


Texas Game and Fish

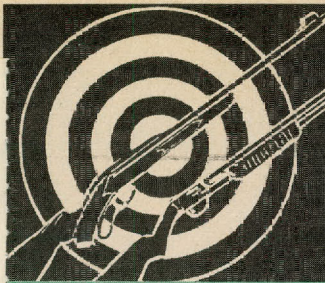
JANUARY 1962 20 CENTS



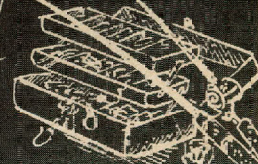


One of the most fascinating views in the state can be found high in the Sierra Diablo Mountains along the Victoria Canyon Rim. Here amid the cholla, lechuguilla and yucca a person can peer down at the winding roads and trails in the valley far below and across the wide canyon floor to the mountain ranges distantly cloaked in a bluish haze. On a calm day you can hear coyote packs yapping far out of sight in the chase of rabbits across the arid land. Without squinting you can see over 75 miles of Texas in three directions.

—Photo by Curtis Carpenter



Long shots Short casts



HEED THAT SPEED: One reason why hunters often miss or cripple flying waterfowl instead of killing the birds cleanly is that they underestimate their speeds. Mallards and spoonbills can move 50 to 90 feet per second when well underway. Both bluewing and greenwing teal whiz by at 80 to 90 feet per second, while pintails, widgeon and gadwall are only slightly slower at 60 to 80 feet per second. Canada geese, probably because they are usually seen at high altitudes, appear to be loafing along but they are actually moving 70 to 90 feet per second. Two of the fastest of all ducks, the redhead and canvasback, wing by at 75 to 90 and 90 to 100 feet per second respectively.

INCA THINKING: In the ancient Peruvian civilization, the Inca rulers and their Indian subjects held the mountain lion in contempt. These people had spectacular hunting excursions to gather meat and wool from vicunas and guanacs that inhabited the region. The hunt was similar to the jackrabbit and coyote drives of the western U.S. held much later. As many as 30,000 Indian hunters would take part, forming a great circle 40 to 70 miles in circumference. As the human ring closed, thousands of animals, including mountain lions and other predators, were forced to the center of the ring. The vicunas and guanacos were either shorn for their wool or killed for meat. Also, many males and females were released to provide brood stock for the next hunt. All predators caught were killed, as "creatures that did harm to the game." The hunt was held in each area only once in every three years, and this rotation plan maintained a good supply of game. This is probably the oldest authentic record of game management in the New World, and included the control of the mountain lion.

CAUGHT RED-HANDED: For years, one of the most difficult law violations to detect has been robbing lobster pots. If a commercial lobsterman preys on the traps of his fellow fishermen and is found out, the other lobstermen usually take care of the situation by cutting loose all his traps, thus putting him out of business. There is no such deterrent for others, and the penalty usually is low. The Criminology School of the University of Rhode Island has come up with a method to halt pot lifting. Rhodamine B is a chemical invisible to the naked eye but readily seen when ultra-violet light is applied, and mixed with an oil base, it adheres to the fingers. In several cases where pots have been treated with this mixture, suspects have been proved to be thieves by the fact that an ultra-violet light lit up their hands like Christmas trees.

IODINE INVESTIGATION: The whitetail deer is aiding scientists in solving some of the problems of this nuclear age. Thyroid glands from freshly killed whiterails are being used to measure the fallout of radioactive iodine from Russian testing. The radioactive material, designated Iodine 131, is formed in nuclear blasts with other fallout elements. Deer pick it up while drinking water or eating twigs, grasses, and other vegetation. The thyroid gland is a storage point for the iodine in the body. All other mammals and fish, amphibians, reptiles and birds, collect and store iodine. However, deer are being used for the study because the scientists involved already are studying them for other purposes.

VOCAL REVELATION: Papa dove likes mama dove. He keeps quiet when she's around, but when she wings out for a flight around the field, he lets the world know his concern by his plaintive and persistent coos. This was uncovered in a recent study of cooing of penned mourning doves and holds implications for the annual dove census, conducted by state and federal wildlife agencies on the basis of coos heard from predetermined listening points. Male birds were found to coo 10 times more frequently when penned females were removed from their mates. If these results can be extended to the field, then any precise interpretation of mourning dove call count data requires information on the ratio of mated to unmated birds.

MAY 19 1962

Birthday of a Magazine

ON THE OPPOSITE PAGE you will notice that this is the first issue of Volume XX of TEXAS GAME AND FISH, our twentieth birthday.

It was a baby of World War II. According to the TEXAS ALMANAC, there were 144,026 babies born in that year of 1942, only a few months after America's entry into the tremendous global conflict.

The TEXAS GAME AND FISH magazine is still a young magazine in years, as compared with many of the old standbys. Like any growing boy or girl, it has had its struggle. It still has its problems and, although it has successfully passed over many hurdles, there are others ahead.

We like to think of TEXAS GAME AND FISH as a young magazine, with an adult approach to everything that has to do with our renewable resources today.

Under such a program it has had a steady growth. For a number of years, the subscription price was \$1. A few years back the price was increased to \$2 for a single year, and there was a slight drop-off in circulation. However, with strong emphasis on publishing information of interest to readers, the circulation took on new life and today it is just under 40,000, which is the highest it has ever been.

During the past year, we turned the microscope on the publication

and checked a sample group of readers in an attempt to learn how we could improve it. In the first place, we found some very surprising facts. TEXAS GAME AND FISH magazine ranked highest among a number of others read by Texans.

We found another interesting thing. Many of those sampled first learned about the magazine from a friend who liked it and persuaded them to subscribe. We found a goodly number who had been subscribers for more than ten years, and more than half of the total number sampled had been taking the magazine for three to four years.

Most encouraging of all, however, was the fact that very few readers throw their copies away. Most of them keep the magazines in permanent files. The majority of the others give them to friends or send them to hospitals or schools.

We also learned that the readers have a varied interest, but that they are vitally concerned with questions of conservation and education in the field of renewable resources. Perhaps that's why a great many more read the magazine for interesting information than for entertainment, or because it helps them in hunting and fishing.

As we look at the birthday of TEXAS GAME AND FISH magazine, we are reminded of the report just released by the Bureau of Cen-

sus on the characteristics and economic value of those who hunted and fished in Texas in 1960. This report shows that of the 1,189,000 between the ages of 12 and 17, and 947,000 between the ages of 18 and 24, 516,000 either hunted and/or fished.

This indicates a tremendous potential number of persons who would be interested in reading TEXAS GAME AND FISH magazine. Our aim is to reach as many as possible, and to give all of our readers, new and old, the best possible publication of this kind. The magazine is designed to entertain, to instruct, and to increase not only appreciation of the outdoors, but also awareness of our responsibilities to it.

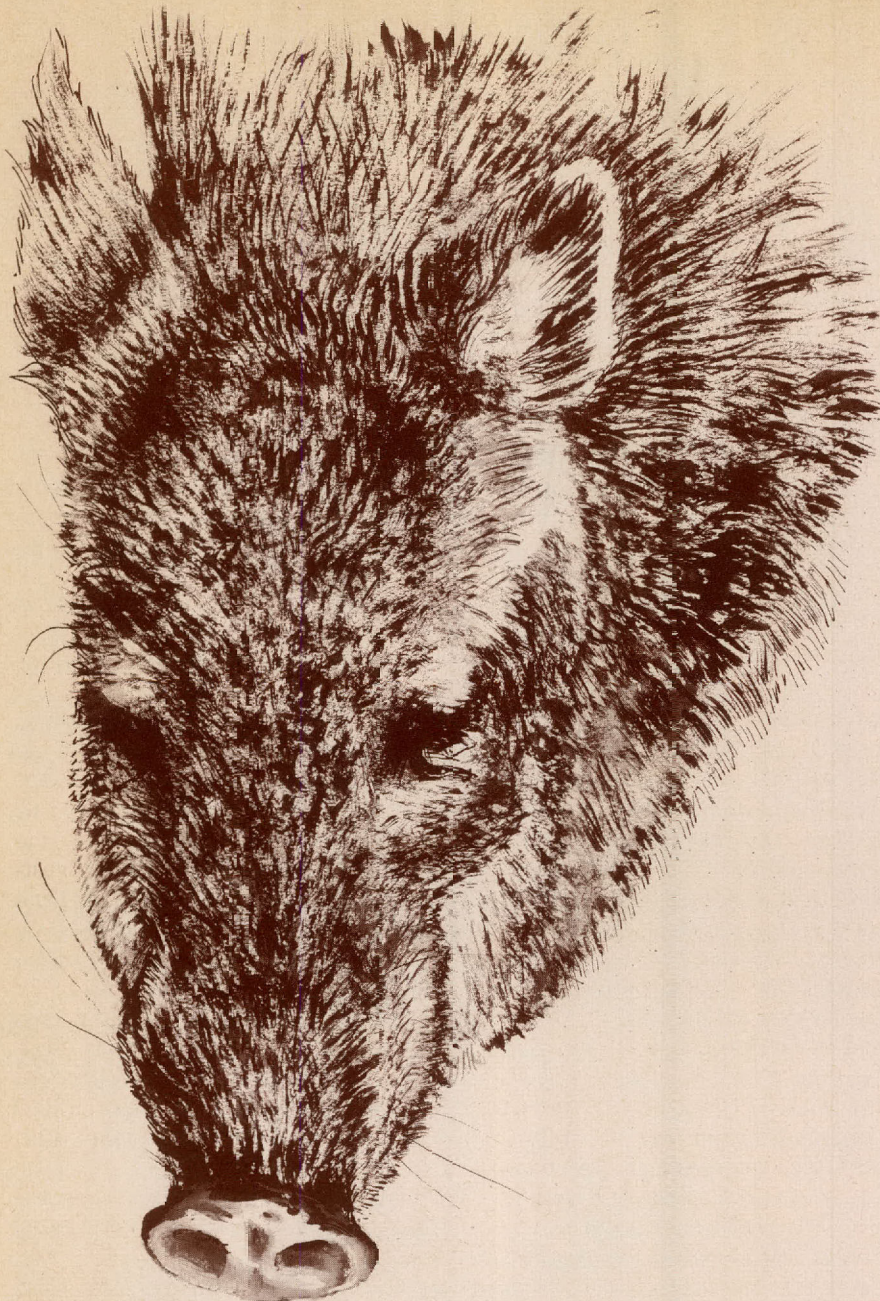
Many of you from time to time have written us letters of commendation and appreciation. Quite frequently we get critical letters, too. Someone will disagree with something we have written. Quite often we make mistakes. You've been very kind about all these in the days of our youth.

Now that we are getting older, we'll try to do even better. But we do need your continued help and cooperation. We are always glad to hear from you. We are particularly glad when you tell us you have told some friend about the magazine, or when you send in a subscription for someone else you think might be interested. **

by HOWARD D. DODGEN

Executive Secretary

Game and Fish Commission



THE SUMMER SUN was down, and a haze of dusk shrouded the tasajillo thickets and blackbrush ridges in one continuous, darkening shadow.

We were about to call it quits when Mike, the big, white hog-dog, struck the javelina's trail and emitted a throaty bark. Instantly he disappeared over the bank of a dry creek bed.

Rain hadn't fallen in the dense brush of South Texas in weeks, so the powdered dust puffed like smoke under our boots as we trotted after Mike.

Such trailing would have been impossible with most game animals in such an arid setting. But the excited javelina had saturated the air with its musk, leaving an indelible trail for the dog to follow.

The pig scampered only a short distance then took refuge in the nearest rock depression large enough to partially conceal its body. When we arrived on the scene, Mike had it bayed in a shallow crevice on a steep, boulder-strewn slope.

We dispatched the little pig with one shot from a .22 caliber revolver.

You may wonder how we were able to kill such a vicious animal with a .22 or why the pig didn't charge us when we had it cornered. If so, you've been reading too much bunk about these brush country pigs.

The javelina (pronounced have-a-leëna) is the only true wild pig native to the United States, and it is found primarily in Texas, Arizona and New Mexico. From the southern sections of these three states the javelina (or collared peccary, so named because of the light gray band across its shoulders) ranges throughout much of Mexico, Central and South America.

The javelina is not a vicious man killer. It is a shy, elusive, nearsighted animal that will retreat, if possible,

by **DAN KLEPPER**

San Antonio Express-News

POTENT PECCARY?

Biologists transplant

Bay Fish to Western Reservoir

by NORREL WALLACE
I & E Officer, Region 1

A LOT OF PEOPLE in the Trans-Pecos region of Texas fish. But, they do most of their fishing in other parts of the state. A few lakes created by dams on the Pecos River have excellent white bass fishing; however, white bass reproduction has been sporadic. Likewise, other species of fish have not done too well.

