Game and Fish MAY 29 1958 20 CENTS PUNIO LI

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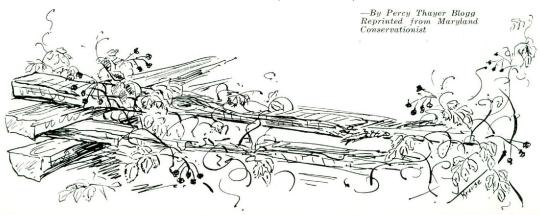
1957



Prayer of an Outdoor Man

W ith the leafy branches of the forest trees I lift my arms to pray; with the babbling brooks and singing birds I raise my voice in praise; I thank Thee for the out-of-doors;

- I thank Thee for the solitude of wild places, the strength of the hills and the calmness of quiet streams;
- I thank Thee for old clothes, rough work, and the right to enjoy the living things about me;
- I thank Thee for the curling smoke of a campfire in the early morning;
- I thank Thee for steaming coffee, sizzling bacon and an outdoor appetite;
- I thank Thee for the swish of my paddle, and the joy of watching fleecy clouds roll by;
- I thank Thee for the call of a whip-poor-will at dusk, across the silent lake;
- I thank Thee for the silvery moonbeams on rippling water;
- I thank Thee for the singing of my reel and the bending of my rod as a Big One strikes;
- I thank Thee for the contentment that comes with the patter of rain on my tent at night;
- I thank Thee for wild blackberries along an old rail fence;
- I thank Thee for my dogs, my gun, and the flaming colors of the autumn woods;
- I thank Thee for wild ducks flying south against a dull grey sky;
- I thank Thee for the glory and majesty of the stars;
- I thank Thee for strong winds pulling at my hair roots and for the spray from the lake on my cheeks;
- I thank Thee for old trails, for rocks, for raging rapids, and for a glimpse of deer drinking in a secluded pool;
- I thank Thee for the drum of the partridge, for squirrels, trailing arbutus, the aroma of pine needles, sunshine through the leaves, and all the other eternal miracles of the out-of-doors.





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|------------------|---------------|
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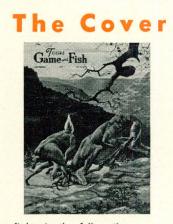
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Deer fights in the fall mating season are seldom seen by man. However, a scene like the cover painting was not only witnessed but also recorded in the Game Commission film, "Hill Country." The film has been shown to more than 63,000 persons since its release, and was included in Warner Brothers' movie, "The Animal World." (See related story page 16.) THE OFFICIAL MAGAZINE OF THE GAME AND FISH COMMISSION DEDICATED TO THE PROTECTION AND CONSERVATION OF OUR NATURAL RESOURCES; AND TO THE IMPROVEMENT OF HUNTING AND FISHING IN TEXAS.

November, 1957

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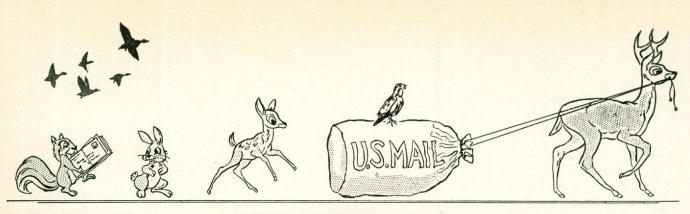
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Northern Whitewings Editor:

Having been reared in Bee County, I am familiar with white-winged doves. I have been under the impression that whitewings seldom nest farther north than Bee County.

On July 8, while three of us were traveling along a country road about seven miles north of Wolfe City in Fannin County, I noticed several doves fly into a tree beside the road. One of the doves appeared to be a whitewing. I drove under the tree, and when the doves flew out one was unmistakably a whitewing. Both men stated that this was the first whitewing they had seen.

Two weeks later Buster Warren, Wolfe City, told me that he had seen three or four such doves in a field near the town. He described the doves as having the typical white band across each wing and as larger birds than mourning doves.

I would like to know if you have had any other reports of whitewings so far north Charles S. Engle

Box 178 Wolfe City

(To our knowledge, this is the first instance of a whitewing being observed this far north. Previously, a few birds had been seen in the Austin region, with one pair reported nesting just south of the town of Burnet. It is indeed very unusual to find a whitewing in Fannin County, since the type of cover available in that area is not typical whitewing country at all .--- W. S. Jennings, Ass't. Director, Division of Wildlife Restoration.)

