunt, since from his vantage point he can frequently, when the hunter is casting hounds in an effort to pick up a lost scent, call a sharp tally-ho and bring the hunters gladly back for their directions.

Beaglers, like turkeys, are easy to raise when they don't all get sick at once. Women, as a rule, are better at raising puppies than men, and of course the reason is that they must be cared for like babies; fed regularly, kept out of drafts, and given plenty of fresh air and sunlight. Grown hounds are fed only once a day as a rule.





STARTING for the field trials. The Beagles are anxious to be on their way and they keep straining at their leashes.

fire after a grand afternoon in the field with friends who love, as you do, the grand sport of hunting with hounds.

Field champions are made at field trials. Beagle field trials are held in many sections of Texas. The one at which the accompanying pictures were made was held just outside of Dallas by the Southern Beagle Club early in February. The weather was anything but ideal for field trials, much less for hunting of any kind.

The day before the trials started, a sheet of thin ice covered trees, bushes

Many beagle men sit up nights wondering and thinking and planning how to breed their dogs. The beagle has been carefully bred for centuries and is a true pure-bred. In England, he is registered in the Stud Book, just as he is registered in the United States with the American Kennel Club. Breed first for hunting qualities, nose, pace, stamina, voice and then for looks. Like all thoroughbreds, beagles will give their best when handled with love and sympathy.

The reward comes in good sport, the pleasure of seeing healthy little animals scampering over the winter fields, in the fun of stretching out in front of an open

THE BEAGLES at the right are perhaps wondering why man is so clumsy crawling through a barb wire fence. A moment later they scoot through the wire and in the bottom photo the dogs are maneuvered for the trials,







TO THE BEAGLE ENTHUSIAST, the music and performance of the dogs provides more enjoyment than actual shooting. He is a blood brother of the bird dog man who stands so entranced by a perfect point that he scmetimes forgets to shoot, and of the fox hunter who listers all night lovingly to the singing of his hounds. Beagles run primarily by scent, will chase by sight only at an extremely short range. While not fast, by their persistent trailing they will soon exhaust a rabbit or run him into cover.

and ground. A cold, being wind blew out of the north. The beagles were snug in their warmly constructed crates, but their owners who came from all over the country were a miserable feeling bunch until the next day when the



weather improved a bit and the excitement of the working hounds brought a warmth to chilled bodies.

There were 133 entries in the Southern Beagle Club trials. Two field champions were crowned in the 13-inch class and one in the 15-inch class. Here they are: 13-inch bitch class, Brookgrove Dixie; 13-inch dog class, Bouton's Jack Sprat; 15-inch bitch class, Hunsicker's P-38. The dogs, however, will not be official field champions until the American Kennel Club approves the championship points they have scored.

The only Texas hound to win anything at the field trials was Lone Star Rowdy who placed Reserve in the 15inch dog class. Lone Star Rowdy is owned by H. D. Braley, secretary and treasurer of the Southern Beagle Club.

A GROUP of Beagle men checking the results of a field trial event and discussing the work of the dogs.



For the first time between covers, the complete story of the game birds and mammals of Texas. Profusely illustrated. Off the press about May 15. Limited edition. \$2.00 per copy.

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END OF THE TRIALS. In the upper left photo on the oppsite page folks attending the field trials take time out to feed the inner man and talk over the events c: the morning. Food is prepared over open fires and hot coffee is available all the time. The three men in the left center photo are adcing up the scores which wil, determine the winners and a group of fine Beagles is shown with handler in the bottom photo. At top of this tage the Beagles are giving one last looksee at the scene of the field trials before separting for home. At right are the 13" bitch winners with handlers and owners. From left to right owners. From left to right they are: Faul Caillet, with Franco Tine 2nd, Reserve; Dick Driffith, with Chesco Sally, 4th; Jos. Freed, with Fairplain Polly, 3rd; Miss Margaret Caillet, with Bob-Along Sonnie, 2nd; Frank, with fie'd champion Brookgrcne Dixie, 1st; Standing, from let to right: H. D. Brawley, secretary and treasurer of the Southern Beagle Club; A. R. Zelt, field marsnal; Dr. O. Rene Caillet, of field trial committee, Srewart McManus and P. W. Childers, judges.



BIG GAME IS COUNTED

BIG-GAME animals in the United States have been increasing during recent years at a more rapid rate than the human population, although the present ratio of such large game to people is only about one to nineteen, according to Dr. Ira N. Gabrielson, Director of the Fish and Wildlife Service.

According to a recently completed tabulation of figures received from Federal, State, and private agencies, the populations of all animals classified as big game within the United States totaled 7,148,422 in 1943, compared with 6,748,424 animals in 1941, or a gain of 5.9 per cent. During the same period the gain in the human population amounted to less than 1 per cent.

As an aid to the conservation of the Nation's living resources, the Fish and Wildlife Service began making annual inventories of the populations of biggame animals in 1937. Counts are made while the animals are on their winter range, as near to the last day of the calendar year as possible, although for a few species it has been found better to wait until early spring. Because of the great number of separate enumerations involved, the reports from the 1944 inventory have not yet been tabulated, and the actual taking of the 1945 inventory has not been completed for all species, it was announced.

A variety of methods is used in making the inventory, according to Dr. Gabrielson, depending on the kind of animal and the characteristics of its habitat. Airplanes are used in many regions without heavy forest cover, proving successful for deer, elk, caribou, prong-horned antelope, bighorn sheep, mountain goat, and buffalo. Ground counts are made by men on skiis or snowshoes for deer, elk, and antelopes, but with buffalo this method is dangerous and the enumerators travel on horseback. The high slopes frequented by bighorn sheep and mountain goats usually must be reached on foot. Bears in the National Parks are sometimes counted on their feeding grounds, but elsewhere it usually is necessary to locate their dens, or trace them by tracks and claw marks on trees.

The State with the largest big-game population in 1943 was Pennsylvania, with 1,104,655 animals, nearly all of which were deer. Michigan ranked next with 731,407, followed by Minnesota with 631,877, California with 597,625, and Oregon with 584,261. Kansas is the only State that has no big game.

Summarizing the inventory, Dr. Gabrielson said that during the two-year period from 1941 to 1943, there was no significant change in the numbers of elks, mountain goats, caribou, or grizzly bears. Black-tailed and mule deer showed a slight decrease, which was more than offset for the deer group by the increase Inventory shows game animals increasing at more rapid rate than the human population

in white-tailed deer. Rocky Mountain bighorn sheep declined by 10 per cent. Populations of other animals gained as follows: peccary, 106 per cent; European wild bear, 98 per cent; desert bighorn, 69 per cent; black bear, 29 per cent; moose, 25 per cent; prong-horned antelope, 23 per cent; American bison, 21 per cent.

Of all big-game animals in the United States, 61 per cent were on State and private lands. However, the heaviest concentration per land unit of 100 acres is found in the national forests. Refuges maintained by the Fish and Wildlife Service rank second in population density, national parks and monuments third.

Deer greatly outnumber all other biggame animals, the white-tailed, mule, and black-tailed deer together comprising 89 per cent of all the large game in the country. At the other extreme is the woodland caribou, now on the verge of extinction within the United States, with only 15 animals reported.

In addition to the deer, big-game animals found in the United States in numbers exceeding 100 thousand are pronghorned antelope, elk, black bear, and peccary. Relatively scarce animals with populations ranging from 1 to 16,000 are the bighorn sheep, mountain goat, moose, buffalo, European wild boar, and grizzly bear.

Populations of deer in the United States reached their lowest point about

1915, Dr. Gabrielson said, when there were only about three million of these animals in the country. Although the present distribution of deer is less than a quarter of their ancestral range, the general trend of the population has been upward during the period covered by the surveys. The increase, however, is in the white-tailed deer, the most numerous and most widely distributed species with 4,199,739 individuals reported. Mule deer, of which there are 1,756,801, have declined slightly since 1941, as have the Columbian black-tailed deer. The latter species is found only in the three Pacific Coast states, where there are 309,090 individuals.

The peccary or javelina, the only American representative of the wild pigs that are so numerous in Europe, showed a higher percentage of increase than any other species. In 1941 the reported population was 54,120; in 1943, 111,785. The peccaries formerly were much more abundant, however, inhabiting most of the brush area of central and southern Texas, southern New Mexico, and southeastern Arizona in droves. Despite their reputation for ferocity, peccaries are usually shy and retiring.

- The prong-horned antelope, a small and graceful member of the deer family found on the western plains, is continuing to increase in numbers, Dr. Gabrielson said. As recently as the late 1920's this species seemed doomed to extermi-

★ Continued on page 29

-- Summary by States of big-gere animals in annual inventory, 1943

State	Thite- tailed deer	Mule	Columbian black- tailed deer	Wood- land cari- bou	Elk	Noose	Frong- horned ante-	Houn- tain	Desert	Moun- tain	Peccary,	pean wild	Black	Grissly		Tot
	0001	Loor	dest.	Dog		1.	lope	bighorn	bighorn	goat	javelina	boar	bear	bear	buffale	
Liebema	20.275	-	A CONTRACT				a martine	1.000			and the	197.84		1201031		10.03
trizona	20.275 29,840	60,775			4,660		7.045		1,625				135			20,
rkansas	38,835			1	90						31,210		1,246		253	136,
California		336,762	223,565										1 49		*******	38,
olorado	100	189.528			1,370		12,548	210	2,315			665	20,190			597.
Connecticut	7,500				25,000	5	6,000	2,045					4,051	12	45	226,
Delaware					******											7.
	84		********													1
lorida	28,251	********			! 49		1						1.066			1
eorgia	13,819												650			29.
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innesota	610,925			15	160				******		*******		5,112			1 731,
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Total	4,199,739	1,756,801													1.103	208,1

./ 300 fallow deer included.

Quacker Comeback



By J. G. BURR

BIOLOGISTS apparently have solved the problem not only of duck survival but of duck abundance. The abundance is usually gauged by the ease with which the bag limit is obtained, and/or better still, by a record of the kill over a period of years. It is a conservative guess that a minimum of more than a million ducks were killed by Texas hunters in the eighteen year period from 1927 to 1945. This estimate is supported by an annual record that has been kept

on file in the office of the Game, Fish and Oyster Commission at Austin. The record, however, is not complete and shows only the kill on the licensed shooting preserves, a kill of some 676,813 ducks, or an annual average of 37,-600 ducks.

The area of the shooting preserves consists of about 5,000,000 acres, a relatively small part of the State of Texas, but perhaps the most important part in game resources. There exists no basis for any estimate of the number of ducks killed outside of the shooting preserves, and the reader is at liberty to place his estimate wherever a healthy imagination might lead. What per cent of the flight of ducks is killed,

APRIL, 1946

Duck management has produced two guacks or more where only one quack was heard before

there is no way of knowing. Usually the comforting surmise that ducks were still to be seen in goodly numbers, when the season ended, tends to quiet all fears.

In 1913 the Federal Migratory Bird Law was enacted but not until 1919 was there any Texas law to control the taking of ducks and geese. Other game birds and mammals had received statutory protection for many years, but the feathered family Anatidae, which breeds mostly in the north, was treated as interlopers and

as the carpet baggers of bird land.