These lakes are very important to the Trans-Pecos region. Aquatic biologists of the Game and Fish Commission have spent considerable time during the last four years surveying and analyzing the waters. Most of their work received little attention until their tests showed progress. Then fishermen in the area became very interested. For the first time in many years, citizens there visualized good fishing waters close to home.

For years all types of freshwater fish had been released in the lakes in large numbers, but only a few remained and they were undernourished and incapable of reproducing.

Chemical analysis of the water showed the Pecos River and the springs that feed Imperial Reservoir to be extremely high in mineral content, principally chlorides. Imperial is relatively shallow and subject to high evaporation loss during summer months. The chloride content increases even higher because of the rapid evaporation. After two or three years the water in the lake, if not replenished by fresher waters from the river and springs, becomes so highly saturated with chlorides that freshwater fish cannot survive.

Imperial Lake is unprotected and spawning procedures of freshwater fish are disrupted by the wind as it buffets their eggs against bank and bottom.

Draining the lake for irrigation water continually reduces the livable habitat and destroys many spawning sites.

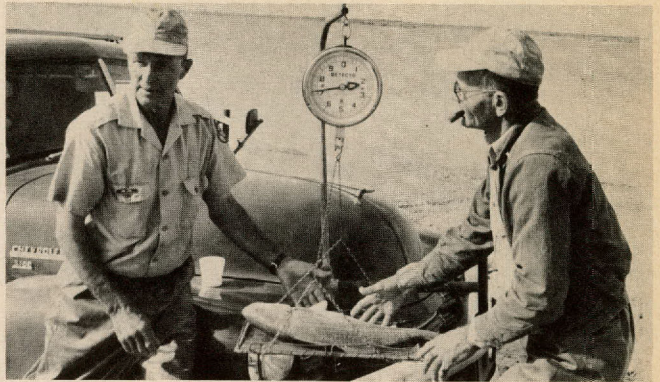
When desirable fishes began to disappear, rough fish, principally carp sucker and shad, quickly cause a serious unbalance.

Aquatic biologists decided to introduce saltwater, predator-type, game fish already accustomed to high mineral content waters. Possibly they could survive in the waters of the Imperial Reservoir.

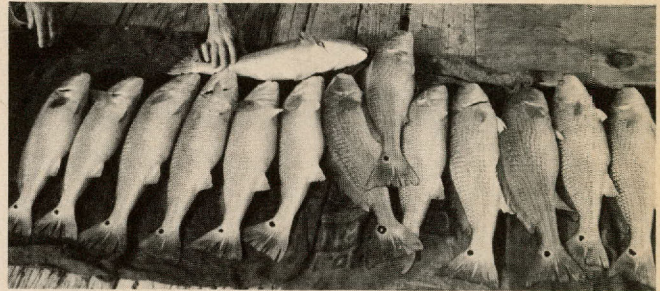
In April, 1961, 246 redbfish, 25 flounder, 50 speckled trout, and 500 golden croaker fingerlings were transplanted from the Gulf Coast to Imperial. Since the project was very different from usual methods of introducing a fishery, biologists checked the lake constantly so accurate records could be maintained on the success or failure of this unusual venture.

The redbfish fingerlings were only four inches long when released. In five months several one-pound redbfish were caught. In their native habitat, redbfish grow very fast and often reach 40 pounds in weight at maturity. Fifteen months after the release, four-pound redbfish were

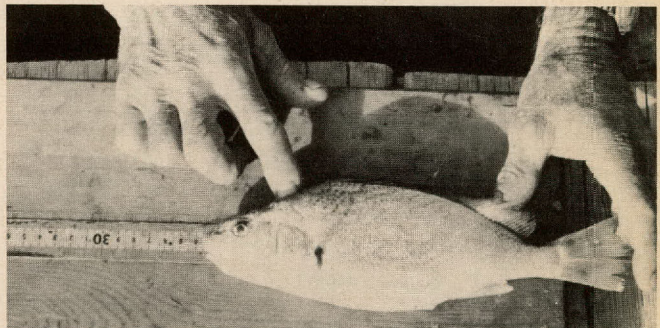
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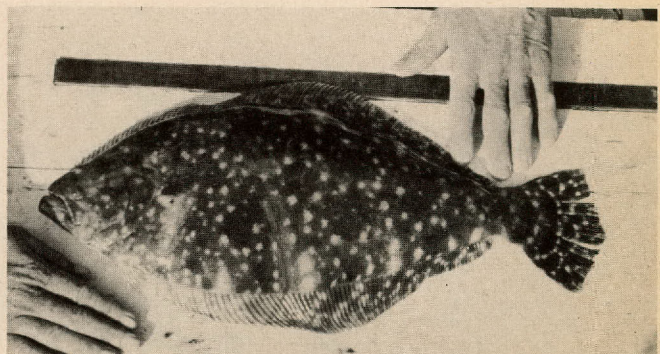
Imperial Lake redbfish only 18 months old tipped scales at 7¼ pounds.



These redbfish caught during the check were returned to the water.



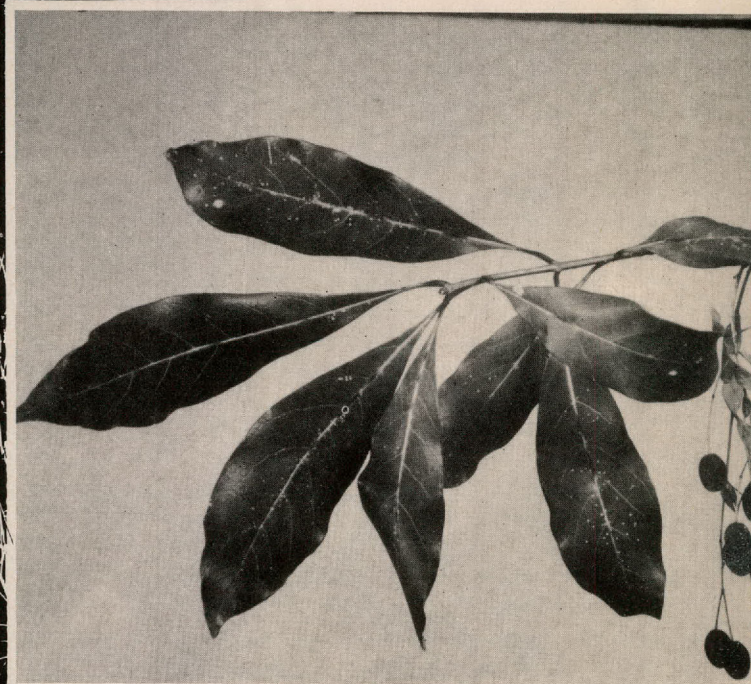
A number of golden croakers were netted averaging about ¾ pound.



The 18-month-old flounder weighed in at 4 pounds or better.

Deer

by DAN LAY
Wildlife Biologist



Fringetree

started using Civilian Conservation Corps crews.

A more recent forestry development is the extreme concept that every living plant in the forest may, during dry periods, compete with pines for moisture. This is leading to an increasing use of fire and herbicides to control smaller hardwoods.

Although early timber stand improvement was confined mostly to overstory hardwoods and the major loss to wildlife was in acorn production, the present trend promises to cause reductions in many smaller trees, shrubs, and vines and in their fruit crops.

Land operators who desire to keep some wildlife carrying capacity should save some of the lesser mast producers as well as some oaks.

DOGWOOD

Dogwood in bloom attracts many visitors to the East Texas highways

THE DEER HUNTER in November often finds his game where the acorns are falling, just as three months earlier he might have found those same deer gathered to feast on the purple fruit of the French mulberry.

Acorns are widely recognized as important food for deer and other wildlife, but there are many other important fruits of trees, shrubs and vines. In fact, almost every available species is eaten by East Texas deer—even pieces of hickory nut.

Large trees important for their fruit or mast include oak, beech, black gum, tupelo gum, and hackberry.

Small trees include dogwood, fringe, chinquapin, blue haw, red haw, may haw, holly, deciduous holly, tree huckleberry, sweetleaf, storax, wax myrtle, plum, honey lo-

cust, mulberry, and persimmon.

Important shrubs are French mulberry, gall berry, sumach, viburnum, blueberry, and coral berry.

Deer relish the fruit of rattan, grape, smilax or greenbriar, honeysuckle, blackberry, and most other vines.

Recent studies by the Game and Fish Commission show that some of these species are important enough to justify their space in the forest. And most of them have an advantage over the oaks in that they can grow under pine trees.

There is widespread concern for the reduction in hardwoods, especially oaks, which has resulted from the intensified effort to grow pine trees in East Texas. Cutting, girdling, and poisoning hardwoods to favor pines began in Texas in the late 1930's when the U.S. Forest Service

Fruit in Pine Woodlands



French Mulberry

every spring. It is not known whether deer, turkey and squirrel admire the white blossoms—but all three do enjoy the red fruit that follows the flowers and ripens in early winter.

Deer eat the dogwood fruit as long as the fleshy part is sound. Turkeys scratch out the hard stones, which may last for several years.

Dogwoods start blooming and fruiting when they are between five and nine years old. We have never observed a dogwood crop failure; neither have we seen much loss of immature fruit from summer to winter.

This dependability of production may be contrasted with oaks, where a good crop every third year is normal and even a good crop may be lost to insects before maturity.

Another contrast is that most species of oak require part of the overstory space in a forest, thus re-

ducing the space for pines. Dogwoods, on the other hand, do best in partial shade and can grow in almost full shade.

Production from 26 trees, diameters of which ranged from 1½ to 8 inches and averaged slightly under 4 inches, showed that about 1,083 ripe fruit made a pound and that trees averaged 3.3 pounds each. This is the equivalent of about 38 pounds per square foot of basal area, a measure of the cross section of tree stems.

An acre often carries more than 100 feet of tree basal area; thus, 11 dogwoods 4 inches in diameter and yielding 38 pounds of fruit would comprise less than 1 per cent of the stand. By contrast, one 14-inch oak would occupy a square foot of basal area but would rarely yield 38 pounds of acorns.

No other East Texas plant tested approaches dogwood as a source of



Kentucky Viburnum

calcium for wildlife; its fruit yields 1.10 per cent calcium content and its leaves and twigs from 2 to 2.9 per cent, air dry basis. Nor is there a cheaper or more efficient method of liming the generally acid topsoils. Beneficial effects of dogwood leaves and litter on the soil include improved water penetration and holding capacity. Thus, dogwoods contribute to both the pines and wildlife.

For those especially interested in dogwood, planting seedlings is practicable. Liner stock 6 to 12 inches in height may be obtained at approximately \$3 per hundred.

It would be better for wildlife and for the forest itself to leave dogwoods undisturbed wherever they occur.

FRINGETREE

Fringetree is a shrub or small tree known in some localities as Grand-



Dogwood

father's Gray Beard because of its delicate, drooping white flowers produced in early spring before leafing. Not generally recognized is the fact that it produces fruit enjoyed by deer and many other animals.

Fringetree fruit is a dark blue



Chinquapin

inches in diameter and 16 years of age. They produced 692 fruit each or slightly over a pound per tree, as there are about 631 fruit per pound. Fresh fruit is 69 per cent flesh, 31 per cent seed.

Fringetree is adapted to a wide range of soil conditions. It may oc-

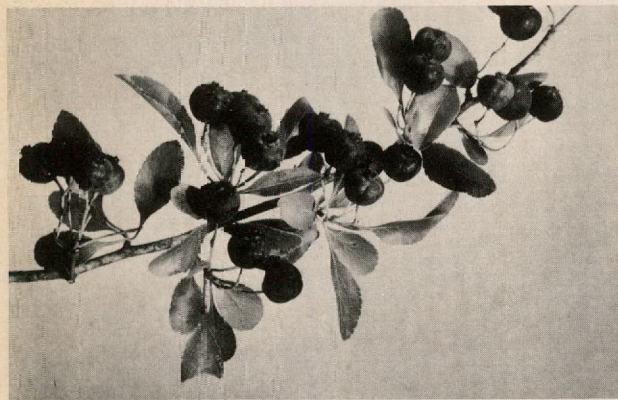
especially where fires have occurred, French mulberry may be the dominant shrub. It ranges throughout well drained pine-hardwood sites and extends almost to the western edge of the Texas post oak belt. Although it may wilt during droughts, it persists on sites that produce only scrub post oak. On the moist side, it is found with white oak, dogwood and holly.

A series of 42 plants studied averaged 3.8 feet high and produced 1,771 fruit, or a quarter pound each. There are about 7,322 fruit per pound. Its flat, white seeds are not digestible and have been found in deer pellets every month from June to March. The fruit normally ripens in early August and lasts through September—which often is the critical time on a heavily stocked deer range, especially in dry years.