Coast Reader

Editor:

I am renewing my subscription to TEXAS GAME AND FISH for three years. I certainly don't want to miss a single copy, and I do not miss the money it costs for so much good reading. My wife and I are both ardent coast fishermen. While we enjoy all the articles and stories in the mag azine, we are particularly happy to read about coastal affairs.

Elmer W. Lawrence 235 La Manda Blvd. San Antonio



Good Catch Editor:

These four big bream were caught on dough bait at Daingerfield State Park on June 24, 1957. The bream are on a 1" x 12" board with a 12-inch rule between them. Two of the fish were 10% inches long, and the four fish weighed one ounce less than two Franklin Howell pounds.

Box 1042 Daingerfield

Resemblance



Editor:

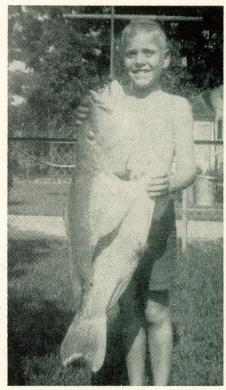
This buck, killed near Frio several years ago, closely resembles the one shown in the August issue. It has 15 points and a 261-inch spread.

The four-bearded gobbler was taken north of Raymondville on the South Yturria pasture this past season. The large beard was 113 inches long and the other three between 81 and 9 inches.

The small 41-inch-long beard, considerably thinner than that of a gobbler, is that of a hen, killed along with another bearded hen on the Yturria Ranch.

F. E. Knapp, Jr. P. O. Box 205 Weslaco

Ambitious



Editor:

Eight-year-old J. M. Moehle is looking over his dad's 29-pound red snapper. J. M. has been hunting and fishing since he was two years old. His dad is a taxidermist who works for Bob Cross, J. M.'s uncle, the state game warden warden in Houston. J. M. would like to be a game warden like his Uncle Bob when he is a man.

> Mrs. M. R. Moehle 5220 Nolda Street Houston

Let's Jalk About Money

By HOWARD D. DODGEN, Executive Secretary Game and Fish Commission

MONEY and financial statements are not very interesting subjects in casual conversation unless it happens to be our money; then most of us would be willing to pay pretty close attention to any intelligent or constructive discussion of the subject. Let's talk about your money—at least that part of it that you have recently invested in your hunting and fishing license.

Last year's hunting and fishing license expired on August 31, 1957, and, since that time, most likely you have visited your favorite sporting goods store to get another one. You found that your fishing license cost 50 cents more than it did last year, your hunting license was up a dollar; and for the first time in Texas, salt water fishermen were required to have a license. You were already aware that this was to be the case, and you were probably prepared for it. But the question may have come to your mind, "What advantages am I to get from this additional investment?" This is a good question, and the purchaser of a hunting or fishing license is entitled to know the answer.

A little more than a year ago your Game and Fish Commission decided it was good business to do specific wildlife conservation planning at least five years in advance, not only to insure an orderly approach to various game and fish management projects, but also to permit a wiser apportionment of the annual dollars available. Such fixed expenses as law enforcement work, operation of the fish hatcheries, trapping and removal of game from areas of plenty to places of scarcity, and office expenses would require the usual amount from the budget, except for adjustments here and there. These expenses, which might correctly be referred to as usual operating costs, amount to a little more than 31/2 million dollars a year. Your old license dollar was enough to provide the usual operating costs and some new projects involving efforts to improve and better distribute the wildlife supply. The additional revenue makes it possible to further improve conditions for wildlife, and, it is hoped, make it possible to keep up with the ever-increasing demand for fish and game.

The Game Commission has tentatively approved some development projects that are known to be sound, and which are believed to be most necessary. One such project is the dredging of passes from the Gulf of Mexico to inland bays in order to improve access to nursery grounds in the bays so that migratory fishes may be better distributed and more available to fishermen. Construction of passes is not a new idea, but the work is expensive and has been retarded for many years because of lack of sufficient funds for extensive pass construction. The Commission will depend upon sound engineering advice before going forward with any specific projects. Other marine projects planned include the construction of artificial red snapper reefs in the Gulf, probable construction of oyster reefs within inland bays, and an expansion of scientific studies along the Coast.

Fresh water fishermen will receive corresponding benefits through an expanded program which includes rough fish control in public waters; improvement of existing fish hatchery facilities and additional work to control excess vegetation in lakes and streams where such vegetation has interfered with production and catching of fish.