But in 1919 you were expected to stop shooting ducks and geese when you got as many as twenty-five birds in a day. The twenty-five a day on ducks continued to be the bag limit until 1933 when the limit was cut to twelve a day. In 1935 the bag was reduced to ten and that is still the limit in 1946. Meanwhile the limit on geese was being rapidly reduced.

Prior to 1919 the belief seemed to

prevail that the supply of ducks was inexhaustible and that very little regulation was needed. But the fact of a steady decline in numbers was reflected in the dwindling bag limit and the shortening of the open season. But more ominous than the army of gunners was the drouth that hit the breeding grounds of Canada "where 70 per cent of the North American wild ducks are hatched." This drouth began in 1929 and continued in subsequent years. The effect of the drouth was ★ Continued on page 27

A FEW of the ducks and geese taken at the St. Charles Bay Hunting Club, Aransas County.



Wiggler Wizard

By RAYMOND HAMMOND

Savannah's worm population plus a lot of gaudy signs create a big business for a former "hot" piano player

M Chattanooga to Memphis on Highway 64 usually slow down and take a second look at a sign on the city limits of the Tennessee River town of Savannah. It says:

WELCOME TO SAVANNAH, TENN.

Population 7,500,000 Fish Worms HOME OF HUGHES WORM RANCH

If their curiosity gets the better of them, as it usually does, they will follow the signs to a staid, comfortable, twostory house in the center of a residential district. Beside the house is an outlandish cane "jungle" where ten million worms squirm contentedly in the fragrant earth under the tender watchcare of the owner, Chesterfield Hardin Hughes.

"Worm-Wizard" Hughes has reason to sit back in the shade and smile as curious tourists rubberneck at the carnival-like facade of signs and drawings which fronts the ranch. Twenty years in the show business taught him a few facts about the public. Last year he paid Uncle Sam \$3,000 tax on an income derived largely from glamorizing the American worm.

"It all started about five years ago," said Hughes, as we sat in the small office where orders for Red "Wigglers" and Brown Angles go out to 48 states and Alaska.

"I had been playing the piano in night clubs and showboats for 20 years. Then in 1939 my brother, Paul, was drowned in the river, my father had been an invalid for some time, so I decided to come back to Savannah settle down, and help look after the family interests.

"Incidentally, it was also my intention to catch up on my fishing. So, to keep a supply of bait on hand, I dug a worm pit in the back yard. Well, sir, every lazy no-account fisherman in town took to coming by here to get a few worms and just pestered me to death. I couldn't devote my full time to the serious business of fishing.

"To keep them away, I started charging for worms but that didn't stop them. They said my worms were just naturally more attractive to fish. I built more pits, sold more worms, and began to see the possibilities."

When Hughes once got the idea there

was no stopping him. The business began to grow like Pinocchio's nose and the worm pits have spread over half a city block. First, he went to the Bureau of Zoological Research at Peoria, Illinois, and took a course in the care and feeding of earthworms. "Figured I might as well do the thing right," he explains.

Next he came back and dug his pits -10 feet square and 3½ feet deepfilled them with rich loam, corn cobs, even garbage, put in the worms, and let nature work. He has 40 of these pits now which look like hotbeds with their wood framework and screen covers.

Inside the "Jungle" the canebrake canopy keeps the ground warm and damp. The air is humid and fetid—hard on humans but fine for worms. They multiply fairly rapidly. Four to six worms will hatch from an egg the size of a grain of wheat after incubating 30 days. In four months they are full-sized fishing worms of one of two varieties, the "Brown Angle," a heavy-bodied luscious native worm, or the "Red Wiggler," a smaller more active worm, originally imported from England, according to Hughes.

Most of all, Hughes phenomenal success is due to that amazing loquacity for which fishermen are universally famous. While I was inspecting the visitors' register which bore names from 19 towns and nine states on one page, two typical fishermen from Pittsburg, Texas, drove up—Harrison and Clay Jackson. "We were on our way cross country," said Clay, "and drove out of our way to come by your worm ranch. You know, the last time I was here I bought a box of worms and forgot and left them in the trunk of my car for a week. I finally found them and threw them out and do you know ever one of those worms wiggled off as sassy as you please."

Over the entrance Hughes has a sign: "Through these gates pass the best people in the world: My friends, the fishermen!" He isn't kidding. It's this "wordof-mouth" advertising that keeps six employees busy digging and counting worms into cardboard cartons filled with moss. Last year they counted slightly over 3,000,000 of them.

Now 46, Hughes is happy with his worms, but sometimes when the mournful notes of a steamboat's whistle drift in from the Tennessee River a few blocks away, he strokes his thinning sandy hair reminiscently and a bit ruefully.

It is a quarter century now since he left high school at Savannah to study music at the Cincinnati Conservatory. He spent two years studying Chopin, Liszt and Schubert but he couldn't get that jazz beat out of his soul. It went in Bach but it came out boogie-woogie. He was offered a job as a pianist on the James Adams, a showboat making the stops around Chesapeake Bay. Jitterbugs of the Twenties did the Charleston and Black Bottom and they loved the hot licks that Hardin put in on "Twelfth Street Rag" and "Kitten on the Keys." The following 20 years carried him through every night club from New Orleans to Frisco' with side trips on a Mississippi showboat up to Memphis.

When Hughes can't stand to look a worm in the face any longer he will jump in his canary-yellow convertible, pack his bottle of "Preacher's Hair Tonic" and start on an excursion taking in his old haunts and filling his soul once more with the rhythms of a hot piano.

Some Court Rulings on Hunting

From a Minnesota Court: A hunter, though standing in a place where he has a legal right to be, has no right to shoot over the premises of an adjoining owner, or to go onto the premises to get game which has fallen there.

From the Courts of England: One who finds game upon his own ground can not justify pursuing it from his own lands on to the lands of another. In England it has been held that to constitute a trespass there must be a personal entry. It is not sufficient to constitute a trespass that a dog is sent upon the

land. Another ruling somewhat in reverse says it has been said that while a person may have the right to hunt on a road, if he sends his dog on another's land, he may be convicted of trespass; but if the dog, becoming unmanageable, crosses to another's land, and the defendant has no intention of hunting thereon. there can be no conviction. But it has been held that one may justify trespassing with dogs upon the lands of another in the pursuit of a fox if he does no more than is necessary to kill the fox. He must do no unnecessary damage.

Preserving Feathers For Fishing Flies

By LEON ENSIGN DERR

A new but tried and tested technique for getting the right feathers for flies that really get 'em

T HE best fishing fly feather material is that from water-fowl. These ordinarily contain enough grease to make as natural a looking lure in the water as they did on the bird.

Domestic fowl, not of the aquatic type —if you have seen those birds out in the rain—show then a far cry from plumage which was so pretty when dry. Sadly enough, the dry-land type of bird feathers have been used to an overwhelming extent in fly-making, for a reason apparent to me. Plumage on that type looks brilliant, and they are easily obtained. Most flymakers think they are going to look like that when wet, but under use they DON'T come out like that. Chicken, quail, grouse, turkey, guinea, peafowl, ostrich—and others of that type are the most glaring examples.

That condition of color and contour changing when wet can be remedied, and this article shows you how to do it.

To preserve to the highest degree of efficiency any kind of fishing fly feathers, either aquatic or dry-land type: DO NOT PICK THEM OFF. The bird should be skinned, and include there every feather that will be useful on any size fly. You might ruin a few hides before skin can be removed in one piece, but this procedure is well worth following over the conventional way of picking, as you will discover later.

After skin of bird is removed (in whole or various pieces) fasten it (or them) to corrugated boxboard paper slabs with thumbtacks, FLESH side up. Lay board flat and cover skin with an equal mixture of ordinary table salt and photographers' powdered chrome alum, well rubbed in with plenty left on top to cover whole hide, and leave it there 48 hours. If chrome alum is not available, vou still have three alternates to combine with salt. One of them is liquid tannic acid which can be obtained at almost any drug store. Mix salt into this till it makes a heavy paste and use same procedure as above. For you who cannot get either of the above tanning agents, there might be a few oak trees in your neighborhood from which you can whittle some bark (cutting clear down to the wood) and boil those chips till liquid is black and heavy; strain out chips and mix salt in like you were told to do with tannic acid. Boiled-down tea leaves is an alternate for any of the liquids heretofore mentioned.

This salt and chrome alum—or other liquids mixed in it, acts both as a preservative that prevents grease from the skin working back into feathers to discolor them; and also makes a tanning agent that makes the skin tough so it can be handled easily. Try these skins for feather removal when it is dry, and you will quickly see what I mean, if you didn't use this or a similar process before.

Remove preserving material later by shaking board over a newspaper sheet. What does not come off easily should be left on hide. Put this removed mixture in an air-tight container and it can be used again.

Next step is to take feather hide offcardboard and fasten it on opposite side of panel in the same way with thumbtacks, with feathers now on OUTSIDE —but be sure all feathers are pointing in the same direction.

Put a large safety-pin through edge of board opposite pointed ends of feathers and hang board on a nail with feathers pointing to floor, with a piece of paper behind it to prevent discoloration of any material which might be on the wall.

You have a lot of latitude in making water-proofing and MOTH-proofing which now goes on the feathers. A combination of materials should be used for this, as any one thing, so far, has not done it. You MUST keep moths from feathers, or soon you will have none of them. It takes only a short time for this destruction to happen; many other flymakers besides myself can well testify to that, if those feathers are not mothproofed by something that really will work.

My personal bet for moth-prevention is "larvex" to keep those bugs out, and a single application will do that for a vear-but I take no chances on it doing that. Larvex does not contain enough grease in it alone to keep feathers in a natural color and contour for more than a short time and so something else must be added to it to accomplish the purpose you now wish to achieve. That unsatisfactory condition can be remedied by adding other elements-and you will have to do some experimenting yourself, because I have never seen any two flymakers who agree on what proportions should be, to make that water-proofing material right for them.

Here is a start on the right path. Get the "Larvex" in as small quantity as you can, and a perfume atomizer from a dime-store; a tube of pure lanolin; and a small vial of "finer-nail polish remover." These are all the materials you need. Mix Larvex, lanolin and polish remover in almost equal parts till it will work through atomizer. Try it on a single feather first to see if the feather changes shape. If feather does change shape, move atomizer farther away, and that is the distance you should use for this mixture.

If there are several boards with skins on them, after this treatment, clip safety pins on a metal garment hanger. By this method one can always get duplicate feathers for pairing on opposite sides of those skins without having to search through your entire stock of feathers sometimes to no avail. This really works.—Anglers Reporter.

Brown Crow Shot

Howard McKay, crow-shooting Ohian, made history when he recently shot a brown crow in a rookery some seven miles north of Celino, Ohio. Thirty-five other crows taken at the same spot were clothed in the usual conventional black. The freak bird was brownish-red in color, without a single black feather. Legs and bill were brown.