Because a good stand may produce as much as 50 pounds of fruit per acre, French mulberry should be recognized as a valuable wildlife plant. Cattle compete with deer for its leaves and twigs, as well as for its fruit.

BLUEBERRY HAWTHORN

Blue haw, as this small tree is generally known in East Texas, is the only member of the red haw group which produces blue fruit. Others in the group include may haw, red haw, and parsley haw. All have values to wildlife similar to those of blue haw.



Blue Haw

date-like drupe in loose panicles, which ripens in mid-July and is available until September. Deer, however, manage to obtain some as early as June and as late as November. They apparently eat all they can find.

Fruiting starts when the fringetree reaches about one-half inch in diameter. Production varies some from year to year, but there have been no crop failures in four years of observation. Production of 41 trees studied in 1959 amounted to 65 pounds per foot of basal area.

The study trees averaged 1.75

cur on dry sites with post oak and black jack, or on moist sites with holly and willow oak. This is a shade-loving species that offers little competition to pines or other trees, and the fringetree should be left in the forest for its wildlife and scenic values.

FRENCH MULBERRY

French mulberry is a shade-loving shrub best known for its clusters of small purple fruit at the base of each pair of leaves. Deer love this fruit, as do quail, turkeys and squirrels.

Under heavy stands of pine, and

Roadside counts of deer on a certain route in the Boggy Slough Hunt Club in Trinity County dropped from 120 to 40 between the middle of July and first week of August, 1961. Investigation disclosed that the deer had moved to the flats of tight soil where the blue haw fruit was falling. As many as 25 deer were observed from one spot picking up blue haw fruit. There was abundant deer sign under almost every tree.

Late summer, before acorns ripen, may be a critical time on a deer range and blue haw deserves recognition as a most important tree for deer. For this reason, it is more valuable than other red haws because the others fruit at a time when a far greater variety of food is generally available.

A series of 10 study trees averaged 3 inches in diameter and 14 feet in height. They produced 2.4 pounds of fruit per tree and averaged 936 fruit per pound. That is 46 pounds per foot of basal area. In the last three years, there has not been a crop failure.

Blue haw normally occurs on soils of marginal value for pine, too wet in winter and too dry in summer. Where it does occur with pine, there is little competition because blue haw has a thin crown which produces little shade. Where wildlife values are considered, it should be left undisturbed. On the typical "haw flat" it is questionable whether pine can be successfully established; therefore, the blue haw should be left for reasons of economics, if for no other purpose.

FLATWOODS PLUM

The flatwoods plum is another type of shrub and small tree which provides palatable variation for the diets of deer and other wildlife. All are readily taken.

The production of a small series of flatwoods or sloe plum was observed. Trees averaged 3 inches in diameter, 13 feet in height and 578 plums or 1.18 pounds of fruit. This is about 23 pounds per foot of basal area.

Flowers develop in March and April and fruit ripens in July and August. Fairly moist upland pine-hardwood sites are preferred, and normally only an occasional tree is found. Retention in pine stands is justified if there is any interest in wildlife. Removal of these trees would contribute little, if anything, to pine growth.

SWEETLEAF

This is a small tree which occurs on better quality pine-hardwood sites. Common associates are black gum, sweetgum, and dogwood. Sweetleaf flowers in April and matures fruit in late summer. Its fruit lasts until December and is used to some extent by deer.

The 38 trees studied averaged 2.4 inches in diameter and had about 1,398 fruit or about two-thirds pound each. Fruit develops on twigs from the previous year and is dark blue in color.

Although sweetleaf fruit has some value for deer, squirrels and birds, its principal use is as a browse, which remains green almost all win-

ter. Cattle and deer relish it. Sweetleaf serves as a good buffer for pines because the pines will not be browsed as long as sweetleaf is available.

KENTUCKY VIBURNUM

Kentucky viburnum is one of several black haws which grow in East Texas; all are useful to deer and other wildlife. The Kentucky species grows on fairly moist sites under such trees as water oak, black gum, and loblolly pine. It flowers from April to June and the terminal clusters of blue-black fruit ripen in July and August, with some still available in November.

Viburnum fruit is sought by deer, and its leaves and twigs also are highly palatable. Year-to-year production is reasonably constant, and no crop failures have been observed. The 51 plants studied had an average height of 8 feet and production of 415 fruit or about a half pound each.

Where the Kentucky viburnum occurs in thickets, fire may be necessary to open the site for pine regeneration. But once the pines are established, the understory of viburnum does not impede their growth. Black haws add variety to the wildlife table and should be kept in the forest where wildlife values are considered.

These are just a few of the obviously valuable plants in the East Texas forests. Persons who destroy them should first make sure their reasons are sound. **

Contribution of Federal Aid in Wildlife Restoration Project W-80-R.



Sweetleaf



Tree Huckleberry

Hagerman Wildlife Refuge

by JOHN CLIFT
Denison Herald

THE HAGERMAN National Wildlife Refuge on Lake Texoma soon may have more oil and gas wells than ducks and geese.

Unfortunately for the future of the migratory fowl, all money from the gas and oil production reverts to the owner of the land at the time it was purchased.

At the rate the waterfowl is diminishing, the time may come when there are more wells on the refuge than birds.

About 70 per cent of the total acreage on the refuge is upland area with the rest under water.

The refuge has 320 acres planted in duck and goose food, including

wheat, spelt, corn and maize. Similar crops are planted on a share-crop basis on another 320 acres.

The big flights of birds don't come in until the food is depleted at the Tishomingo Refuge at the north end of the lake. The peak flight came about the last week in November and held up through the first two weeks in December. This coincides with the Texas duck and goose season and provides some pretty fair shooting in the Texoma area.

The large number of oil and gas wells hasn't affected the operation. Drillers are very cooperative in keeping close tabs on their drilling and production, and at the first sign of

a leak they rush in and fix it. There hasn't been any pollution problem at all.

Blayne D. Graves took over as acting manager following the death in September of C. A. (Bud) Keefer. He, in turn, has been replaced by Fred L. Bolwohnn, who came here from Salt Plains Refuge in Oklahoma, where Graves has been assigned as assistant manager.

Graves blamed the industrial expansion and urban sprawl for the reduction of nesting grounds in the north and east. "When you take away the nesting grounds, you are eliminating the birds. It is that simple," he said. "Efforts are being made to preserve what we have, but it is going to be a long, expensive struggle."

Graves pointed to flights of ducks and geese into the Hagerman Refuge only five or six years ago that reached a peak of 250,000 to 300,000.

"Today, our peak flights are only one third of that, and it can be blamed on lack of nesting grounds. Most of the birds die as compared to the number moving to additional flyways. All of the flyways are reporting a decline," he said.

Graves said it is refuges like the two at Lake Texoma that help preserve the population of waterfowl.

"Our purpose is not to harbor the entire flight and keep hunters from getting any shooting. Rather, it is to give the birds a haven where they can rest from long flights. I think history will support the fact that birds move out by day and return here by night, providing some excellent shooting all around us," he said.



Great flocks of geese find food and rest on the refuge during their long journey south.

Late Manager of Hagerman Was True Friend of Whoopers



Bud Keefe always carried a notebook with him and had daily entries to keep his count up to date. Here Keefe, right, chats with a visitor to the refuge.

C. A. (BUD) KEEFER, manager of the Hagerman National Wildlife Refuge on Lake Texoma, died last Sept. 12, with few persons outside refuge management work realizing that his efforts were primary in stimulating national concern in whooping crane preservation.

Keefe spent several of his 23 years of wildlife work in a concentrated effort to save the diminishing whooping cranes from extinction and was concerned with the fight until his death.

He was manager of the Aransas National Wildlife Refuge near Austwell when in 1948 he pooled his efforts to save the whoopers with Bob Allen, an aquatic biologist for the National Audubon Society of Tavenor, Fla. Keefe, however, had become seriously interested in the whooper cause in 1945 when a crippled whooper spent the winter at the Aransas refuge.

Allen had been assigned by the Audubon Society to work for whooper preservation. He had traced them from their nesting grounds in Canada to the Texas coast, talking to hundreds of people along their flight line.

In an interview Keefe recalled, "One Saturday afternoon in the spring of 1948, Allen dropped in at the refuge and we got to discussing the whoopers nesting in captivity. The only two captive birds we knew

of at the time were in the New Orleans zoo. I told Bob that we had an area a mile from the refuge that we could convert into a winter nesting ground for the whoopers. He said he'd write the National Audubon Society to see if the birds could be borrowed."

Keefe got the okay to use the land and the money to put up an eight-foot hog wire mesh fence around a 50-acre area, and Allen got the birds on the agreement that the area would be accessible and properly fenced.

It was an uphill fight for the pair and it will be a long time before the whoopers reach a number that will insure their survival. One of the problems lies in the habits of the birds. The female lays no more than three eggs, and there is no record of a hatch of more than two.

There were 33 known whooping cranes when Keefe and Allen started their project. The number dropped to 24 before "operation survival" started paying off. The number of whoopers began increasing. Four sets of twins were among the first 27 whoopers to reach Austwell in the fall of 1958, 10 years after the effort was initiated. This year the whooper population was still gaining. Aransas refuge officials expected 45, including four new baby birds, to return this year. Keefe died, however, before the

report of the increase in this year's flight reached him.

Keefe, the son of a West Virginia jeweler, had varied occupational experience before he began wildlife work. He studied law at West Virginia University, but upon completion of his work he did not take the bar exam. Instead, he joined his dad in business. He didn't enjoy the business, however, and took a job with the Baltimore and Ohio Railroad. Later, he took a three-months leave of absence to travel with a friend. The journey ended in El Paso where he went to work as an accountant.

When the bottom fell out after the 1929 crash, he went to New Mexico prospecting for lead. Then in Bocque del Apache, N. M., he got into the cattle business. Eight straight drought years, however, ruined him, and when he was offered a job with the National Fish and Wildlife Service, he took it.

During his wildlife career he worked at seven refuges. He became manager of Hagerman refuge in 1951 and remained there until his death.

In mid-October, George E. Barclay, regional refuge supervisor of the U. S. Fish and Wildlife Service of Albuquerque, presented to Keefe's wife a posthumous award for her husband, lauding his 23 years of wildlife work. **



A Big Day at BALMORHEA

by CURTIS CARPENTER

WE FLASHED OUR lights across the still, cold water. Thousands of silvery reflections bounced back like twinkling stars in a tar-colored sky. The biologist's survey was right; Balmorhea Lake was saturated with rough fish.

As the outboard slowly pushed us along, we had a chance to survey the results of the treatment. Carp suckers literally covered some sections of

water. They appeared to be from one mold, about six inches long. We covered most of the 600-plus-acre lake before we cut the motor. I could have counted all the game fish I saw on one hand, and not one of them was under six inches. The bass were all one pound and up.

Early Saturday morning Herman Stroman, aquatic biologist, Norrel Wallace, I&E officer from San An-

gelo, and I cruised over Balmorhea Lake once more observing the lingering effects of the chemicals. Nothing new. A few large carp here and there and once in a while a dizzy black bass. Most of the fingerling carp suckers and shad had vanished. "They either drifted ashore or settled to the bottom," Stroman explained. I peered down through the shallow water below. He was right; the lake floor was coated with dead and dying fish.

Hundreds of people from miles around crowded the lake in search of table fish. Most of them understood that the event was not designed for entertainment, but for the sole purpose of killing all fish in the water. However, the disappointed look on many faces convinced me that some had expected a show.

Every so often some lucky fisherman with a mile-wide smile weighed in an old grandpa bass that had outsmarted fishermen for a decade. A few big cats were scooped up, and some nice stringers of smaller bass and cats were salvaged for the deep fat. Since the chemicals used left the fish safe for consumption, there was no danger to those who dined on them.

All the game fish seemed to be too large for last year's crop. I saw no sign of a new generation to replenish the old timers. The spectators began to realize this, as evidenced by their conversation. The lake was ripe for a complete kill, and it appeared that this was happening.

By nightfall, several bass over eight pounds had been taken from the water. How I would have appreciated one of them on the barb of a treble-hooked plug. No doubt, they had fooled better fishermen than I.

Larry Campbell, biologist in charge of the project, later reported that the treatment had been a 100 per cent success. He said except for the canal which carries warm spring water into the lake, the entire impoundment was affected the first day. A man was sent back to the lake the second day to treat the canal, where a number of fish had taken refuge. With that, the lake should be ready for restocking in January.

When the time comes, Campbell explained, there's a possibility that



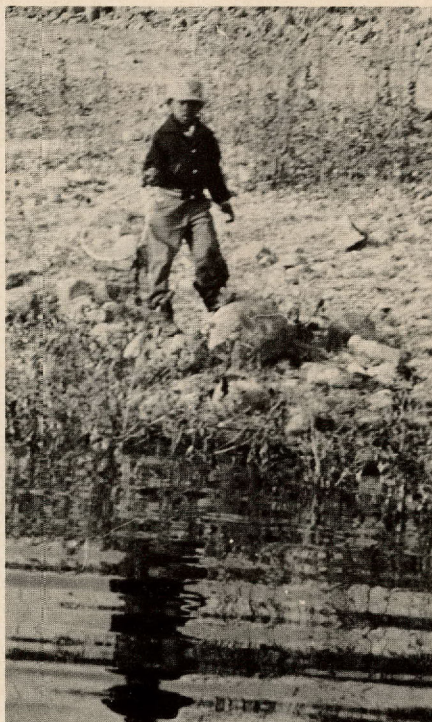
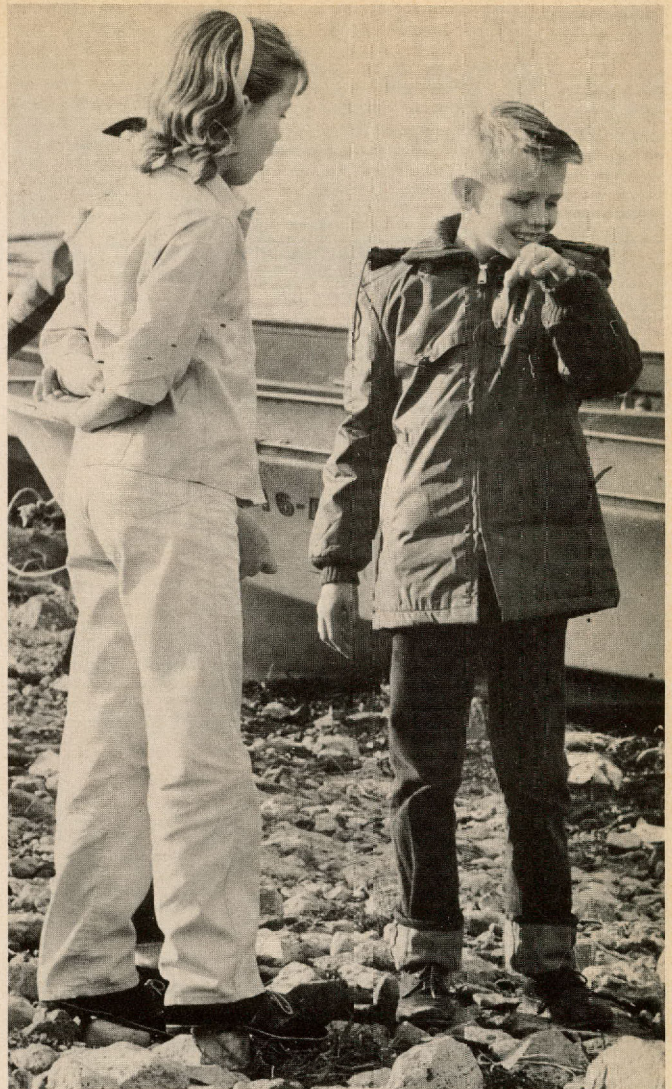
Mrs. Travis Phillips of Monchans was one of the few to find anything worth keeping. Her bass weighed 8 pounds 9 ounces.

fingerling or larger game fish will be used instead of tiny fry. This would shorten the time until fish could be taken.

Balmorhea Lake is nestled in the high country between Fort Stockton and Van Horn just off Highway 290 near the town of Balmorhea. When approaching the lake, visitors get a glimpse of one of the most beautiful sights in Texas. The picturesque Davis Mountains stand majestically in the background. On a breezeless spring day, their charm is reflected in the mirrored waters of Lake Balmorhea.

When fishing returns to this jewel in the mountains, it should grow into a fabulous fishing lake. The facts prove that the people made a wise decision when they agreed to treat the water for a complete fish kill. In a year or so, fishermen will flock once more to the popular Balmorhea oasis to fill their stringers. Plan to be right in the midst of them. In the meantime, when you're in the area, stop to glimpse its scenic wonder, and to take a dip in its refreshing water. **

The banks were trimmed with tiny shad and other rough fish. Some of the youngsters had an exciting time.



The search was on for table fish. It was conducted by fishermen of all ages with dipping devices of all sizes and shapes.

June Glover wasn't a bit afraid to tackle this big cat. It was just one of the several caught on the lake during the kill.



The DUAL-PURPOSE Dog

by GEORGE KELLAM
Ft. Worth Star Telegram

MANY QUAIL HUNTERS may see what to them is a new breed of bird dog in action.

It'll appear to be something between an English setter and a Cocker spaniel in size but its white and orange or white and liver coat

will be shorter than either.

When it scents quail it'll point with head high, usually, with rear legs firmly planted and a forefoot lifted.

This dog will have little or no tail!



Von Sigmund's Bob, shown at left, was sired by another national Brittany champ, Von Sigmund's Hellgramite, and is owned by Bill Moore of Brownwood.



A Brittany makes a nice family pet.

They will be watching a Brittany spaniel, the bird dog which sometimes is described as "the spaniel that looks like a setter."

The Brittany is becoming more and more popular among city dwellers who find it difficult to keep the popular pointer or English setter in small back yards.

The Brittany is smaller than a pointer or setter, requires less food, is more easily controlled and comes nearer serving the dual purpose of



me it's a pup until it dies of old age.

gun dog and family pet.

This is not meant to imply that the Brittany is a better bird dog than a setter or pointer. It simply serves a better purpose in this instance. The Brittany has, however, held its own against the longer ranging setters and pointers in many field trials.

The Brittany is unique in that it is the only spaniel with a highly developed pointing instinct, looks and acts much like a setter and is

born either with no tail at all or with one not more than four inches long.

These dogs have been popular on the continent of Europe for centuries, but the first large scale importations to this country occurred in the early 1930's.

The breed was developed in the province of Brittany, France, and is believed to be distantly related to the red and white setter, which is the original ancestor of today's Irish setter.

Among the first men to bring the Brittany to Texas is E. D. Britton of Arlington. His were imported from France shortly after World War I, before breeders in the East became aware of the dog's possibilities.

In the last 10 years, many other Texans have established Brittany kennels, due mostly to the success of Oklahoma Trainer Delbert Smith and his amazing field trial accomplishments with a Brittany named Towsy.

Towsy won 59 titles and five national Brittany field trial championships before he retired last year to let his son, Holiday Britt, win it.

Jack Lanthrum and Mack (Poss) Clark of Fort Worth, and Bill Moore of Brownwood, along with Britton, are among the more recent North Texas Brittany breeders. Others are

in Houston, San Antonio and other sections of the state.

The Brittany makes a fine companion for the one-dog man. It has the temperament and size of a spaniel and the natural instinct to retrieve. But it points game like a pointer or setter.

However, just as with the pointer and setter, the latter instinct must be developed. But it is there. The Brittany is more easily disciplined than bird dogs. It also is more sensitive and can be ruined by too harsh treatment regarding correction.

It is not ordinarily as wide a ranger as the pointer or setter; thus it is well-liked by the portly or "bad heart" gunner who likes a "short working" dog.

The Brittany adapts its range to the cover and is at its best in heavy cover or in picking up "singles" from a previously flushed covey.

Physically, the male dog usually is about 19 to 22 inches in height, has a rather pointed muzzle, short ears placed high on a well rounded head, large chest, bony forelegs, straight back, muscular hind legs and bright, amber eyes.

It's a small dog, affectionate, energetic and very intelligent.

And if properly trained, it can find birds. **

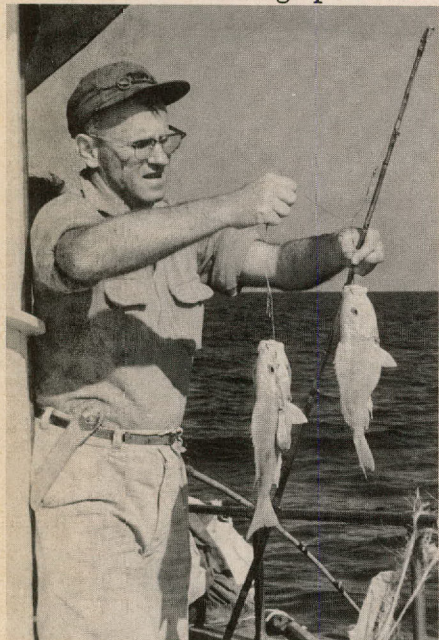


Towsy, above, was national Brittany field trial champ five times. It is owned by Delmar Smith of Edmond, Oklahoma.

Hurricanes **BOOST** Snapper Catches

by A. C. BECKER, JR.
Galveston Daily News

AT THE SAME time hurricane Carla was mussing up the Tex-



Two-pound snappers are small, but author found them challenging as double-headers, two fish at one time. This kind of fishing has been common since the passage of Carla.

as coast with high winds, tides and tornadoes, the great hurricane of



Galvestonian, Leroy Brown, exhibits a couple of snappers in the 10 and 15-pound class.

September was cleaning the silt from the many banks located offshore from the Texas coast.

And the underwater housecleaning has resulted in some of the coast's most fabulous red snapper catches.

Two weeks after the passage of Carla, charter snapper-fishing boats were again carrying fares to the offshore banks. And the catches turned out to be just what the veteran skippers had expected—fabulous!

Snapper catches ranging from 1000 to 2500 pounds of fish per trip have been common. Most of the fish have been two-pounders, but included in the catches have been some unusually large snappers. A lot of 15 to 20-pounders, and a few going as high as 29 pounds.

Captain Herbert Anderson, operator of the charter boat Miss Universe at Galveston, puts it this way: "There's only one good thing you can say for a hurricane. They clean the silt off the offshore banks and make the red snapper fishing unusually good. In fact, years ago some of the old commercial fishermen used to wish for big storms when the snapper fishing lulled."

Captain Anderson, who had charters make five straight catches of 2000 pounds of snapper per trip after hurricane Audrey, estimates the snapper fishing will remain extra good for six to eight months.

Snapper fishing after a hurricane differs somewhat from the kind of fishing experienced prior to the blow. Pre-hurricane snapper fishing is basically on the bottom. Following a hurricane a great many of the fish are caught just 30 or 40 feet deep.

"This doesn't mean the fish aren't on the bottom," Captain Anderson points out. "They are, but in the course of fishing they will come up to the bait rather than wait for the bait to hit the bottom. You catch most of the big snappers high. The little ones won't venture up very far from the bottom." **



Far banks produced the biggest fish. A vast abundance of small snappers made up for size when fishing reefs and oil rigs near shore.

The harvest ran high on the

Management Area Hunts

by CURTIS CARPENTER



HUNTING SUCCESS ran high again this year on the Game and Fish Commission's management areas. The animals were in good condition on nearly all the areas with several reporting deer in excellent shape.

The number of hunters showing up for this year's hunts was near that of last year, with about 75 per cent of those drawing permits reporting. Hunting success for all areas averaged out well over 50 per cent. A check with many of the



Carl M. Lough, Ft. Arthur, makes certain his 16-point buck is dead before approaching it. He killed it on the Moore Plantation Area.



Rev. Larry Ramsour of Jacksonville dropped this beautiful 110-pound 8-pointer on the Engeling Area.



A. R. McLeod, Houston, left the Moore Area with this fine 8-point 119-pound buck.

hunters on the areas indicated that everyone had a good hunt. Most hunters who failed to get a deer reported that they had seen several. Some of this same group were out after heads and would not take anything less than trophy bucks.

At the Black Gap, 387 out of the 501 hunters drawing permits showed up for the hunt which began Dec. 1. This number killed 210 deer of both sexes for a 54.3 per cent success. Several excellent deer were taken. Hunters also bagged 35 javelinas during the hunt.

In Culberson County on the Sierra Diablo Wildlife Management Area, 77 out of 100 persons getting permits drove the winding mountain roads for a chance at a mule deer. Of these, 47 bagged deer for a 61 per cent kill success.

Near Palestine on the Engeling

Area, 155 out of the 182 drawing permits hunted. They killed 98 deer

This group of Engeling Area hunters enjoyed a fine hunt and took home some fat deer for their deep freezers.



of both sexes for a 63 per cent kill. Some of the fattest deer ever reported on this area were taken.

On the three areas of Southeast Texas (Lake Tejas, Moore Plantation, and Cherokee), 500 hunters reported and killed 111 deer. Several nice racks were included in the harvest. Those who showed up for the squirrel hunts following the deer hunts on these areas had pretty fair luck. At the last report, 342 hunters went out after the little gamesters. They had bagged 870 squirrels.