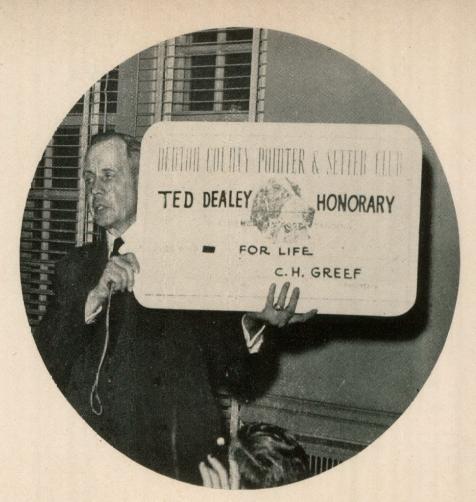


Dear Bill:

I haven't forgotten the promise, made while Frank, Peggy and Bob were ranging ahead of us, looking for birds, on our last quail hunt. Time has passed since then, but you know how I did neglect my business for quail just as I do every year. Anyway, I am greatly interested that a bunch of sportsmen in your town are interested in forming an organization like our Denton County Pointer-Setter Club. It would have been a lot easier to have talked about it that last night around the fireplace in the hunting lodge, but you guys were so determined that you could teach me something about penny ante! Many thanks for the contributions.

Perhaps none of us here in Denton realized when we met several years ago to discuss the forming of a club to promote wildlife and game conservation, just what we had ahead of us. We would have been even more enthused than we were—and you know sportsmen and their enthusiasms. But let me ramble on with what we have done.

Naturally, your group will have to realize that they must organize for a purpose—you must have ideals and goals. You can take ours as a starter and use them as a guide: (1) To promote better relations between hunters and landowners, (2) to introduce and conserve new game species, (3) the breeding and raising of better bird dogs.



A Sportsman's Club Is Born

(4) strict adherence to all game laws, and (5) the promotion of better field trials and dog shows. We have found these goals most satisfactory and a big enough deal for a starter. You must also decide something about the ultimate size of the membership which you will want. Do you want it large or do you want it kept to a small, selected group? We took the first course and for many reasons, we have found it to be satisfactory. After all, the attitude of the general public toward hunters is a matter of great concern. There are entirely too many posted farms and lands everywhere. Now, don't misunderstand me-I rather sympathize with some of those who have posted their lands, for they have certainly had a raw deal from some so called "sportsmen hunters." We have around 600 members now in the club; many of these are not active hunters, but their interest and membership assures us of a chance to prove to the public as well as ourselves, that this hunting thing can be handled right. You can't build this large membership if the dues are excessive-maybe you didn't know it, but your membership in the Denton County Pointer-Setter Club only costs \$1.00. Still the \$1.00 membership dues gives us enough money to

keep going, and there is no point in our group having a large bank account at present.

Course, you cannot leave this money thing out entirely, and we do raise extra money whenever it is needed for a club project. We put on a Western Barbecue last spring, with both beef and barbecued goat. Ead over 900 people there and raised \$350.00 from the profits. People knew this was for our Boys Summer Camp and were mighty interested. Then too Clubs like burs get Christmas presents-we had one from a lady in South Texas who assisted with and is interested in cur Eoys Camp which is also planned for this year. A leading Texas newspaper liked our program well enough to give a mighty nice check, which was accompanied by an additional check from the publisher. We appreciate these gifts. So I don't see any reason why you fellows need worry about the money end of it, as long as you do an honest job: publicize it, and have worthy goals. Money has no more prestige with us than it has with a real bunch of sportsmen anywhere.

Just as you and I have talked many times, Bill, Texas wildlife is not going to be able to take care of itself; we have to do something about it if we are

going to continue enjoying it, and if our kids are going to have the fun we have had afield. That leads me to what we believe is a very logical approachthru soil conservation and proper land use. The state and federal governments have some good programs for sub-marginal farm lands. If we will follow the leadership of these state and national agencies, we will make some real progress in wildlife propagation. One thing of which we are proud is that the membership of our club co-operated with the supervisors of the Denton-Wise Soil conservation district, all land owners and farmers, in bringing about a program for upland game research and reclamation on 19,000 acres of government owned, sub-marginal farm land, over a 10-year period on a co-operative basis between the U. S. Soil Conservation Service and the Texas Game, Fish and Oyster commission. The contract for this research, entered into by these agencies, calls for the full time services of a scientifically trained director who has already been employed. You will learn more about the details of this project as time goes on. We hope that this will prove to be the most effective research wildlife project that the nation has ever witnessed.



A VIEW of part of the crowd that jammed the Crystal dining room in Marquis Hall at the North Texas State Teachers College for the quail dinner. Note hunting caps on the pretty waitresses.

put in a word about selecting your officers and "work horses." You cannot be too careful about that, especially at the start. These guys-and I'll bet that you're to be one of them-must realize that they have a lot of work to do. This deal won't go by itself. It takes work and it takes imagination. I recall that fellow, Jack, who was with you two years ago. He was a swell fellow, but I'll bet that you couldn't depend on him for the routine work and plugging this thing takes at the start. Get someones who are interested in hunting and wildlife and who have the time and inclination to really work. Then, your directors, too, are important. We have found that the more you spread the work out

A lot of our work is designed to building up better relations between farmers and sportsmen. Remember that old bey, who wouldn't let us numt on his place over west there? I'll bet that if we could re-build his confidence in hunters generally, he would not feel that way. It's a slow job sometimes, but it can be done.

This is pretty obvious, but I'd better

BESIDES QUAIL each guest enjoyed a portion of pheasant and wild goose, donated by Rags Thompson of Lake Dallas, and if you don't believe the sportsmen went for it just see how this group of sportsmen are going for it. Left to right they are Dr. J. K. G. Silvey cf North Texas State Teachers College, Howard Dodgen, executive secretary of the Game, Fish and Oyster Commission, George White, sports editor of the Dallas News; Charlie Greef, club secretary; J. P. Harrison, Club president, and Ted

Decley, publisher of the Dallas News.



among everyone, the better the club will go. Don't let one man do too much, but keep everyone busy with some job.

We have our regular monthly meetings on the first Friday of each month, which just seemed to suit better in Denton. We may have to do something tho, what with the high school and college athletic events on so many of these nights in the fall and winter months. Anyway, have a night which is the least crowded, and stick to a regular monthly date. You know something about our programs-gosh, there are so many types and kinds which you can easily get and at little expense. Movies of all kinds-from the Game Commission, from the Federal Government, from Field and Stream magazine and from many

★ Continued on page 29

ANOTHER VIEW of the club members and invited guests who feasted upon quail and duck and enjoyed the fellowship of true sportsmen.



A RE you going to fish this year? If so, your time, even now is valuable. Hence, if you would get the most out of your days upon the water in 1946 concentrate a few moments over these details so vital to the enjoyment of your favorite sport.

Every single piece of your equipment needs conditioning for the season. For example, the:

Fly-rod. Badly grooved tips and guides

.Ill damage your fly line. Replace them. Frayed windings need replacing. Look for a sort of white appearance on windings. This indicates the need of a coat of rod varnish. Reset loose ferrules, as a loose one may cause the rod to break. Always keep the bamboo in a place of even temperature.

Fly reel. A very simple gadget, but also very useful. Take it apart and clean (a bit of gasoline and an old tooth brush, but not about an open flame or heat). Just a bit of reel grease on bearings will put it in order.

Fly line. It is a real pleasure to cast a good lively fly line, but you can get a big headache from the complications of a bad one. Too much heat and leaving it on the reel will damage one. Here's a good procedure. Take the line off the reel. Stretch it out and massage good with a soft cloth. This removes any foreign matter. Next, fold it in coils that will fit in a cigar box, which is excellent for storing until you are ready to put it back on the reel. Store in a place of even temperature.

Fly leaders. Go over your lot. You may have to replace some, if not all of them. A 12-lb. test Nylon, 4 to 6 feet long, is a good all purpose leader for bass. A 6-lb. test Nylon, 4 to 7 feet long, is good for bream.

Fly rod lures. How about your supply? Maybe you finished the past season with only a few good ones left. In that case you will need to restock your tackle box with a generous supply of kinds and colors.

Casting rod. If you have agate guides examine them for chipped or cracked places. Such would certainly injure the line. Also guides of tungsten steel will wear in grooves and do the same. Replace all such worn parts.

Casting reel. Little? Yes. But very important to smooth easy casting. Take the little folder that came with it, which describes every part in detail. Then give it a thorough cleaning and examine for worn parts that need replacing. The pawl that traces the grooves of the level wind will likely need replacing. Badly worn reels should be sent to makers, as they fully understand them, and will do a good job at a fair price.

Casting lines. They usually last but one season. Buy the best black hard braided one you can get in 12 and 15-lb. test. For rather stiff action rods get 15-lb. and 18-lb. test. Always dry them after using.

Casting leaders. Certainly you'll take more bass if you have the right leader. A 12 or 16-lb. test Nylon, 4 feet long, is just the thing.

Casting lures. A little ignition file is just the thing to sharpen them to a needle point. Place the hook on a block of wood and touch up each side first with a steady stroke then tip the inside and outside. A high grade enamel or varnish will do the job of redoing your plugs. Sharp hooks and a new finish will pay off. Lay in the new ones as you find them.

Tackle box. Empty it out and pour full of water, to test for leaks. If you find one solder it. If it's worn or rusty inside or outside, the same varnish you get for metal porch chairs will do a good repair job. Dry and sandpaper for best results. As to color and coats, that's to your taste.

Outboard motors. Put your motor in first class running order, for its a real servant to the fisherman.

The early morning and late evening seem to be the most productive for bait fishing except in early season fishing when the water is high and roily.

Earthworms, night crawlers and minnows are the favorites for bait fishing, but crayfish (crawdads), grasshoppers and grubs are effective on various occasions.

In baiting worms, hook the worm through the middle and thread for about one inch, allowing both ends to be free to wiggle.

There are right and wrong ways to put minnows on hooks, too. When fishing with live minnows where holes are deep and no casting is to be done, hook the minnow through the lips or just in front of the top (dorsal) fin. If hooking in the lips, be careful not to set the hook too far back into the lips or the hook will pierce the brain of the minnow.

When using rock-rollers remove shell and thread the point of the hook just under the roller's chin. This will help keep the roller on the hook. Turn over a few rocks along the edge of the stream or an old log to find rock-rollers.

To place a grasshopper on the hook turn the hopper belly up and insert the hook under the breast armor. Bring the hook out toward the back of the chest. Turn the hook over so the point faces the belly, then push it through and out of the back. The point of the hook should just protrude from the back between the wings. The weight of the hook being on the underside keeps the hopper right side up.

To make hoppers more attractive, it is best to pinch off their outer wings. This leaves the hopper's bright yellow or red wings showing.

Minnows are good bait the entire season, but as a rule are more effective in the fall. Small minnows $1\frac{1}{2}$ to 3 inches in length, are better for stream fishing. Larger minnows, however, are frequently good in lakes.

In fishing the open swift water, let your bait drift with the current, seeking out the deep pockets, for there is where you will find the largest fish.

Deep, still pools with no visible current generally hold one or more prize fish. To get your bait to them, without showing yourself is sometimes quite a problem. Such water is best fished when a slight breeze is blowing.

Insects are not only an occasional tidbit, but are almost constantly a part of \bigstar Continued on page 30 Alligators are still found in Texas waters



THE age of dragons has not passed in Texas, for even today scattered throughout the lakes and river bottoms of the coastal region, many an alligator is found.