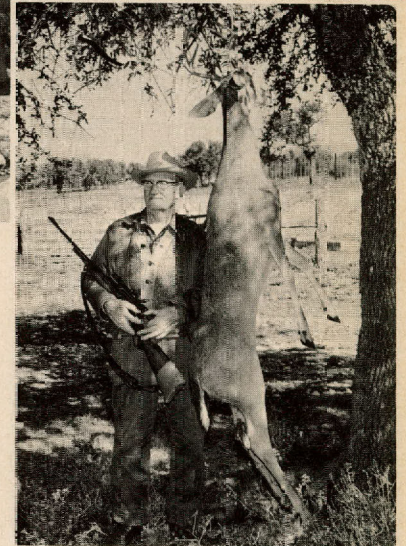
On the Kerr Area in Kerr County, 389 out of a possible 528 hunters reported for the hunt. They killed 238 deer for a 61 per cent success. The numbers of bucks and does was just about the same.

Public Hunt is the term used by most people when referring to a management area hunt. Actually, Controlled Hunt would better suit these events, since harvesting the surplus deer through hunting is a part of the management program,

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From left, H. S. Humphries, Pete Cheaney, D. D. Humphries and H. E. Humphries, all of Lubbock, hunted on the Kerr Area.

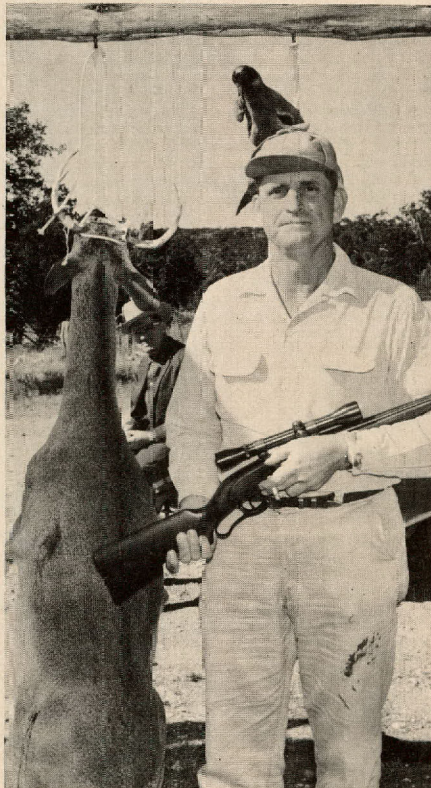


Walter J. Pfiel, Fredericksburg, bagged his nice buck on the Kerr Area.

Kerr Area Photographs
by L. A. Wilke



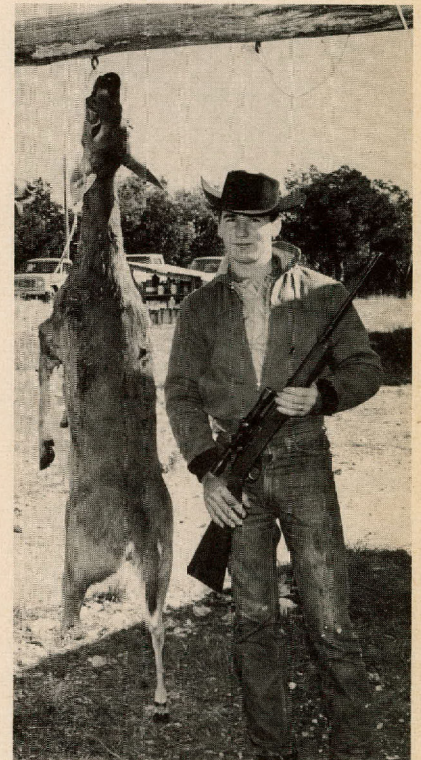
Harry Dan Denton, Valley Mills, gets his deer recorded on the Engeling Area during the hunt.



W.C. Brown, of Sinton, killed this fine specimen on the Kerr Area just west of Hunt.



Charles Morgan, Waco, looks on as biologists weigh and measure his kill on the Kerr Area.



Does were much wanted by hunters this year. Larry Vaughn, Waco, got one on the Kerr Area.



Hunters had some perfect weather the first days on the Sierra Diablo Area. The scenery was worth the trip into the mountains.

and is 100 per cent controlled.

Those who hunted on the areas have had a glimpse of the work biologists perform. These scientists are kept very busy during the hunt getting stomach samples, weights and measurements, and various other bits of information. This in-

formation goes into the record books, where it can be added to past data. It becomes like chapters in a book. Biologists are able to read trends in deer habits, from feeding to traveling.

Each area represents a particular type of habitat. The information

gathered can be passed on to landowners and they in turn can use it to work with wildlife on their land.

While the management work goes on, the herds on the areas increase. The surplus must be removed annually to insure healthy herds. This is where the hunter comes in. Just

before the hunt season, citizens of Texas get a chance to send in applications for a hunt on one of the areas. The names are dropped in the barrel for a public drawing. Those whose names are drawn are given a permit to enter on designated dates to take deer off the areas. The number of deer to be taken off each area depends on a census conducted in advance of the hunt.

Some individuals have misunderstood the real reason for the purchase of these areas. They were not bought for public hunting areas. The hunting phase happens to be a bonus, according to officials of the Commission. So far it has worked out very nicely for both biologists and hunters. **



R. C. Rodgers killed this beautiful 142-pound buck on the Black Gap. It had 10 points and a 24-inch spread. His partner, Elmer Brooks, bagged one weighing 112 pounds. Both men are San Antonio firemen stationed at Camp 20.

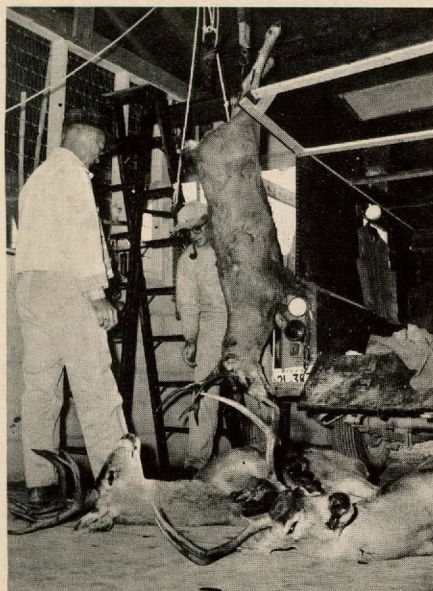


C. A. Archie, Del Rio, at left, and A. G. Baker, Mission, had good luck on the Black Gap.



Robertson, Eull, Banks, and Pratt, all from Ft. Worth, removed some nice deer from the Black Gap. The one in foreground had one stub front leg and freak antlers.

—Photo by Norrell Wallace



Some nice deer were brought in to the check station at the Black Gap. Kept biologists busy.

TEXAS SURVEY of HUNTING and FISHING

by L. A. WILKE

PERHAPS YOU'VE NOTICED the increase in hunters and fishermen among your own family and friends. But to make it official the Bureau of Census has just completed a survey, which indicates that 47 per cent of the households in Texas has at least one sportsman.

With 2.4 million, or one in every three Texans 12 years old and over, either hunting or fishing in 1960, the national average was passed by more than 10 per cent.

The last such survey was made in 1955 when it was indicated only 27 per cent of Texans were outdoor participants, against the 33½ per cent in 1960.

The Texas survey was a supplement to the national survey announced several months ago. The national count was made in cooperation with the U. S. Fish & Wildlife Service and the Bureau of Sports Fisheries and Wildlife. The Texas survey was made for the Game & Fish Commission.

"In our daily work we have been aware of this increase in both hunting and fishing," says H. D. Dodgen, executive secretary of the commission. "These figures provide us an

excellent measuring stick for better coordination of the work we do."

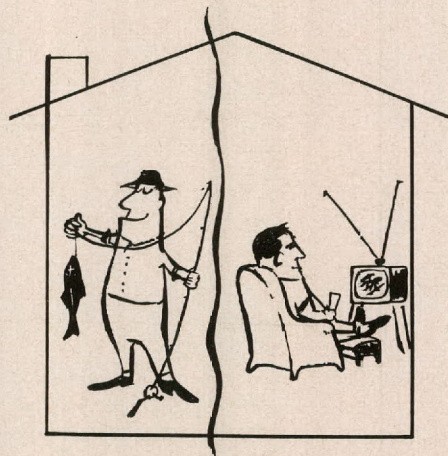
According to the report, which long has been a recognized fact, there are many more persons who fish than hunt. However, 11 per cent of the total Texas population both

hunted and fished last year, while 1.4 million fished only. There were 240,000 persons who hunted only, representing three per cent.

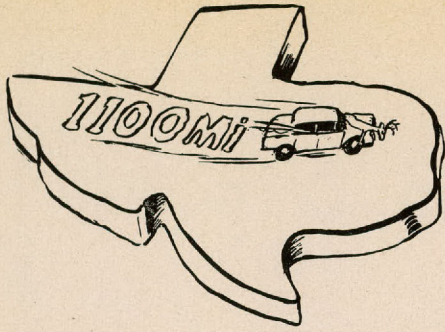
Based on interviews throughout the state during most of this year, the survey covers all of 1960.

Out of the total number there were 1,375,000 who fished only, and 239,000 who hunted only. The figures show that almost half as many women hunted and fished as men. The heaviest hunting and fishing pressure came from the small cities and suburbs, where 36.3% either hunted, fished, or both, and the rural areas, where 33.9% of the population participated. Hunters and fishermen from the big cities represented only 29.1%.

In age groups, 36.3% of Texans between 25 and 34 were hunters and/or fishermen last year. Among those in the 35-44 age bracket, the percentage was 35.3. In the age group of 12-17, 33.5% hunted and fished. The bulk of the fishing was done in fresh water, with 1,915,000 Texans over 12 years of age fishing. This represented 26.2% of the total population. There were 555,000 salt-water fishermen, representing 7.6%.



47% of householders hunted or fished.



Each sportsman traveled an average of 1100 miles.

The small cities and suburban areas again furnished most of the fishermen.

The sex ratio held again with approximately half as many women as men fishing. In hunting, the pressure was on small game, with 800,000 or 11% in that category. Hunters of big game amounted to 423,000 or 5.8%.

The 7 million Texans put in 54,638,000 man days of fishing, or an average of 22½ days. They made 47,369,000 trips, or an average of 19.5 trips per person. These fishermen spent 33,924,000 days, or an average of 17.7 days per person fishing fresh water, and 6,236,000 man days, or 11.2 man days each, fishing salt water. On small game, they hunted 11,117,000 days, for an average of 13.9 days per person on 13.3 trips. On big game they hunted 2,262,000 man days for an average of 5 days per hunter.

There were 776,000 fishing trips that lasted more than one day, representing 10.6% of the total hunting-fishing population. There were 284,000 hunters who averaged 3.9 days each. The average fisherman in Texas in 1960 spent 8.6 days on the water, and the hunter spent 6.8 days in the field. In traveling by automobile, they racked up a grand total of 1,168,706,000 miles. Fishermen accounted for 851,200,000 miles, whereas the hunters traveled 317,507,000 miles. The average fisherman traveled 314.7 miles, and the average hunter 301 miles.

There were 418,000 deer hunters

last year, who killed 208,000 Texas deer, representing one deer for every two persons. There were 321,000 quail hunters, harvesting 9,665,000 quail, with an average of 30.1 quail per hunter. The 450,000 Texas dove hunters killed 14,081,000 doves, averaging 31.3 each.

In expenditures, 96% of those persons who hunted and fished spent \$382,769,000, for an average of \$157.84 per person. They spent a total of \$198,436,000, or an average of \$81.83, for fishing equipment; \$156,168,000, or an average of \$64.40 trip expense, and \$13,649,000, or \$5.63 each, for licenses and lease fees. It was pointed out that the relatively high total cost of fishing equipment was brought about mainly by more expensive boats.

In a comparison of these figures with a similar survey in 1955, it was shown that there was a 131.9% increase in total expenditures of fishermen and/or hunters. The 1960 total of \$382,769,000 is compared with the 1955 total of \$165,054,000. The average hunter-fisherman expenses last year amounted to \$157.84 against \$101.57 in 1955. On equipment items, the average expenses last year amounted to \$81.83 against \$36.25 in 1955. The total trip expenditures last year amounted to \$64.40 against \$58.27 in 1955, whereas hunting licenses and lease fees were \$5.63 last year against \$2.12 in 1955. The report showed that slightly more than 50% of all Texas hunters and fishermen last year bought licenses.

The average amount spent nationally by sports fishermen was \$106.26, against a Texas expenditure of \$130.39. Nationwide hunters spent \$79.34, and Texas hunters spent \$93.18. Nationally, 36% of the households boasted members who either hunted or fished, whereas in Texas 47.1% of the households have hunters and/or fishermen.

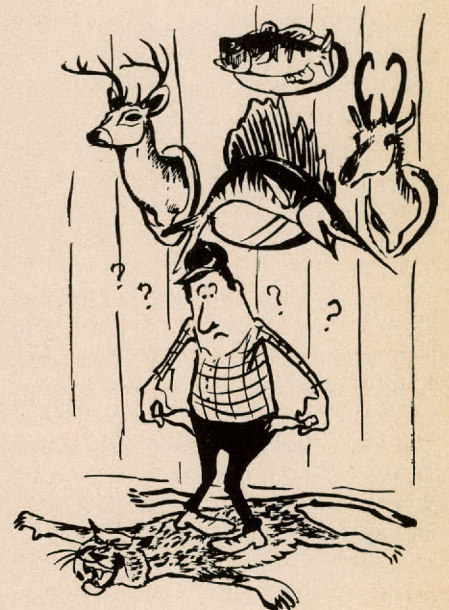
"A study of these figures is very important in conservation work," according to Dodgen. "This survey was made by the U. S. Bureau of Census, with the same care of the workers making the regular 10-year population census. For that reason, it is substantially accurate. It therefore furnishes us with definite in-

formation concerning the trend in the people who use the out-of-doors, their demands, expenditures and the time involved.

"It is interesting to note that both in Texas and nationally there is a definite increase in the number of hunters and fishermen, the number of hours they spend in hunting or sports fishing, and their expenditure on equipment.

"Last year was a good year in the main for both hunting and fishing, and there is every indication that this year will be much better. The 208,000 deer kill in Texas in 1960 reported in this survey was slightly higher than our own estimate. Based on this total, however, the 1961 harvest should be considerably more. For instance, in the Edwards Plateau alone this year, we have issued 71,000 permits for taking of antlerless deer. This number is greater than the total harvest of deer only a few years ago, when only bucks were permitted.

"We also consider it significant that these surveys continue to show an increase in the number of women and minors who hunt and fish." **



Texas sportsmen spent an average of \$157.84 each in 1961.

We saw

Singles, Doubles and Triples

on opening day

by ROY SWANN

Corpus Christi Caller-Times

IT WAS 12 NOON, exactly the legal hour for the duck season to begin. C. W. Carpenter pointed to the east and asked the time. "There are some coming now," he added.

Three or four widgeons sailed past the blind on upper Copano Bay and as we watched they passed us by. We kept watching to see if they'd turn, when a hen widgeon flopped onto the water right alongside the decoys.

We watched her swim around, then looked for some more ducks coming. Nothing better than a live one to bring 'em in, you know.

The second bunch sailed right over our decoys, well within range. Carp picked out the lead, a fine widgeon drake, and I noticed a pintail drake and knocked it out. That started it off exactly two minutes after 12 noon.

From then on it was easy. The flights were well spaced so that there was little time when hunters couldn't watch some birds moving about.

We watched the flights and singles and doubles and then started waiting out the pintail drakes. Even by selecting them, we finished shooting by 1:20.

The ducks didn't stop flying, though. We had singles, doubles, triples and whole flights of them. One bunch of about 45 pintails lit

right outside the decoys.

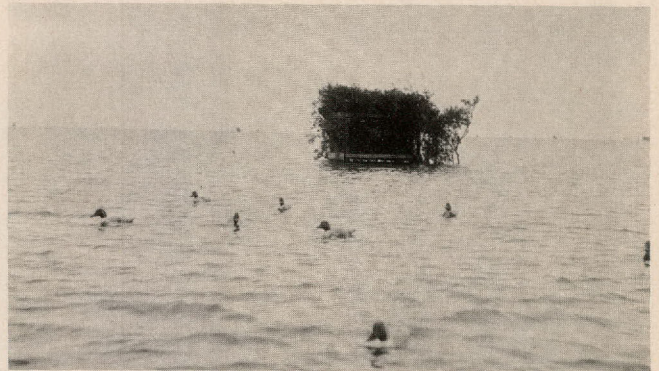
With the camera we shot limit after limit.

Other shooters working from Mills Wharf blinds found some decent shooting, too.

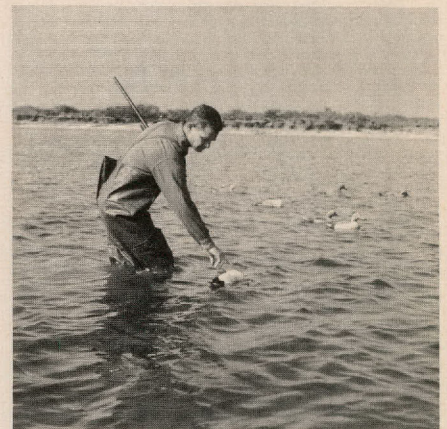
Warren Beck and Sam Hare of Houston teamed up on limits and S. L. Moore and W. L. Dennis managed to get their ducks. Moore got the top kill of the day, a big Canada goose.

Ironically, he had spent the morn-

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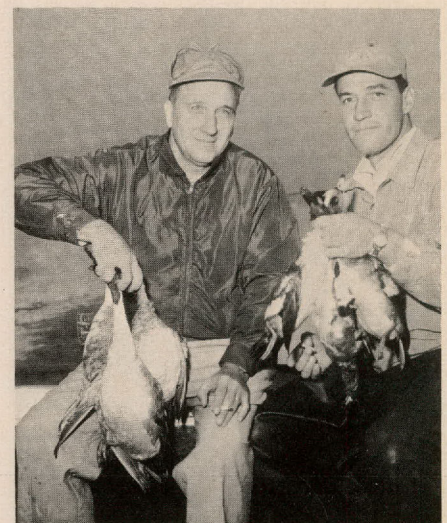
The decoys were put out early. Then they waited in the blind.



Ducks had to be retrieved as they fell.



Then came the walk back to the blind.



Warren Beck and Sam Hare, Houston, show their six.

GUNS



by L. A. WILKE

... and Shooting

This Month: STORING GUNS

IT'S BEEN A SHORT SEASON, or so it seems. Although Texas hunting was officially opened Sept. 1, on mourning doves in the North Zone, by the time you read this many hunters will have popped their last cap.

Basically the hunting season ended when the sun went behind the horizon on New Year's Eve. Quail shooting continues until Jan. 16, in several counties. In others the season will be open until Jan. 31. But the spirit of hunting generally is broken by this time. Most hunters will be putting away their guns.

This means that it's time to think about storing old reliable for the next eight months. What you do for your gun today will lengthen its life and affect its functions the next time you take it afield.

You'll often read that with modern ammunition guns do not need to be cleaned as thoroughly today as when we had the old mercuric primers. Perhaps we should say they need not be cleaned as often. But they should be cleaned thoroughly before they are packed away.

Cleaning guns today isn't the chore it once was. When we used the old primers it was necessary to scour out the barrel with plain old soap and water. Then usually the gun was coated over with Hoppe No. 9, or some similar gun oil.

Some of the old timers still like this soap and water method, possibly because it is a tradition from younger days. The procedure was very easy. We broke the gun down, placed the muzzle in a pan of water containing a cake of laundry soap and ran a clean rag through the gun with a cleaning rod. The gurgling noise as the water was sucked up into the barrel, and then released again, always sounded good.

After soap and water, the barrel was given a rinse, coated inside and out with oil, put back together and placed back into the closet to await next season's use.

In those days most of us had but one or two guns. Today we have a half-dozen or more, and gun cabinets in which to keep them. We are equipped with silicone cloths with which to wipe off the guns every time we handle them, to prevent rusting from finger prints.

This all is very important. A gun so handled and kept clean will last forever. I have three old guns in my own cabinet that tend to prove this story. One of them is a double-barreled 12 gauge Ithaca, more than 60 years old, which still has its original blue and is in excellent condition. This gun has had hard hunting, and was used on the coast a great deal in its earlier days. It has been swabbed out many times with soap and water, and polished more often with an oily rag.

Then I have another old gun, a model 1873 Winchester that belonged to a Texas ranger. It knocked about in a saddle boot for nearly 30 years and I doubt if it was ever cleaned during that time. Although still in a fair shape of preservation, it shows its age. And then there is another, a Model 94 Winchester, which also had belonged to a Texas ranger. But before he had used it long, he was bushwhacked. Not too long afterwards the gun came into my possession. I've kept it polished, and today it is still a pretty good looking gun, although it is at least 50 years old.

Thus it is recommended that before you do put your gun away and pick up your fishing rod, give it a good cleaning. Run several patches through the barrel and see that its

insides get a good oil coating, not too much, but enough to eliminate any possibility of rust.

Care also should be used in storing guns. Putting them in sheep-lined cases for several months isn't to be advised. The lining sometimes retains moisture which in turn will rust the gun. Some gun owners use plastic bags that come with their cleaning, wrapping the guns tightly in them after they have been thoroughly oiled. This method also is good when you go out in a boat over salt water. These plastic bags will give your gun good protection.

Storing away in leather scabbards also can prove bad unless the gun is well oiled and handled occasionally. Leather can retain moisture. Also where brass brads are used, there is a tendency for the leather to turn slightly green, and sometimes this will get on the barrel or action.

Naturally the gun should be stored in a dry place. In the absence of a gun cabinet, perhaps in the back of a clothes closet is best. Usually this is well out of the way of the children. However, it is a good idea to look over any stored gun occasionally and give it a good fondling, with an oily rag.

Storing ammunition also is another problem. Cartridges will be effective indefinitely if they are treated right. This is particularly true of rifle ammunition. I know a man who got a model 70 and a box of 20 cartridges a dozen years ago for Christmas. He's killed a deer with that gun every season and still has several hulls left. Last year I saw a deer killed with a .30-30 cartridge that was more than 20 years old.

The situation is slightly different with shot shells. They will remain

• Continued on Page 28

What Others Are Doing

by JOAN PEARSALL

HEAP BIG SWITCH: Much of Arizona's bow and arrow hunting is done on the state's various Indian reservations, which issue special archery permits. On one of the reservations, archers who opened the deer season found themselves in a startling situation. The Indians apparently had chosen to open their own season at the same time the archers were invited for the special hunt. Having gun hunters in the same field was not exactly conducive to ideal bow hunting. However, the ironic aspect was worse. Here were the paleface deer hunters, tramping the ranges with their bows and arrows, while scurrying up and down the reservation roads were numerous pickup trucks full of Indian deer hunters, with rifle barrels pointing in all directions.

LOBBYIST?: A wild red fox recently caused considerable consternation in the heart of Washington, D.C. The fox invaded backyard areas of several homes in an elite section where many members of Congress and other government leaders reside. Unmolested, the fox eventually disappeared.

GAUDY BUT GUARDED: North Dakota state law requires all big game hunters to wear a colored hat or cap, and at least 144 square inches of safety color on both back and chest. Hunters may choose red, orange, or yellow.

DEER UP TO HERE: If you don't mind traveling a few extra miles, you can enjoy a deer hunters' paradise in New Zealand. Plagued by the glut of deer, authorities are permitting hunters to take all they want, any time of the year, without a permit, and they are even furnishing the ammunition. They've gone to the extent of hiring professional hunters, but the deer are still gaining, causing serious erosion problems.

RADIO AID: During hunting season, a New Mexico radio station provided an emergency message service for the 11th consecutive year. This enabled families needing to get in touch with hunters in the field to relay messages to them.

ONE HYPNOTIZED HUNTER: A deer hunter in Arizona was so intent on bagging his deer he apparently failed to notice a few other items which happened to be in the immediate area. "Nothing really important," reported the game ranger, "just a house only 240 yards away and 53 horses pastured all around the deer." The hunter said he never saw the horses or the house, only the deer. He was issued a citation for shooting too close to a house.

TOURISTS TREAT TROUT: Following the example of New Mexico fish hatcheries, in 1960 the New Hampshire Fish and Game Department installed vending machines on a trial basis at a few of its hatcheries. These machines dispense handfuls of pellet-type food to visitors for feeding fish. They proved so successful that all of the hatcheries now have them. Having fish food available for purchase has alleviated the problem of people throwing bread, crackers and other unsuitable food to the fish. Last season, hatchery visitors spent \$667 to help New Hampshire feed its trout!

CHICK CHECKING: To show the rate of growth of pheasant chicks, a unit at Iowa State University recently prepared a series of colored slides showing how a growing pheasant compares in size with other birds—a one week old pheasant chick shown with a sparrow; one four weeks old with a meadowlark; one six weeks old with a pigeon, and one 10 weeks old with a crow.