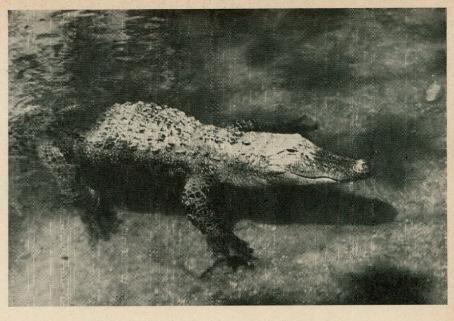
The largest of North American Saurians, its name comes from two words "una lagarta" meaning "a lizard," so called by the early Spanish settlers. They imagined the creature to be some gigantic relation of the smaller lizards of their old home and, for many years, the American form was thought to be the only one of its kind. However, in 1870, Swinhoe, the famous explorer and naturalist, discovered another and somewhat smaller species in China.

The American form, however, shares its home with the caimans, or jacares in South America and in the United States with the Florida crocodile, a smaller species, from which it may be distinguished by the shape of its head and the placement of its teeth.

In the alligator the entire head is broad, the snout being bluntly rounded, and the fourth tooth on each side of the lower jaw, which is much the longest of all its teeth, fits into a cavity or pit in the upper jaw, being concealed when the mouth is closed. The crocodile, on the contrary has a triangular head, becoming very narrow toward the snout, and the teeth of the lower jaw, instead of being contained in pits, fit into external notches on the snout, and are plainly visible at all times.

Like the turtles and many of the snakes, the alligator lays eggs. These are from 10 to 60 in number, chalky white in color, and, although about the same diameter as a hen's egg, they are somewhat longer. They are deposited in a nest far from the home of the mama 'gator. Dead leaves and trash are raked together in a small pile, and a few of the eggs are laid on this. Then more leaves and trash are scraped on top of this, more eggs are laid and so on, till the entire number are finally deposited, the mound reaching as much as eight or ten feet in diameter and two or three feet in height, and here the eggs are left to be hatched by the heat of the rotting vegetation.

The little alligators emerge in from six to seven weeks and scratching their



way up through the mound are ready to take up the business of living. Few, however, last very long. Keen-eyed birds of prey are on the lookout for just such an opportunity as this, and hawks, crows, buzzards and eagles are there in a jiffy to see that only an occasional survivor reaches the water, even through the mother, warned by her instinct of their hatching, s on hand to try and give them their start in life.

Growth of these youngsters is generally believed to be slow, but Dr Raymond Ditmars, curater of reptiles in the New York Zoological Garden, has proven that such is not the case. At the time of hatching the young are about eight inches long; at one year their average length is around 18 inches and at 2½ years they have attained a length of nearly four feet. Under faverable conditions their subsequent growth is steady and rapid and they become adult at about 5 or 5 years of age.

Very large alligators are rare nowadays and a 12-footer would be considered a giant, although at one time specimens of 14 or 15 feet were not uncommon. Dr. Ditmars believes that the finest living example of a big alligator is the huge bull now in the zoological garden at New York, known as Cld Mose. This reptilian patriarch has reached a length of almost 13 feet.

Alligator food is varied. Some records to exist of alligators actually having attacked and eaten human beings and, accarding to the Smithsonian Institute, undoubtedly a number of people have been mained by these beasts. In general, however, the saurians feed cn fish, mammals and birds. The youngsters feed largely on the former along with frogs, tadpoles and insects, but with the larger ones water birds form a portion of the ciet. Particularly are alligators blamed by some for the scarcity of the wood duck which breeds almost entirely in

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By J. L. BAUGHMAN

districts inhabited by these reptiles and whose half-grown young fall an easy prev to the submarine monsters.

Not are the half-grown ducks the only ones caught. Vivian Slean, for many years chief game warden of the county of Charleston in South Carolina, tells of watching a single duck floating on the still surface of a lagoon.

Suddenly the water broke behind the duck and the bird was seized by an alligator and drawn beneath the surface of the pond. Sloan thought that this was the end of the drama but within a minute the waters were again violently disturbed and out of the tamult rose the disheaveled and frightened duck, none the wcrse for its terrifying experience. Evidently the reptile had engulfed the duck in its mouth and when the 'gator momentarily opened its jaws again the duck swam out.

Such a case is, of course, a miracle. Few are the creatures that escape when once the grip of an alligator's jaws has closed upon them, and it is reliably reported that alligators will kill hogs, young cattle, sheep, fawns, and dogs, of which they appear excessively fond.

Formerly these reptiles were extremely plentiful in Texas. Dr. Spencer Baird of the Smithsonian, who was a member of the Mexican boundary survey about 1855, records a fair-sized specimen from Brownsville as being among the reptiles taken by the biologists of the expedition and the late Doctor Strecker of Baylor, in his work on the reptiles and amphibians of Texas, remarks that at one time the range of the alligator covered the whole eastern half of the state, although at the present time it is principally confined to the counties bordering Louisiana and the gulf.

According to Doctor Strecker, old settlers claim that in former years, alligators were abundant all along the Brazos, clear up to its sources in west Texas, and there is an Indian legend to the effect that these reptiles were driven from northwestern Texas by a severe ★ Continued on page 24

By R. D. Turk, D.V.M.

ONE or more species of ascarids or large roundworms occur in the digestive tract of many domestic and pet animals. They usually are host specific, that is ascarids of horses occur only in horses, pig ascarids do not infect poultry and species found in dogs and cats are not the same as those found in other animals or man.

Two species of large roundworms frequently are found in dogs, one of these species also occurs in cats, particularly in kittens. These large roundworms are particularly injurious to young animals. The commonest symptoms of roundworm infection are unthriftiness, digestive disturbances and ploating. A puppy will be pot-bellied, and often may suffer from loss of appetite, occasionally the pup may have a diarrhea and roundworms may be passed with the feces. The hair coat is dead and lusterless and the breath may have a peculiar sweetish odor. In many cases the roundworms may be present in sufficient numbers to cause intestinal obstruction, in other cases the worms may migrate into the bile ducts of the liver causing a jaundice to appear.

There are many popular fallacies about how pups acquire worms. Some people say feeding milk will produce worms, others believe feeding certain substances such as green beans or other vegetables will prevent a puppy from harboring these pests. The truth of the matter is, puppies, and kittens, can acquire roundworms only by eating roundworm eggs. These eggs which are eliminated in great numbers in feces of infected dogs may be on the feeding pans, drinking pans, or on the body of the mother proper. In many instances puppies are infected with the first meal at their mother's breast, due to the breast being soiled with such worm eggs.

The life cycle of the ascarid in all types of animals is similar. The normal location of the worms is the small intestine although the adults may wander around and sometimes are found in the large intestine, stomach, gall ducts of the liver or occasionally in the pancreatic ducts. The adult females lay large numbers of relatively large thick-shelled eggs. These eggs are able to withstand prolonged exposure to freezing temperatures and drying. After a few days exposure to favorable conditions of heat and moisture an immature or baby worm develops in the egg shell in much the same manner that a ch ck develops in a fertilized hen's egg. However, the ascarid egg does not hatch until it is taken into an animal's body. The immature or larvae worms will remain alive in the eggs a long time. Eggs of some species have been shown to contain living larvae five years. Soil is not necessary for the egg's development, they will develop anywhere there is a slight amount of moisture. The eggs are extremely sticky and will adhere to walls, floors, feeding



THE COMMON ROUNDWORM

utensils or the dog's body. Many times a dog will pick up the infection by licking its own soiled body. After the egg is swallowed, the shell is digested off, the larvae worm is released and it immediately bores through the walls of the digestive tract and takes a ten day trip through the host's tissue. The majority of the larvae go to the liver, then to the lungs, break out into the air passes, are coughed up, re-swallowed and grow to adults in the digestive tract.

Since the infection passes from one animal to another by means of eggs passed in the feces any measure that will lessen fecal contamination will lessen the incidents of roundworms. However, if dogs have been on an area any length of time it is almost impossible to raise puppies without them picking up some worms.

Due to the advertising campaigns carried on by many drug supply houses most dog owners are "worm conscious" and many owners are firmly convinced that a pup should be dosed or treated at regular intervals regardless of whether such treatments are necessary. Nothing could be farther from the truth. No animal should be dosed for worms unless there is evidence that such treatment is needed. All worm medicines are poisonous, if they were not they would not kill the worms!

Diagnosis of parasitism is not always a simple matter. Many of the symptoms associated in the minds of the general public with "wormy puppies" also occur in connection with other diseases. Usually a laboratory examination is necessary before the type and extent of parasitism may be definitely determined. The advice of a competent veterinarian should be sought before worm medicine is given any animal. This is especially true in the case of pure-bred dogs which usually are more sensitive to the toxic effects of drugs than are mongrels. Cats of all types should be treated only by a veterinarian since they are particularly susceptible to toxic effects of many "worm medicines."

If an owner decides to treat his own animal and if professional advice is unobtainable there are certain precautions that should be taken.

- (1). That the drug given is indicated for the parasite suspected or known to be present.
- (2). That the dosage suggested by the manufacturer be faithfully followed. In worm medicines, "a little bit is good, a whole lot is not better and may kill."
- (3). Be certain the animal is not suffering from some febrile condition. Many times puppies in the early stages of distemper are killed by worming.
- (4). Be certain the animal is properly prepared. Should be starved 12 hours prior to medication but may require special feeding several days previously to build up strength.
- (5). Do not retreat under at least 14 days. Never treat nor retreat any dog unless they actually are wormy. Often the effects of the treatment are more injurious than the few worms removed.

Early Texas

* Continued from page 5

Just where man came in this array is hard to determine, but up in the Panhandle a few years ago scientists turned up the remains of five elephants, intermixed with numerous stone spearheads and knives.

The greatest find of recent years was made by a Houston man, Frank Dougherty, who while surveying near Beeville about five years ago, turned up part of an elephant tusk. Since then Dr. E. A. Sellards, director of the bureau of economic geology at the Texas University, has been supervising the excavation of the site. Fifteen skeletons of the mighty shovel-jawed Buckner's mastodon have already been uncovered, as well as remains of alligators, camels, a three-toed horse and rhinoceros, all of which have left their calling cards in the shape of bones.

In other and more recent deposits about this old water hole, which bids fair to prove one of the largest known graveyards of ancient elephants, there have been found parts of true elephants, bison, horses, sloth and peccaries, intermingled with flint implements. These are scattered about the prehistoric hearths of ancient camp sites, showing that man of that day, like the animals, lived in the vicinity of this ancient watering place.

Tub o' Fish

★ Continued from page 6

drinking in these huge stories and trying to imagine just what a four pound bass would even look like, much less having the nerve to throw such a smallie back. And it might be fitting to add that both Clopton and Cooke felt quite immature in their fish schooling as compared to Parker.

The seventy-five miles to the fishing grounds flew fast, as next to fishing, a true fisherman likes best to be in the big middle of tall talking about tall fish.

Here the three were at the lake before they realized they had hardly started.