Guns ————— From Page 27

in good shooting condition for years if not stored in overheated places. These shells are coated with a waterproofing that is oily. When this oil gets warm it impregnates the cartridge and has a disastrous effect on the powder and primer.

Most of the time a shell that has been badly overheated for any appreciable length of time will not fire at all. Other times the shot and wads will barely clear the gun barrel.

I learned this the hard way. A good many years ago I bought some longbase shells at a fire sale. I went duck hunting along an irrigation ditch off the Rio Grande in the El Paso valley. After crawling through wet grass for several hundred yards, I raised up and pulled the trigger. There was just a pop instead of an explosion. The ducks didn't even bother to fly. I jacked in another shell with the same results, but this time the ducks decided it was time to take off. This was one time cheap shells were very costly, which usually is the case.

So take care of your guns and ammunition during the next eight months. The time will pass in a hurry and there'll be another hunting season at hand before you know it. **

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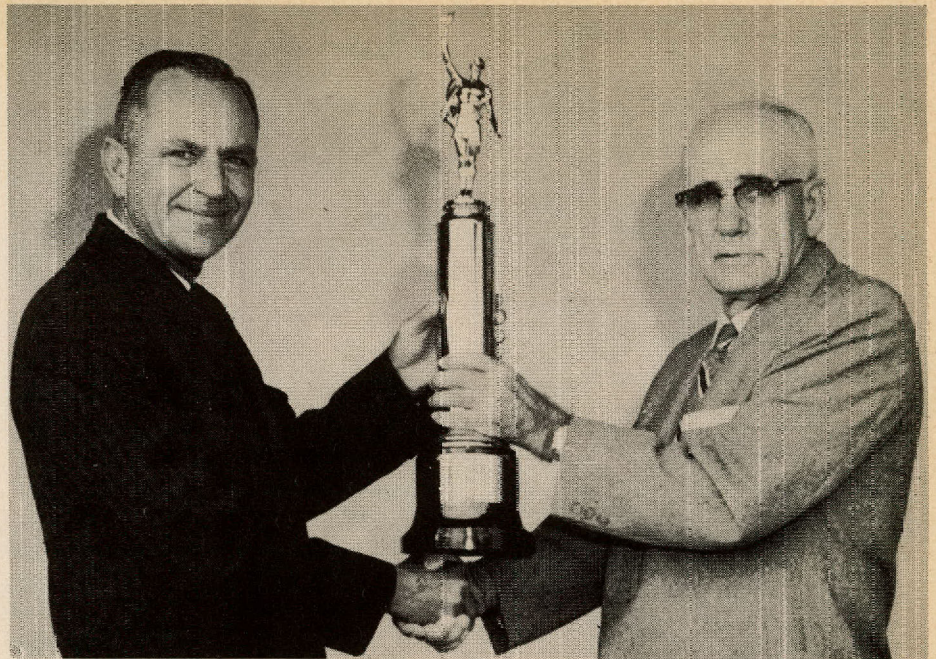
King Ranch Supervisor Is Recognized For Wildlife Research

AN AWARD for outstanding work in the field of Wildlife conservation was presented by the South Texas Chamber of Commerce to Val Lehmann, wildlife supervisor of the King ranch, at its annual meeting in Corpus Christi in early November. Dr. Clarence Cottam, director of the Welder Wildlife Foundation and recipient of last year's award, made the presentation. This organization, covering a 52 county region in South Texas, has an active wildlife committee headed by George Jambers, Whitsett rancher.

Lehmann, who has directed the King ranch wildlife program in South Texas, since his return from World War II, previously had worked for the Game & Fish Commission.

Although Lehmann's principal work on the ranch deals more with deer and turkey than upland game, he long has been an outstanding authority on both quail and the vanishing Attwater prairie chicken. While an employee of the Game Commission he made one of the most exhaustive studies of the prairie chicken on record, published as Bulletin No. 55 of the American Fauna series.

Lehmann also has delivered papers before the North American Wildlife Conference on the bob white quail, after having made in-



Lehmann, left, and Cottam

tensive studies of this No. 1 upland game in Texas.

Brush control also has been a study of long intensity. As original chairman of the Technical Committee of SCOT he worked long and hard for more thorough studies of the effects on the complete plant-animal-soil complex.

His latest contribution to research has been in the use of tranquilizers in game capture and transfer; the use of helicopters in game census and capture, predation control and the use of SS-13 in reducing water seepage from surface tanks. **

Fishermen should not get over-anxious and remove the brood fish

Bay Fish

From Page 7

taken from the lake. Even veteran coastal biologists said this was an unusually good growth rate.

In October this year, just 18 months after the release, 19 redfish averaging over seven pounds and measuring 26½ inches were caught in check nets by biologists. Also, one flounder, 19 inches long and weighing just over four pounds, was taken along with five golden croakers weighing ¾ pounds each. So far, no speckled trout have been caught even though fishermen reported seeing a few in the lake last year.

Redfish, croakers, speckled trout and flounders are some of the finest game fish in our coastal waters. They also are very excellent food fish. If these initial transplants succeed, blue crabs, oysters and shrimp may be next.

It usually takes four years for redfish to reach maturity. The rapid growth so far doesn't mean that reproduction will take place with the same speed. So,

fishermen should not get over-anxious and remove all the potential brood fish.

Golden croakers reach adulthood much faster and will weigh about one pound. They are a fine light-tackle fish in their own right. The flounder is undoubtedly one of the tastiest fish swimming.

Red Bluff Reservoir on the Pecos, is also a proving ground for saltwater transplants. Redfish released there six months ago already weigh two pounds.

Fishermen should release any of these saltwater species they catch for the next couple of years, to give the fish a chance to spawn.

With the cooperation of Trans-Pecos sportsmen this venture can be a rewarding success. Catching fighting game fish is something all Texans look forward to. Biologists and fishermen alike are keeping their fingers crossed and their eyes peeled for any new developments. So far, everything looks favorable. **

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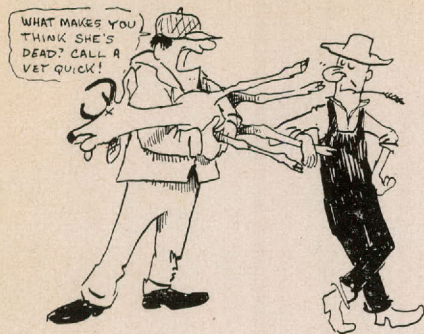
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It Happened This Way . . .



A TRUCK DRIVER, when carried to jail by a county sheriff and his deputies, had quite a deer story to tell one Saturday morning in October. The Justice of the Peace handling the case called for a game warden.

The man, a convoy truck driver, was driving his truck on U. S. Hwy. 77 late one Friday night when something told him to stop. He got out of his truck, took his flashlight and went down the road a short way where he discovered a young buck deer that had been hit by a car or truck.

Believing the deer to be alive, he carried it back to his truck, put it in the seat beside him and drove away. He drove up a gravel road, tried to stop a car to no avail, and finally went to a farmhouse and asked the farmer to call a veterinarian for the deer. The farmer looked at the deer and told the truck driver that it was dead. The man asked the farmer how he could tell and he explained that the deer was already stiff.

Despite this, the truck driver would not believe the deer was dead. So he went on down the road, stopping at first one house and then another in search of a veterinarian.

When he came to the last farm, no one was home so he broke down the front door. He carried the deer inside, put it in the bed, got an overcoat out of a closet, covered the deer with the coat and then went to bed himself.

The next morning a constable noticed the truck and called the sheriff's office. They came out and took the man and the deer to town.

The judge and sheriff advised the warden that the deer was dead and already stiff and unfit for charitable uses. Since there was no apparent violation, the deer was disposed of. The animal had been run over by a car or truck and apparently had

been dead for several hours before the truck driver found it.

The man was held in the county jail for further investigation. Although an unusual deer story, it is all true. **

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Eighth Buck, Fourth Season



E. P. RUHMANN IV (Little Paul) felled his eighth buck in November, ending his fourth deer hunting season. Nine-year-old Ruhmann copped his last eight-point trophy (above) with a neck shot at 117 paces on the Ruhmann Ranch in LaSalle County. It weighed 130 pounds and had a spread of 23 1/4 inches. He has killed two bucks each year since he began hunting at the age of six. Along with his deer trophies, he always gets a turkey, javelina, and a number of quail and dove.

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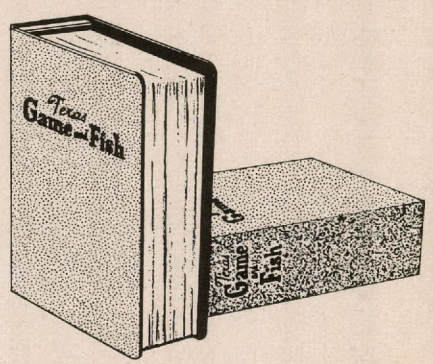
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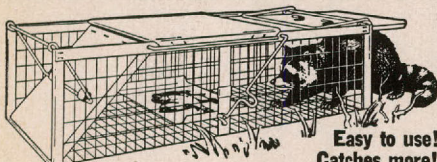


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Duck hunters go full steam

Redheads _____ *From Page 26*

ing in a goose blind without getting a single shot.

Barclay Tyler of Red's Place said he heard hunters banging away during the afternoon, so the flight must have been pretty good for Laguna Madre hunters, too.

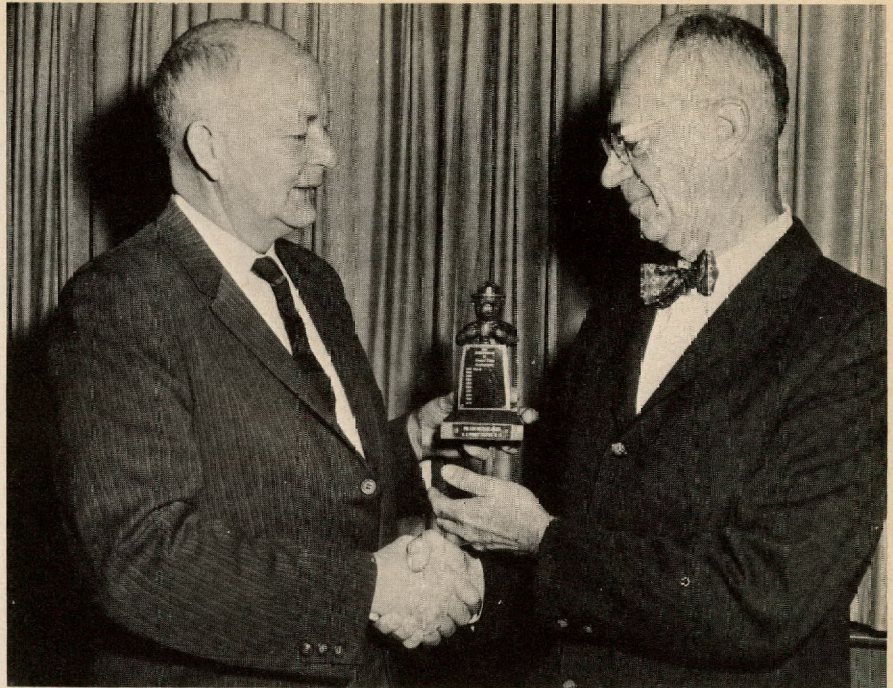
He was more interested in the fishing, though, because those who stuck it out along the Intracoastal Canal did real well.

State game warden Carl Webb said he didn't get to check on duck hunting because of some illegal hunting in another area. Only duck hunters he saw, said he, were some on the caliche pits, where there was no action.

At Port Aransas, Mathews Place guides and a few hunters ventured forth, Ruth Mathews reported. Seven or eight hunters all got limits.

What kind? "They didn't get any redheads," she answered. **

FOREST FIRE PREVENTION AWARD GIVEN



Texas State Forester Al Folweiler (right), College Station, Texas, receives the Sam Beichler Award for outstanding accomplishment in forest fire prevention by the state of Texas during the past year. James K. Vessey, southern region forester (left), presented the award for the U. S. Forest Service. Southern state foresters

from Georgia, Alabama, Florida, Tennessee, North Carolina, South Carolina, Virginia, Kentucky, Mississippi, Louisiana, Texas, Oklahoma, and Arkansas met in Atlanta three days with Forest Service officials to discuss Southern forestry problems.

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The domestic Belgian hare isn't a hare, but a rabbit. The jackrabbit isn't a rabbit, but a hare.

* * *

A bird's two eyes often weigh more than its brain. The ostrich's eyes often weigh more than twice the weight of its brain.

The throat and ears of the beaver are equipped with valves which voluntarily close when the animal dives and open when it comes to the surface.