"We got to the place about 10:30," Cooke related. "It was still raining but not too hard, so we got out our poles and tackle boxes and headed for the water. The place didn't look so good for casting as there were a lot of dead trees and snags in the water. It looked like a perfect place to lose about five bucks worth of irreplaceable lures, but I remembered that Parker had said that was the kind of a place to catch big bass, so decided the risk would be worth a four or five pound bass. Anyhow, I had made a lure with a spinner and a white bucktail that looked like it had pretty good action, and I figured that I wouldn't lose much if it did get hung up and lost.

"Parker and I started walking around the bank while Clopton was locking the car, so he was a little behind us. We went around a little neck of water and got back to the edge of the lake about the time Clopton got to the water. He made a short cast, more for practice than anything else, and we heard him say, 'I got a strike.' Then in just a second, he hollered, 'I got him!' Well, the water began to boil and splash, with Clopton trying to reel him in. But the fish went under a log and after several tries to get him loose. Clopton rolled up his pants and waded out to where he could get him loose. When the fish tries to get him loose, Clopton rolled yelled, 'That's the biggest fish I ever caught.' He started leading him to the bank with his rod and repeating excitedly, 'That's the biggest one I ever caught.' Just as Clopton got to the bank, the hook pulled out of the fish's mouth and "Ker-plunk" he fell back into the water. Clopton threw his rod down and grabbed the fish in both hands, running out on the bank."

"Clopton doesn't carry a fish stringer, because he thinks it's bad luck," Cooke remarked, "so I went to take him a stringer. Boy! he really had a fish! It was the biggest bass I'd ever seen. It was so large it was really hard to believe that it was actually a black bass."

"Well, teacher, guess I can keep that one, can't I?" Clopton joked with Parker. "He'll hit the scales way over that four pound limit of yours, I bet."

"And you're not kidding," Teacher Parker agreed readily.

"Well, anything we do from here on



THEY GROW BIG and scrappy in Possum Kingdom Lake and these three ardent anglers have every reason to be aroud of their catch. From left to right, they are: Bill Sweat, Ray Lake and Coy Noles.

THE BRIGHT SIDE

He cheers the disconraged farmer when it is too wet to plow by having him take his shotgun and go after the blackbirds. His rustic dialect makes one sit down and take it easy, and see this common world as it is. A homely description of things gets under the skin a little better if we have an interpreter such as Riley. Just get a whiff of this:

"The summer wind is sniffin' round the bloomin' locus' trees; And the clover in the pasture is a big day fer the bees, And they been a-swiggin' honey, above board and on the sly, Tel they stutter in theyr buzzin' and stagger as they fly. The ficker on the fence rail 'pears to jest spit on his wings. And roll up his feathers, by the sassy way he sings; And the hoss-fly is a-whettin'-up his forelegs fer biz, And the off-mare is a switchin' all of her tale they is. You can hear the black birds jawin' as they foller up the plow-Oh, theyr bound to git theyr brekfast, and theyr not a-carin' how; So they quarrel in the furries, and they quarrel on the wing-But theyr peaceabler in pot-pies than any other thing: And it's when I git my shotgun drawed up in stiddy rest, She's as full of tribbelation as a yaller-jacket's nest; And a few shots before dinner, when the sun's a shinin' bright, Seems to kindo -sorto' sharpen up a feller's appetite!" Then the farmer asks some questions: "Dces the medder-lark complane, as he swims high and dry Through the waves of the wind and the blue of the sky? Dces the quail set up and whissel in a disappinted way, Er hang his head in silunce, and sorrow all the day? Is the chipmunk's health a-failin'? does he walk, er does he run? Den t the buzzards ooze around up thare just like they've allus done? Is they anything the matter with the rooster's lungs er voice? Ort a mortul be complainin' when dumb animals rejoice? Then let us, one and all, be contented with our lot; The June is here this morning, and the sun is shining hot. Oh! let us fill our harts up with the glory of the day, Ar.d banish ev'ry doubt and care and sorrow fur away! Fcr the world is full of roses, and the roses full of dew, And the dew is full of heavenly love that drips fer me and you."

out is definitely down grade," all three admitted.

"We got the fish staked out," Cooke went on, "and I went back and finished rigging up my tackle and started casting. I felt like Clopton had caught the biggest bass in the lake, but thought I might get a shot at a two or three pounder maybe."

"After about thirty minutes of casting and trying not to lose my lure and not even getting a strike, I was more convinced than ever that Clopton had caught the only fish around there," Cooke continued. "It started to rain pretty hard, so I went down the bank to find Clopton and get the keys to the car so I could get my rainzoat. Clopton said that if I were going all the way back to the car that I might as well fish down the other side of this neck of water, as he said the water was deeper. I got the coat and started down the other side of the bank, looking for a suitable place to cast."

"I hadn't gone far," Cooke explained, "when I saw a big granite rock, sloping into the water and a pretty nice looking open spot between the trees growing out of the water. Well, I started out a pretty good cast but got a backlash as my lure was about half way cut. So, I started stripping the line off in a hurry and straightening it out as far as I could before my bucktail lure could get hung on the bottom. I got the mess cleaned up pretty soon but felt like my lure had already hit bottom and sure enough when I reeled the line tight, it wouldn't move. Well, I was sure that I was hung but gave the reel another turn to see if I could pull it loose, and then my line took off sideways. I still thought for a second that I was hung and that it was slipping off sideways, but in the next second I realized it was going too fast to be a log and that it must be a fish, but it was sure hard to believe!"

"Well, I began reeling on him, and he broke water with a loud 'ker-plunk,' and business picked up. My hand slipped off the reel, and away he went, but I thumbed the spool and got hold of the handle again and began reeling him my way. In some manner I pushed the click on and tried once or twice to get it off. but finally gave up, as he had me plenty busy. Finally, I got him headed toward the rock and figured that I would slide him out of the water onto the rock as I have always done, bu: in this case it didn't work. When he was about threefourths out of the water, the leader snapped, and he started to slip into the lake. I made a half dive and slid into the lake, ran my hand into his mouth and clamped down on his lower jaw. I can really tell you things began to look brighter to me, as I was at about the lowest ebb when that leader broke, and it looked like he was a goner. As soon as I could pick myself up out of the lake, I ran about thirty feet up from the water and took a good look at him, and all I could say was 'Boy! What a fish.'

Cook's yells, "Woooo! Woooo! What a fish" came echoing down the lake bank, rounding up Parker and Clopton, who weren't long in coming over to the scene of action.

"Man, what a fish!" Parker exclaimed, while Cooke had to sit down on the rocks and rest that one out.

Clopton had his prize catch with him, but it wasn't hard to tell that Cooke's fish was even larger.

"We staked them out, and the other two went to fishing again," Cooke added, "but I just made a few casts around where we were and spent most of my time going over and checking on our fish to see if they were still tied good where we had them staked out. I was ready to come home then, but we messed around and they fished until about 4 in the afternoon."

"Now, it's really Parker's time!" Clopton and Cooke joked.

Well, it was the teacher's time, but as he didn't want to outshine his two new pupils, Parker decided to leave that third whopperoo out in the lake until next time.

"There's just no need to make these boys feel sick and unhappy about their little catches," big-hearted Parker figured.

And he was right about that, being the good teacher that he was.

The group had to wait until they hit Burnet on the way home to weigh these two whoppers. Cooke's bass weighed nine pounds and three ounces, while Clopton's was seven pounds and twelve ounces, usually a record fellow on anybody's fishing trip. Cooke's fish was 25 inches long, and that of Clopton's was 23¹/₂ inches in length.

Some real old joshing took place on the trip home that evening with Pupils Clopton and Cooke sorta proud of their "A double-pluses," and with "Teacher" Parker, beaming all the while at his good technique.

Parker is planning on opening a school most any day now for beginning anglers with his two first students as assistant professors. Applicants form on the right!

"You just gotta get in the right frame of mind. That's the real secret," Parker divulged.

That evening and the next day there was a lot of picture taking with two proud participants holding two record fish. Next day the Austin populace kept Petmecky's Sporting Goods Co. busy by coming in to ask about and to see the big fish. For there in a big tub of crushed ice lay a full, running-over "tub o' fish," those two whoppers we've been talking about. And the exciting fish story of two lucky fellows with two notso-lucky bass was spreading over Austin and vicinity faster than that famous Chicago fire. Pictures were carried in newspapers throughout the country with the caption "Biggest bass ever caught in Texas." Flave Ingram with Uncle Sam's navy in the Caribbean, Clopton's friend and fisherman in his own right, was writing home in less than a week to get details of this big trip.

And they tell me this same trio has

been back every chance they've had, trying to beat their own records.

So, if you are interested in enrolling in this productive, guaranteed school, call Parker at FISH 0002, and sign up on the dotted line. You won't be sorry! Take it straight from those two fishing pals, Cooke and Clopton. They'll recommend him every time!

Modern Dragons

★ Continued from page 21

and long continued drouth, immense droves of them traveling overland, headed for the gulf. Dr. Mearns, in his work on the mammals on the Mexican border, says that alligators were found in the lagoons of the upper Rio Grande, and that he knew of one caught 20 miles south of Fort Clark, in Kinney County. This seems to be the extreme westward record for the species.

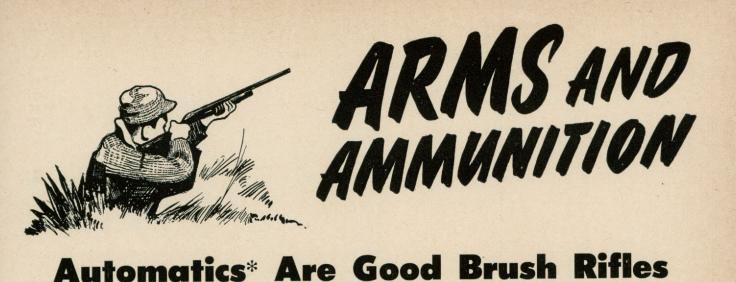
Today the picture has changed. Some years ago three or four of the reptiles were caught near Waco, and an eightfoot specimen was caught in the Trinity bottoms a few miles from Dallas, but about the only large concentration of these reptiles still to be found in this territory occurs in Manor and Eagle Nest lakes, leased by the Renfro club in Brazoria County.

There during the course of one afternoon on Eagle Nest over 40 of these saurians were observed, ranging all the way from youngsters only a couple of feet long on up to a giant bull of nearly 12 feet that lay off from the fishing boats, eyeing them as though debating on the advisability of trying to get a string of fish for supper.

Locally, however, there are few. Occasionally during flood times one will turn up in Buffalo bayou and numbers have been killed there from time to time, but there are certainly no such numbers now as those mentioned by Dr. S. O. Young, in his "Stories of Old Houston and Houstonians." Dr. Young says:

"Now, speaking of alligators reminds me that there used to be quantities of them in Buffalo bayou. I don't know how many Mr. Erickson, the father of Otto, killed in his day, but I know of several, and one of the largest I ever saw was killed by him about where the Louisiana Street bridge now stands. It was so large that it attracted public attention. He cut the head off, had it prepared and shipped it to a museum in Germany. I remember seeing the head. It was in a large wash tub and stuck up 2 or 3 feet above the top of the tub.

"I heard stories of men being eaten by alligators when I was a boy, and I believe there are one or two well-authenticated cases reported. We boys paid no attention to the stories, however, and went in swimming just as though there were no such thing in the world as an alligator. The very evening Mr. Erickson killed that big one, the bayou was full of boys not a hundred feet from where he killed it."



By ADAM WILSON III

MANY of the experts and a few sportsmen have a strong tendency to frown upon the user of an automatic for a hunting rifle. "He can't hit a bull anywhere with a bass-fiddle, therefore, he just sprays the countryside and hopes that maybe the target will accidently run into a bullet"—so they say. I will readily admit that there are such characters roaming the woods who do that very thing; also, I agree that it requires little skill to handle a rifle in said manner to bring down game. But, there are exceptions, I think, when the kind of game, and type of country is given a consideration.

Maybe the reason the above quotation sorta' "rubs my hair the wrong way," is that I have been a user of the "stutter gun" for a number of years in the form of a Remington Model 81 .300 Savage, and have done so to a decided advantage over other rifles in the brush country of Texas.

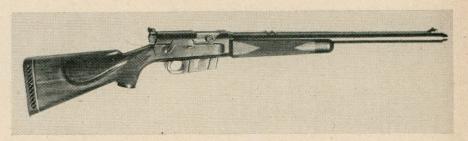
If densely covered country is available for deer to hide, there is where the old big boys are going to spend most of their daylight hours. Not until dark. after the sportsman has ceased to roam, do they venture forth. Occasionally, an old "rusty" will have his resistance lowered by a little number with a lot of "doe-oomph," and be lured out into the open where most any popular deer rifle can give him the works; but usually it is the old-timer's better judgment, rather than his desire, which governs his actions. It is through circumstances such as old bucks trying to act like young bucks, that some majestic old heads now stare glassy-eyed out into the interior of a den or living room from over a mantlepiece. Seldom are they taken easily though. Prize and record heads are ordinarily well earned. In thick timber or brush a fast handling rifle will certainly increase a hunter's chances of filling the meat-pot with an old grondpas' steaks. Now I do not mean the hunter should start throwing lead in the general direction of the first white flag that waves. That's bad business. After identifying

the pursued as a desirable, pick out openings and gaps in the brush ahead of him over the rifle barrel. Touch 'er off with ample lead, just as he "darkens the hole." It may be well to add a word of caution when snap-shooting at those gray bodies zipping by, or away. Care should be taken in case a "Mrs." or "Miss" isn't preceeding the "Mr.", as nine chances out of ten she will be leading the escape. Plugging the first form which passes through an opening could result in an embarrassing situation. After a few seasons of experience in "close" hunting, it becomes natural to be able to estimate fairly well where a deer will cross next. A good automatic will make it possible for the huntsman to be ready sooner for the next brief opening. I've seen veteran gun handlers manipulate lever-actions, "trombine"-actions, and even bolt-actions with unbelievable rapidity, but anyone can easily understand that when speed of fire is needed, the auto-loader has a wide margin over manually operated arms.

Carrying a refle not capable of rapid fire on javelina or wild boar hunts may cause one to return home without a porker, or it may possibly cause his wife to become a widow. Wild hogs are known for cutting and slashing their annoyers the famous four ways: Long, wide, deep, and frequent. Last December a member of our hunting party found out that his lever-action .30-30 carbine was entirely too slow to stop a javelina charge. He had to drop his carbine with several unfired rounds in the magazine, and take refuge up the nearest masquite tree. From his perch he shot five of the vicious beasts with a .44 caliber revolver. Had it not been for his handgun he would have had to spend a cold night out sitting astride a narrow limb. I might add that one of the items on his must-have-when-available list is a .35 Remington Woodmaster, or, as he added "... anything that'll shoot ahellova lot faster than my old .30-30."

To say the automatic is the best allround hunting rifle, would be a very untrue statement. When the scene is stretched out over the open spaces, or across wide canvons. I prefer to feel the butt of a good 'scope-sighted rifle in the .30-06 class against my shoulder. I have made a few shots with my Weavermounted Winchester Model 54 '06 that would have been almost impossible to have made with my Remington Model .81. The latter wasn't manufactured for "strain-your-rifle" shots, even though I, as well as others, have connected on long shots with it that left nothing lacking. Year before last it brought my antelope season to a very successful conclusion.

Of course, I favor the .300 Sav. caliber when automatics are concerned, but there are other auto-loaders on the market which are commercially sound and



THE AUTHOR'S FAVORITE brush and timber rifle. The French walnut stock and forearm, with buffalo horn pistol grip cap and ebony forearm tip, is a custom-made job by Keith Stegall of Gunnison, Colorado. The rear sight is Redfield's 102-N, made especially for the Remington auto-loader.—Photo by Roger Adkins.

reliable. Built on the same frame as their .300 Sav., Remington's Model 81 is chambered for the .30 Rem., .32 Rem., and .35 Rem.—the Sav. caliber being the latest addition (1936) to their famous line. A state Ranger in this section of the country converted his Model 8 a forerunner of the M. 81—to take the popular .300 cartridge. Another interesting Remington automatic of his is a converted Model 8 to handle the .250-3000 Savage load.

Let's take a look at the ballistics of the .300 fodder. Commercial loaders offer three bullet weights-150 gr., 180 gr., and 200 gr.-in hollow point, softpoint, various other expanding points, and the full-metal cased number. Velocities range from 2220 to 2680 feet per second. For those who are strictly riflemen, the metal cased bullet provides them with a very effective turkey load. In the event that long range justifies a shot through the bird's body, very little meat will be destroyed. Long range need not be a hindrance in turkey hunting, as it very often is in Texas if the hunter is carrying a shotgun. The metal covered bullet will cut an old tom down just as far as the whiskers can be seen on his manly chest. Sighted-in to hit center at 200 yards, my .300 Remington, with its 22-inch barrel, puts a 150-grain bulelt 12 inches low at 300 yards, 34 inches low at 400 yards. Sighted-in at 100 yards, it puts a 150-grain bullet five inches low at 200 yards, 19 inches low at 300 yards. The 180-grain S.P. drops 8 inches at 200 yards with a 100-yard sight setting. With a 24-inch barrel rifle, the drop will of course be a few inches less.

Winchester has turned out several good short-ranged, low-powered selfloaders in calibers .22 Auto "special," .22 Long Rifle, .32 Win., .35 Win., and .401 Win. All of these are special Winchester cartridges, and will not chamber in other rifles-excepting the .22 L.R. Although the rifles which take these loads were built in different years, and in different models, their pattern is the same, and are almost identical in appearance. My father used the .32 Winchester Model 1905 for a number of years as his favorite turkey gun. On land, or in the air, I wouldn't have given two cents for any old gobbles' life if he got within range with that little six-shot (including

one round in the barrel) 71/2 lb. spit-fire. Winchester's Model 63 L.R. is the best performer I ever owned for snap-shooting, or for moving small game targets. This number and the Model 1907 .351 are the only two calibers that were still being manufactured before the war; however, the .32 Win. and .401 Win. appear yet in the deer hunter's camp. I have a friend whose ten-shot .351 Winchester serves as a dual purpose arm. On duty he uses it as a persuasion instrument, and in the woods he finds it a fair black bear killer. The rifle's ability to put its 180 gr. slugs into a bear at a rapid rate qualifies it as a bruin-gun in his case. Actually, it lacks a lot of punch to be classed as an arm for that type of game, and a rifle that light certainly should not be recommended to the average hunter-the man who shoots at the whole animal

I very often hear this question asked: "Should I put a telescope sight on my automatic?" The answer, I would say, is "No." Such action would be defeating part of the rifle's purpose, and the shooter could not get maximum benefit of the 'scope. The only exception would be fore the man whose eyes have begun to fail him a bit. In that case I would suggest that he choose a rifle not of the automatic type, but one which is better suited for 'scope attachment.

Most of us are interested in a gun as a sporting piece. Having been a member of a law enforcement department for several years, and having many friends in that business, I can not help but admire any form of a shooting iron for its qualities as a combat or self-defense weapon. The .300 Automatic is tops in that category. On repeated occasions it has been the star performer in eliminating those characters who make it necessary to brand and mark our livestock, endure sleepless nights on roads passing through wild game country, and lock our doors when we leave home.

Yes, our guns have to help us carry out unpleasant duties at times, but, shucks, on the sixteenth of every November 1—among the many—ain't ever gonna be mad at nobody. About 7:15 o'clock on those glorious mornings as the gray of dawn gives way to the light of day, I always hope to be cat-footin' around the head of a certain brushy



draw in some of the choicest venison country in Texas. Grasped in my hands will be one of the sweetest shootin' rifles in the woods—a .300 Savage Remington Automatic.

*Technically speaking, the word "automatic" when applied to a rifle, or gun, means that the weapon is capable of firing a number of shots with one press of the trigger. Not until pressure on the trigger is released, or until the magazine is empty, will the weapon cease to fire. All of our "automatic" sporting arms are actually semi-automatic the trigger having to be pressed and released for each shot.

We of the sporting world have always referred to our semi-automatic arms as being "automatic" or sometimes, to be more correct, as autoloaders and self-loaders. That policy shall continue to be practiced in this Department. In the event I have reference to a true automatic the term full-automatic shall be used. —A.W.III

SPRING GUN CLEANING

With the hunting season over in most states, it is time to lay away that rifle or shotgun in such shape that it will be ready to go again this coming fall. George E. Frost, Technical Advisor of Western-Winchester Companies, suggests the following rules to give guns permanent off-season protection.

1. Clean the bore thoroughly with patches of cloth and a reputable powder solvent, or soap and water.

2. With the bore perfectly clean and dry, coat it with heavy gun grease. Do not use light lubricants as they are more subject to atmospheric rusting. Cover all exposed metal parts with the same type of heavy grease, rubbing it on with a cloth.

3. After greasing, release the spring of the firing mechanism by snapping, or letting down the hammers.

4. Store in a dry place of ordinary room temperature. Do not keep your gun in basements, attics or any place subjected to extreme temperature changes or dampness.

5. Do not plug the muzzle or breech or confine the gun in tight fitting scabbards or cases.

"Remember," warned Frost, "these directions are for *storage*. It is dangerous to fire your gun again until the bore has been cleaned of these heavy greases."

Bold Foxes

The fox is generally a shy and wary animal but at times occasional individuals will upset all the dope. As illustration, take two similar cases reported by Game Protector John Blair of Waynesburg, Pa. Two boys hunting in different parts of Greene County, each reports killing a squirrel and leaving it on the ground temporarily. In each case a fox is said to have seized and made away with the trophy right under the nose of the hunter.

Quacker Comeback

felt almost immediately over the entire ration in the diminishing number of ducks killed. In Texas, while the kill on the shooting preserves up to 1930 had been around 65,000 ducks annually, in the year 1931 the kill was down to 16,-253, though there had been no reduction in bag limit.