* * *

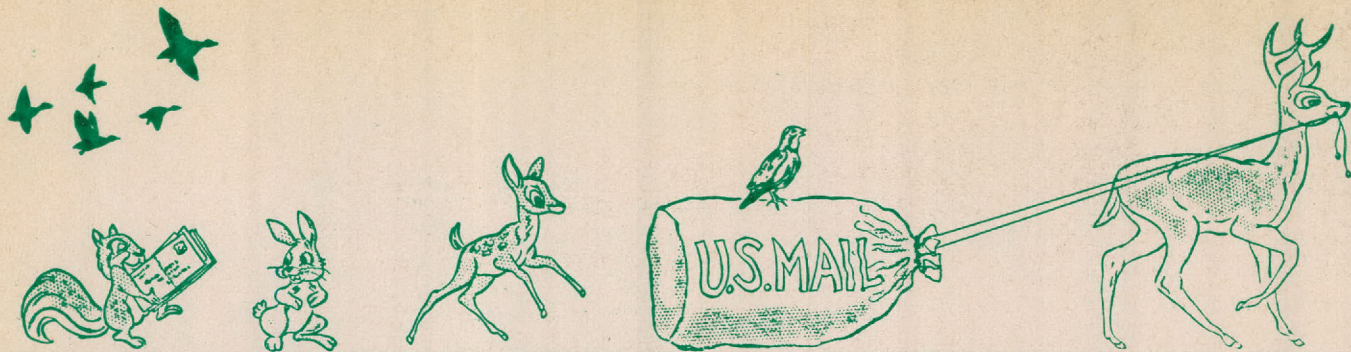
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Tan Those Hides

Dear Editor:

Our family has killed two deer this year, and I would appreciate it very much if you could send me directions for different ways to cure a hide.

I have tried different ideas of my own and not one of them has worked.

Larry Whitehead
San Antonio

(Using common table salt for curing hides is recommended by the Boone and Crockett Club. Directions are as follows:

When the skin has been removed, lay it flat on the ground with the fur side down. Sprinkle salt over all the skin and rub in thoroughly with the palm of the hand. About five pounds of salt should be sufficient for a large complete deer skin. Fold the salted side in, lay the head in the middle and roll up tightly. Keep it in a place where cool air is circulated for 12 to 15 hours. Then unfold, drain off liquids and trim. All flesh must be removed.

To skin out ears, cut away the flesh about the base of the ear cartilage. Separate the skin at the back of the ear from the cartilage by cutting the tissue between them as you turn the ear inside out. The fleshy parts of the lips and nose should be slit within their outer walls so the salt can get into those regions. Cut from the skin extra fat and flesh. Re-salt the open ears and areas where you have cut away flesh. Fold skin. The next day the skin will be ready for drying. Run a pole through the mouth backward and hang skin, stretched flat, in the shade. Dry grass or small sticks can be put in the face and ears to avoid wrinkling. Skin may be taken down when it is almost dry. Sticks and grass should be removed, and the skin should be folded. If there seems to be danger of cracking, leave the skin outside overnight so the dew will soften it.—Editor.)

Litterbug Menace

Dear Editor:

I enjoy reading your magazine very much.

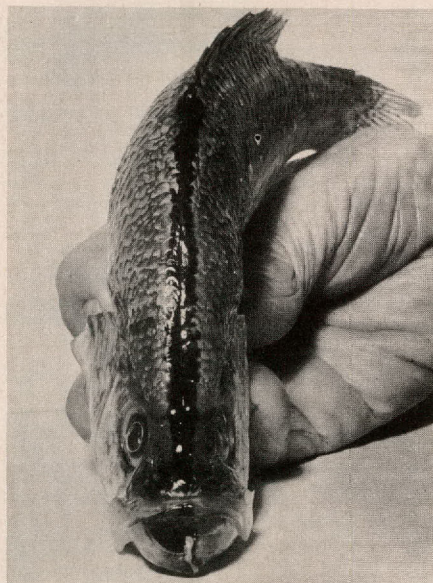
In reference to the litterbug article (July editorial, "Everyone's Loss"), I regard the litterbug, the ones who throw bottles and

cans on the highways, a menace to the traveling public.

Let's give them a big fine, and if that does no good, let them work out their fines picking up the trash along our highways. Double the fine every time they are caught.

J. S. Zimmerman
Fredericksburg

Sporty Crappie



Editor:

I am sending a picture of a crappie that is creating quite an interest among crappie fishermen. I have searched all the books on fishing and have found no description of such a fish. It has a jet black stripe from its under lip to the dorsal fin. I have caught a few of these fish in the Possum Kingdom Lake during the last four years. Last week, this one was caught in the upper end of Benbrook Lake.

I have a friend who tells me that he caught a number of these fish in Thurber Lake 20 years ago. I have checked with them, and they know of no such fish there now.

Would like to know what they are and where they came from.

Henry Law
Fort Worth

(This is a black crappie, originally from Lake Caddo. It was planted in numerous other impoundments over the state. It

is known as a "sport" and is becoming quite numerous. It reproduces, and its spawn also carries the black stripe down its back.—Editor.)

Kudos From Washington

Editor:

Finally got around to complimenting you on the Bighorn story in your October issue. Nice layout and superior illustrations I thought.

Merry Christmas from us.

Clar Pratt
Co-Editor
Washington Game Bulletin

Venison Vitamins

Dear Editor:

I would like to know if deer liver contains the same value of protein as calf liver. Does deer meat have the same vitamins and proteins as beef?

We love the liver and meat and often wonder about this.

Mrs. Julius Chovanec
El Campo

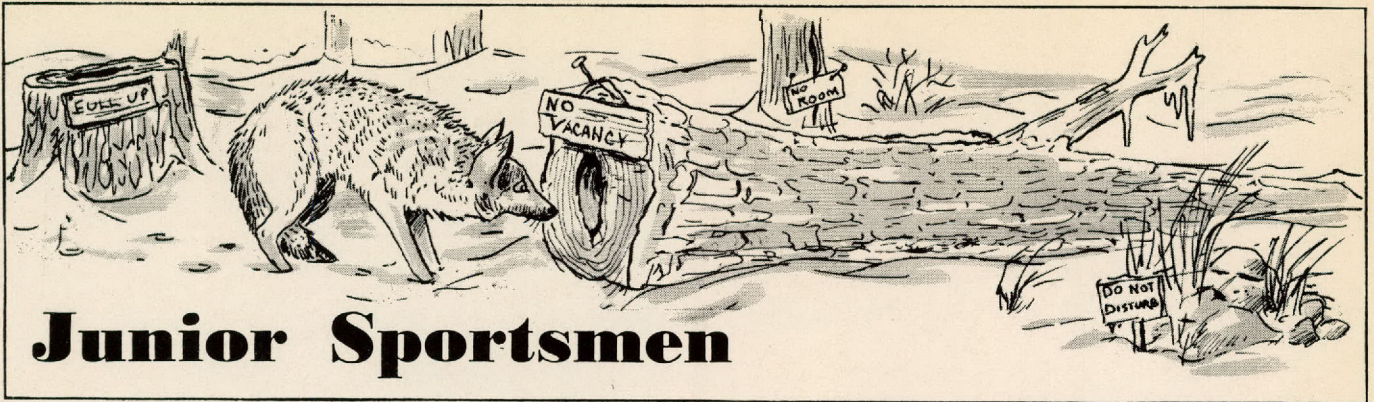
(According to the Travis County Home Demonstration Agent and a teacher in the Department of Home Economics of the University of Texas, the protein content of deer liver is similar to that of calf liver, and the nutritional value of venison is in general similar to that of beef. The University official explained the main difference in the two animals' meat is the relative degree of fat digestibility. Deer fat has a higher melting point, and the human body, therefore, does not digest it as well as beef.—Editor)

Somebody Likes Us

Editor:

I have read TEXAS GAME AND FISH for a number of years, and during the same period of time have also subscribed to several of the national magazines which are published for hunters and fishermen. TEXAS GAME AND FISH appeals to me more than any of the others because you continue to run factual articles of interest and do not fill up your magazine with too many stories of personal experiences, etc.

Sam Pinson
Dallas



Junior Sportsmen

Woodland Winter by ANN STREETMAN

KA-BLOOM! At the end of December, the last deer hunter lowered his gun and tramped toward his camp, leaving the bare, jagged Texas woods quiet for the winter.

Now, because of the stillness, it seems that all the animals have deserted the woods. Indeed, some have gone away for the winter. Many of the birds have flown farther south for warmer days. Even the monarch butterflies have departed and won't be back until spring.

Although some wildlife creatures have migrated, many others are playing a hide-and-seek game with icy winds in the woods. The raccoons and skunks are nestled in their comfortable underground, log, or rock dens. Sometimes they sleep through several days of bad weather, living on stored body fat, but they often venture from their dens on milder days. Some butterflies take shelter in hollow logs and flit about the lonely scene on sunny days.

Some of the animals, however, have disappeared underground for the whole winter. They have settled down for a long hibernation nap. During this time of hiding, their breathing, heart beat, and temperature are decreased so that the body fat they have stored during summer is enough nourishment to keep them alive until spring.

Some turtles are enjoying a winter rest in the warm mud of ponds. Others have covered themselves with about a foot of leaf mould or earth.

Snakes, too, are still in the woods, snoozing in their hibernation hideaways. Several snakes usually share the same den. Rattlesnakes seem to be especially sociable with their wiggling fellows. In some hidden burrow in the woods, there may be a hundred rattlers curled up together.

Some of the creatures, such as caterpillars, are disguised for the winter. They spin themselves into protective cocoons. Unlike the turtle and snake, they will burst from their winter disguise in a new form—frothy moths.

Regardless of the calm scene, the woods still are teeming with wildlife. You may have seen a cocoon or den already. If

not, look around. Mark the spot, and when the spring sunshine returns observe what happens. **

HUNTING QUIZ

HERE IS A FUN TEST of your hunting knowledge. Match the items numbered at the left with the lettered choices at the right.

- | | |
|-------------------------|-------------|
| 1. Closing of duck sea- | A. Compass |
| son in Texas | |
| 2. Hunting in which re- | B. Shotgun |
| trievers are used | |
| 3. Gun used in deer | C. Blind |
| hunting | |
| 4. Equipment for any | D. Decem- |
| hunting trip | ber 17 |
| 5. Place of waiting on | E. Mallard |
| a duck hunt | |
| 6. Gun used in duck | F. Rifle |
| hunting | |
| 7. A good aid in duck | G. Duck |
| hunting | hunting |
| 8. Limit per day for | H. Forkhorn |
| duck hunter | |
| 9. A deer with four | I. Decoy |
| points | |
| 10. Duck commonly | J. Three |
| hunted in Texas | |

SQUIRMY PET



Editor:

From time to time, I notice that you publish photographs of interest to our junior sportsmen. I find these very interesting as is the rest of your splendid magazine.

Enclosed is a photograph (above) of

my three daughters, Diane, Loretta, and Julia, holding a 7½ foot indigo snake which I brought home from a recent trip to the lower country. They are interested in about every form of wild creature. I felt your readers might find this picture of interest.

Dr. D. F. Davis
San Antonio

(In the December Junior Sportsmen feature, "Panhandle Rats," shrews and moles were erroneously listed as rodents. They belong to the Order Insectivora, a name which refers to their diet of predominantly insects.—Editor.)

Free pamphlets on wild furbearing animals are available to students and teachers interested in conservation. Address your requests to Junior Defenders of Wildlife, 809 Dupont Circle Building, 1346 Connecticut Avenue Northwest, Washington 6, D. C.

FIRST HUNT RESULTS



Editor:

Here is a picture of me and the antelope I killed on October 14th, during the Panhandle hunt on the Foy Proctor Ranch. I am 13 years old, and this was my first hunt.

Using a 30.06 Springfield with a 4X Weaver scope, I killed my buck with one shot at a measured distance of 300 yards. The horns were measured at 14½ inches by a Texas Game and Fish biologist. The animal weighed 84 pounds field-dressed.

Larry Taylor
Fort Worth

QUIZ ANSWERS: 1. (D) December; 2. (G) Duck hunting; 3. (F) Rifle; 4. (A) Compass; 5. (C) Blind; 6. (B) Shotgun; 7. (I) Decoy; 8. (J) Three; 9. (H) Forkhorn; 10. (E) Mallard.

Wolf or Coyote?



The red wolf, *Canis niger*, so closely resembles the coyote experts find it difficult to tell them apart without skull measurements. The coyote runs with tail down, the wolf with tail high. Size is no help since there are small wolves and large coyotes.

Texas Game & Fish

Published monthly by
The Texas Game and Fish Commission
Walton State Building
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