Improvement was noted in 1938 when the kill had climbed back to 50,000, notwithstanding the bag limit was now down to twelve instead of twenty-five. There can be no doubt that the reduced bag limit over the country for the five year period had much to do with an increased duck population. But more significant still was the work of an organization chartered in the United States and Canada as "Ducks Unlimited." In 1937 the concern began the restoration of water supplies in the important nesting areas of western Canada. The February issue of the Reader's Digest contains an abridged account of the "Quackers comeback," describing the methods used by "Ducks Unlimited." Perhaps you read that issue of the Digest but the story of the duckling crises is well worth a second reading:

"Here's what happens: Each spring, when the birds fly north, they find thousands of potholes, sloughs and shallow lakes containing from six inches to three feet of water, the result of melting snow and early spring rains. Mother ducks

★ Continued from page 15

know these potholes will produce unlimited food-water nymphs, water fleas, crustaceans and larvae—for their young, when hatched, so they build their nests nearby. The ducklings must have this animal food during the first six weeks of their lives, as their metabolism is so rapid they would starve to death on vegetable foods.

"But even in a normal year, 75 per cent of these potholes dry up entirely before the broods can fly. Ducklings and their mothers travel from one puddle to another as the water disappears. In many cases the mother duck dies with her brood. A tally on sample areas throughout western Canada in 1940 showed an overall loss of 21,800,000 birds.

"The Ducks Unlimited plan was to establish from five to eight 'kee' (key) waters in each good duck nesting 'town-

\$

A Ten Year Box Score On Hunting at Texas Duck Clubs

ship' of 36 square miles, so that the ducks would have to waddle no more than a couple of miles before reaching safe harborage in a permanent pond.

"Methods of establishing these kee waters are varied. In pothole country DU field men and their hired or volunteer workers drain two or more potholes into one. In other sectors they build a dam and established a fairly large body of kee water for hundreds of potholes around its perimeter. Occasionally it is necessary to excavate a kee pond with dynamite about every quarter of a mile in the beds of large, shallow lakes.

"The record of accomplishment is impressive. Beginning with the 1939 season, a healthy increase in the southward flights was noted, and that increase has continued steadily. In the fall of 1944 approximately 140,000,000 ducks flew south out of Canada. The result has been more birds in the bag for sportsmen, and a lengthened shooting season in both the United States and Canada.

"We've now improved nearly a million and a quarter acres in 155 projects," Tom Main, General Manager of DU, reports. "Practically all this land has been made available to us at no cost, or at a nominal figure, by the Dominion Government, the governments of Manitoba, Saskatchewan and Alberta, by municipalities, private companies and even individuals. For every dollar the American sportsmen have sent up here in cash, the Canadian governments and people

		States and the							
Season	Datly Limit	Open Season Days	Days Hunted	Total Hunter Days	Average Hunters Per Day	Ducks	Kill Per Day Hunted	Kill Per- Hunter Per Day	Guests Per Season
1936-37	10	30	29	253	8.7	2386	83	9.4	70
1937-38	10	30	30	272	9.0	2576	86	9.5	73
1938-39	10	45	44	365	8.3	3515	80	9.7	100
1939-40	10	45	45	390	8.7	3568	80	9.2	109
1940-41	10	60	57	370	6.5	2910	51	7;9	98
1941-42	10	60	- 56	295	5.3	1575	28	5.3	62
1942-43	10	70	67	389	5.8	3679	55	9.5	69
1943-44	10	70	62	374	6.0	3474	56	9.3	82
1944-45	10/15	80	76	447	5.9	3977	52	8.9	97
1945-46	10	80	64	345	5.4	2672	42	7.7	83
Average For Ten Seasons		57	53	350	6.6	3033	57	8.7	84

APRIL, 1946



A 74 POUND CATFISH caught in a hoop ner near the Old Ferry on the Navasota River in Brazos County by Guy Blanton, Evander Hermsarling and Sam Sousley.

\$

have invested at least \$10 in land and services."

Notwithstanding the remarkable "come back" of ducks, there have been occasional fluctuations in accustomed centers of population due to purely local causes. Among these are the tropical storms that wreck or destroy vegetation along the Texas bays. Plant focds adapted to brackish water are destroyed by the high salt concentration of tidal waves from the Gulf as they lash the shorelines.

The storm of August 31, 1942, destroyed the wild celery, a valuable duck food, along much of the Texas coast. At East Matagorda Bay, where the sea swept inland carrying debris for miles, the bay water became putrid from decomposing vegetation, driving fish from the bay into the Gulf. A similar storm struck the coast on August 25, 1945, with like results.

When ducks visit the coast expecting

to find their favorite foods, they soon turn and go elsewhere if the food is missing. That is apparently what happened in Aransas and other counties after the 1942 storm. In Aransas, less than one third as many ducks were killed as in the previous seasons, and in Chambers and Jefferson counties the total bag was materially reduced. With the exception of Chambers County, where inland lakes abound, there has been no come-back in the number of ducks formerly bagged in those counties. But in Colorado County, untouched by tropical storms, there was no decline in the number of ducks taken. Eagle Lake and the surrounding rice fields have made that county the finest rookery in southern Texas. It is a veritable paradise for the ornithologist as well as for the throngs of many kinds of birds that visit the rice fields.

S. C. Smothers, manager of the Rod and Gun Club at the Lake, states that he has seen gathered in a small area as many as 100,000 geese. Of these, 90 per cent were said to be the white-fronted species. Other observers believe that in the rice field region along the coast the concentration of white-fronted geese is the greatest to be found anywhere in the United States.

With the gratifying return of more waterfowl there is still the feeling that flocks have not measured up to what might be hoped for. It may be true that the flight of ducks, as observed at some of the shooting clubs, has not been as phenomenal as in certain other years but the explanation may be found in a wider diversion to other feeding grounds. This often occurs when rains have been general over the State. Then, the conservation of flood waters by the erection of dams in the last decade seems to have given such diversion a permanent status.

Since 1937, when Ducks Unlimited began restoring water holes in the nesting areas of Canada, the United States Agricultural Adjustment Agency, operating in Texas, has been busy restoring moisture to the arid sections of the State. More than 128,000 tanks or ponds have been built on farms and ranches to shorten the distance that animals, both domestic and wild, must travel to reach water. This in turn, prevents concentrations around a few watering places and the beating down of the adjacent range. it also scatters predatory animals which lie in wait.

The ducks have found these ponds and are making use of them, according to hunters who have reported fine shooting, with pintails, mallards and widgcons the main bags. What had these ducks been eating? Peanuts! The war had stepped up the production of peanuts nearly four fold. In 1937 the Texas yield was 100,000 pounds. In 1942 it was 430,000 pounds and in 1944, 349,000 pounds in which the ducks got their share. War profiteers! you will say. Maybe so, but it just goes to show that every duck has his day.

The war did not cut down the number of ducks bagged at the wealthy gun clubs, according to figures available to the writer, but elsewhere there may have been fewer bagged because of ammunition shortage.

At a leading duck hunting club in southern Texas a tabulation of ducks killed over a period of the last ten years gives the average annual kill as 3033 ducks, which was well above the kill at the beginning of the period. The average kill per hunter per day was 8.7 ducks. That is a remarkable daily average for a period of ten years in an average of 84 guests per season. Thus the ten year average for the hunter was only 1.3 ducks under the bag limit of ten. It is a fine showing when sportsmen are willing to leave a little for manners' sake. The 1.3 ducks in that club amount amounted to 453 ducks that were permitted annually to join their flocks in the return to the nesting grounds in the north.

The tabulation for the ten years is appended immediately following the concluding paragraph. While the number of hunters is increasing from year to year, the range of the food supply is also being enlarged to meet the needs of increasing duck populations and there is every prospect that hunters will be able, as a rule, to continue the ten day bag limit, and the 80 days open season as long as ducks fly.

3-Million U. S. Aid

Congress has been asked to appropriate \$3,000,000 in Pittman-Robertson funds for the 1947 fiscal year, beginning July 1, 1946. If approved, this will represent the largest appropriation yet made under the Pittman-Robertson Act.

Under the provisions of this Act, excise taxes on sporting arms and ammunition are earmarked for wildlife restoration, but may only be expended after they have been appropriated by Congress. They are then allocated to the states through a formula based on geographic area and number of licensed hunters. The various states must then add one-third to the amounts allocated to them, after which the total may be used for projects which have been approved by the U. S. Fish and Wildlife Service.

Was This Owl Really Hungry

Michigan has come through with a meritorious entry in the unofficial national tall story derby. It's the sad tale of a twice-lost tail. First a squirrel lost it to a hunter-motorist, who in turn was victimized by a snowy owl.

Said hunter-motorist was driving along a highway at the head of L'Anse Bay, with the squirrel tail proudly floating from his radio aerial as a symbol of his prowess. Suddenly there was a rustle in the air and a great snowy owl swooped down and snatched the plume from its place of honor.

Game Is Counted

★ Continued from page 14

nation, although early explorers had found it nearly as abundant on the Great Plains as the buffalo. Through the efforts of wildlife conservationists, however, refuges for the antelope were acquired and through this and other means the population has been increased from a few thousand in the twenties to 246,090 animals.

Another animal traditionally associated with early American history, the American bison or buffalo, seems to have been rescued from the threat of extinction, although present herds are only a fraction of 1 per cent of the numbers that once roamed the plains. From an estimated population of more than 50,-000,000 at the time of the early settlements, buffalo were reduced to about 500 individuals in 1889. From this low point, they have been brought back through the efforts of Federal, State, and private organizations to the present population of 6,047 animals in the United States and some 2,000 in Canada.

Most buffaloes are now in refuges, national parks, and reservations, although under primitive conditions these animals normally made migrations of hundreds of miles each year. At one time experiments were made in crossing the buffalo with domestic cattle. The experiments, however, were not successful from the practical standpoint, for the resulting hybrid, known as a "cattalo," was infertile.

The American elk now occurs in 25 States and is considered huntable game in eleven of them. The elk, which is one of the largest American members of the deer family, once occurred in territory corresponding to 42 of the present States. Hunted persistently because of its good food qualities and excellent hide, by 1910 the elk were reduced from original millions to about 60,000 animals in only seven States. By introductions into many States of stock from Yellowstone Park and the National Elk Refuge in Wyoming, the distribution of the elk has again been extended, and the population increased to 233,714.

Although moose show a 25 per cent increase compared with 1941, the continued welfare of this animal of the wilds is in doubt. The moose live for the most part in wooded muskeg and lake regions; when muskegs are drained and lake shores lined with summer cottages, the moose habitat is destroyed. Moose are now found chiefly in Wyoming, Montana, Minnesota, Maine, and Idaho.

Grizzly bears, once found in 15 States, now occur in five. Montana has 632 grizzlies and Wyoming 572; in Colorado, Idaho, and Washington there are only a few scattered individuals.

The scarcest big-game animal in the United States, the woodland caribou, dwindled to a population of three in 1937. The following year nine caribou were introduced from Saskatchewan, and latest reports indicate that the herd consists of 15 animals, in the Red Lake region of Minnesota. The woodland caribou is the southern representative of the species that inhabits the Arctic Barren Grounds, and is closely related to the European caribou of prehistoric times, drawings of which have been found on the walls of caves inhabited by primitive man.



★ Continued from page 19

companies. Talks and discussions about wildlife by game authorities are also very good. We have a tie-up with Ducks Unlimited which gives us one bang-up program every fall. Pretty soon we're planning a program on hunting equipment of all kinds, both guns and some of the new clothes and things which are coming out.

Besides the educational angle which we try to keep in the meetings at all times, you do want some programs which are designed to be just plain fun. Like that barbecue I mentioned; then we had a fish fry one time; and every January we have our annual Quail Dinner. Each fellow is required to provide his own bird for the dinner-or eat crow if we cannot produce. I had the devil's own time this year-just fooled around and put off getting my own bird. Mary and the kiddies and I had some at home, then we gave some to the father-in-law and I really had to put the pressure on old Bob, the setter, to get mine in time. We had 204 people this year, and I was sorry that you had the flu and couldn't drive up for it. It's a big event and we got Howard Dodgen, secretary of the Game Commission and George White, sports editor of the Dallas News to be with us. When Mr. Dodgen made the announcement of the actual beginning of that Game Conservation program on the 19,000 acres, you could really see that we were going ahead. Some of the things which I mentioned earlier about Hunter-Farmer relations were the ideas which Mr. White brought to us. We had a lot of fun last year with other events, too. Like the time we had the 30 wounded soldiers from Ashburn General Hospital over for a dove barbecue at noon and then an afternoon of shooting. Those boys really did enjoy it, but I'll confess Bill, that everyone of us had a good feeling inside, too. National Dog Week celebration involved mostly contacting the school children and there were over 400 entries in the little contest we put on. The Game Census, which we took last fall in Denton County, was the first of its kind and we have an annual program for at least 5 years on it. Good basic stuff and important. Besides the Quail Dinner each year, I guess we look forward mostly to the Boys Camp. We had 28 boys there last year, from this whole section-mostly farm boys who wouldn't get such an outing any other way. Good kids, and I'll tell you the whittling contest and the Bingo games were something to see! We had a regu-

lar program with instructions in handling fire arms, game conservation and lectures on wildlife of all kinds. Then the Riding Club brought down 25 horses one day, and you should have seen the kiddies really play "The Lone Ranger." The trot line night was spoiled a little, when it rained, but the idea is sound—if you have plenty of life preservers and lights. We're lucky here tho, with the college, for the Boys Group there acted as councilors and stayed in each cabin every night with the campers.

That newspaper friend of yours certainly would be one you would want to interest, as well as the Chamber of Commerce. You will need to keep your club and its program before the whole community. They can and will help if you just show them that you are actually trying to help the whole county. Your radio station fellow is a good one, too, for if you can get someone to handle it, a club radio program would really be of interest. That's about like the little monthly magazine we put out, The Retriever. You've noticed how we try to keep interest high and give the hunting and sportsman's angle to it. Anyway, it does not cost very much and we believe it does spread the news of the club. Don't neglect the local schools either, for if you can get the co-operation of the superintendent, you have a fine chance at some educational work on "the sportsmen of tomorrow."

There's a lot of help to be had from the Game Commission and our local warden is one of the best members we have. He knows that actually we are trying for the same thing that he is working for. I do hope that Prexy Harrison and Doc Harris will come back from the Waco meeting this month with some good news about a State Organization of such clubs as ours. That's what we need, Bill, and it's bound to come some time if we can make local groups like ours function right.

We are day dreamers, too, and those dreams which may come true some day include: a skeet or trap range (watch me outshoot you then, my friend), a Field Trial course of our own around here, an annual Dog Show and a real program of visual education thru the school system.

Guess this has been pretty long, but I do hope, Bill, that you fellows will get started and have the fun that we are having here. Mary and the girls send their best to Betty and yours.

Charlie.

Can't Shoot in Churches

The Sportsmen's Service Bureau credits Don Stillman of the New York Herald-Tribune, with digging up the following from the reverse side of a Korean hunting license:

"Hunting in public streets, shrines and temples is not permitted. Firing at buildings, people, cattle and street cars is not permitted."



THE DUCKS CAME BACK: The Story of "Ducks Unlimited." By S. Kip Farrington, Jr. Illustrated by Lynn Bogue Hunt. vvi 138 pp. Published by Coward McCann, Inc., New York, 1945. Price \$5.00.

This handsome, well printed volume. will be welcomed by many sportsmen who have contributed to Ducks Unlimited, for it tells of the work and achievements of that independent conservation organization, and is in itself a contribution to the cause since 25 per cent of the royalties are to be turned over to Ducks Unlimited. It is unfortunate, however, that the author has taken the same uncritical stand concerning the part played by Ducks Unlimited as have the publicity agents for the organization. Hence the reader will look in vain for any comparative data on the part played in waterfowl conservation by the U. S. Fish and Wildlife Service (which is not even mentioned directly) and the various state game commissions. Undoubtedly Ducks Unlimited has made a real contribution to waterfowl conservation through its program of rehabilitating Canadian breeding grounds, but that is only part of the story. Such statements as this, from the author's concluding chapter, are hardly the sort to convince impartial bystanders: "It is the author's firm conviction that Ducks Unlimited is responsible for a real contribution to the phenomenal increase of waterfowl in North America over the period covering the last eight years. I would attribue but part of the credit to God. It is the conservation miracle of all times, and if D. U. didn't do the job, who else was there to do it?"

Apparently complete tables of the projects, census counts and banding operations undertaken by Ducks Unlimited are supplied, and there are interesting accounts of shooting conditions in various parts of the United States in recent years. This information, together with the photographs of officials of Ducks Unlimited, will give the contributor to Ducks Unlimited an excellent idea of the use to which the money is being put. However, it should be pointed out that the money from the sale of federal duck stamps does not go to Ducks Unlimited, which may be the impression the publication of the table of duck stamp sales without comment might convey. The proceeds of duck stamp sales go into the Pittman-Robinson Fund, which is primarily used for cooperative research and conservation projects between the Fish and Wildlife Service and the conservation agencies of the various states.

The book is generously illustrated with many excellent photographs, and with fine drawings and a colored frontespiece by the well known artist, Lynn Bogue Hunt. For these alone many duck hunters will want to have the book in their libraries.—Joel W. Hedgpeth.

\Rightarrow With Texas Editors \Rightarrow

TEXAS TRAPPERS PAY HEAVY INCOME TAXES

The misnamed muskrat, which is really a member of the mouse family, is putting the Texas trapper in the ranks of labor aristocrats. A few skilled trappers last year made as high as \$12,000 in the four-month season. Beginners made as high as \$3000, according to reports from Orange, Jefferson and Chambers counties, where most of the trapping is done in this state.

Many ranchers have found that muskrat farming pays high dividends. One Chambers County rancher following the advice of the Texas Game, Fish and Oyster Commission "harvested" 43,000 pelts last year. The fur yield from his 4000-acre ranch was 5000 pelts in 1940, the last year before he began to farm muskrats scientifically. The market prices last year ranged from \$1 to \$2 according to quality.

Muskrats burrow in the banks of rivers and lakes, their homes having many exits and entrances, all under water. In the winter they build domed houses of grass and sedges, plastered with mud. The animal is about 12 inches long, exclusive of tail, and covered with thick soft underfur, interspersed with longer stiff, glistening hairs, which overlie and conceal the underfur. The color is dark amber-brown, almost black on the back and gray below.

The muskrat, like other fur animals, is prettier in the wintertime. That is not because of the colder weather, as was long believed, but because of less sunlight. Too much light fades the fur. The colder climates do make for a higher quality fur, because the animal grows a heavier fur to withstand the more severe weather.

The best trapping territory for muskrat in the United States is in Louisiana, which is the number one fur state. However, there has been a steady increase in the fur industry in Texas in recent years and some trapping is done in Harris County.—Houston Chronicle.

MAKING THE HUNTER PAY

Texas ranchmen who lease their lands to hunters for deer and turkey hunting are asking for higher fees for 1946, according to an Austin correspondent of the *Dallas News*. On one of the more favored ranch properties, the deer hunter will pay \$200 for hunting privileges next fall, as compared with \$100 heretofore. Some ranchmen who have been giving hunting permits on a per diem basis are also increasing their charges. One landowner is asking \$250 per hunter, for the season.

The chances are that there will be no slackening in demand for privileges, no matter how high the price goes. A number of conditions are making for an increase in the number of hunters, and those who can afford to pay high for the privilege will do so.

The day is coming when there will be little good hunting, whether for deer or for small game, except where the hunter pays for the privilege. In some parts of Texas, owners of tracts on which quail are plentiful are already following the example of the ranchmen in the deer country, and charging fees for hunting on their land. Some of them are making special efforts to improve hunting conditions, by seeing that cover and feed for the birds are provided.

Many hunters feel that a land owner has no rights which they are called upon to respect, when they go out after birds. The city dweller who waxes wroth when a neighbor's lad chases a ball across his carefully tended lawn may be found shooting quail near a farmer's doorstep and assuming that he has a perfect right to do so. If farmers undertake to protect their own interests and to obtain some revenue from those who wish to hunt. the selfish, sometimes arrogant individual is to blame. It will not be surprising if farmers generally do as the hill country ranchmen are doing-charge the hunters all that the traffic will bear.

-Wichita Falls Times

Hints

★ Continued from page 20

the regular diet of all fresh water game fish. This is particularly evident in midsummer when, in flagrant disregard of minnows and imitations alike, fish of every species break water in obvious quest of insect food.

Some oldtimes will insist that jumping fish mean playing fish—and that playing fish won't bite! Actually fish don't find much time to play. They're continually fighting for existence and the biggest part of that job is getting something to eat. During summer, when streams abound in insect life, it is far easier for the fish to pick these helpless creatures off the surface, or as they slowly sink and settle to the bottom, than to chase minnows and other small fish.

Check on this. At dusk on some quiet day in summer, watch the insects that hatch in countless numbers and variety on lakes and streams. Watch the flash and roll of striking fish as bugs, creepers and flies are consumed! Every swell of disturbed water, every widening ring and ripple is a feeding fish.

Fisherman Wise makes his doughball bait as follows: "One cup white flour, two teaspoons vanilla extract, two to four saccharine tablets, and white longfiber cotton. The cotton is worked into the dough and the mixture is kneaded until very tough. Balls are then made about one inch in diameter. These are dropped into boiling water and left there until they float, usually about 10 minutes. They are removed and allowed to dry in the sun. When these are placed on the hook the point should be slightly exposed."

TEXAS GAME and FISH

takes great pleasure in announcing the appointment of two national representatives to better serve manufacturers of hunting and fishing equipment, and their advertising agencies, who really want to bite off a big chunk of one of the most juiciest markets in the world.

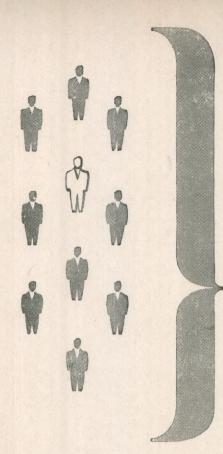
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Every employer can write in his own set of reasons why the Payroll Savings Plan should be continued as a part of his personnel relations program, but the principal advantages are obvious:



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An opportunity for the employee to maintain his "share in America" with the safest, easiest, most profitable investment he can make.

An opportunity for the returned veteran to share in the Payroll Plan's varied benefits.



Your employees will require little "selling" on the idea—they are accustomed to their monthly saving habit. With the Treasury Department's savings bond program now in peacetime operation, your partnership is again invited to continue this systematic, convenient means of contribution to a prosperous peacetime future.

The Treasury Department acknowledges with appreciation the publication of this message by