A shot in the arm to improve upland game work in Texas involves very close cooperation with landowners. An expanded program of trapping and distributing game, improving the conditions under which various game species live, as well as the matter of hunting it during the open seasons, is so closely connected with the landowner's normal use of his place as to sometimes overlap and interfere. A great amount of study and work will be added to the existing program to bring information and help to the hunter and landowner. This information will be used to improve living conditions for game on the lands, expanding the hunter's opportunity and an incidental profit to the land operator.

As the human population grows, and as more people each year are added to the throng of hunters and fishermen, it becomes increasingly necessary to provide a home for wildlife that will help guarantee its continued existence. This involves the acquisition of lands to be used as wildlife refuges or management areas where a stock of game, such as migratory birds, can be carried over each year with reasonable certainty. Only enough land area to adequately provide for this need is considered, but because of relatively high cost, it will take a number of years to complete such a program.

An added expense is involved in the growing tendency to give the Game and Fish Commission the responsibility of fixing open seasons, bag limits, and means and methods of catching fish or killing game. This process, sometimes referred to as regulatory authority, has been passed on to the Commission by the Legislature in several instances, and now affects 80 counties. This arrangement gives us a flexible control of bag limits and open seasons in accordance with the supply of game or fish in any given area.

When the cost of operating the State's hunting and fishing program is added up, including the addition of new license fees, it amounts to little more than three cents out of every dollar the individual spends annually for hunting and fishing. The small additional cost of hunting and fishing licenses may add as much as a 20 per cent increase in funds for wildlife conservation work.



Standing in open fields was a favorite shooting site for many hunters.

Whitewings and hunters a-plenty turned out for the Rio Grande Valley's first hunt since 1953

Feathers Fly in the Magic Valley



By JEAN RICHMOND

Illustrated by THERON D. CARROLL

This hunter took his birds the easy way—sitting down. But whatever their positions, one hunter after another bagged their limits.



A novice gets in-the-field instructions from her husband on loading her shotgun. Better to do this now before the birds are sighted.



Over fly the whitewings, and the husband-wife team tries for a limit of birds. All three days of the hunt were successful.

THE WHITEWING HUNT is past history, now, but it will be a long time before the hunters stop talking about the fine time and excellent shooting they had hunting whitewinged doves in 1957.

Approximately 15,000 hunters came from all over the State to participate, and the large majority of these got their limit of birds. Statistics show an average of 7.9 whitewings per hunter-day, or about 116,000 whitewings were bagged.

The whitewing hunt was highly successful from the biologists' point of view, too. Of an estimated 250,000 birds that could be harvested, a total of approximately 175,000 birds were killed.

The birds would have been even more numerous, if about half the nesting population and their young hadn't migrated to Mexico and Central America shortly before the season opened. This migration was compensated for to a certain extent by the return of about 100,000 or more birds from Mexico, due to a shortage of food in that area.

A number of bands were recovered, five of which were from Mexico—two from Mante and three from San Fernando. All of the birds banded in Mexico were shot in western Hidalgo or Starr Counties.

Unfortunately, the losses from unretrieved dead birds was too high, with about 50 per cent of the birds not being retrieved. This was due, in part, to the difficulty of finding the birds in the thick, thorny brush. Too, although the weather was clear, it was extremely hot. If a killed bird went down at a distance of more than 100 yards, few of the hunters made any attempt whatsoever to retrieve it. This was true whether the bird went down in cut fields, high grain fields, or thick brush.

One warden found it wasn't necessary to fire a shot to get his limit of birds. He simply went out after the shooting was over and picked up 10 birds that had not been retrieved by the hunters.

It can be assumed that there will be a good whitewing season next year, since there is still ample brood stock. Unfortunately, three more brush nesting tracts have been cleared for agricultural purposes. These tracts constituted a nesting area for about one-third of the nesting birds in the Valley.

Hunters can look forward to a good whitewinged dove hunt again next year, if conditions continue as favorable as they are now.





Retrieving some birds, one whitewing fan holds them by the wing, showing the famous white stripe that gives the doves their name.



The harvest over, a hunter leans his unloaded gun against a fence and cleans his kill. A foot of each bird was turned in for counting.

Here the bags containing whitewing feet and other information were dropped by the hunters. Biologists judged the success of the harvest from this and other information obtained from the hunt. Enough young birds were taken in proportion to brood stock to justify high hopes for more good whitewing hunts.

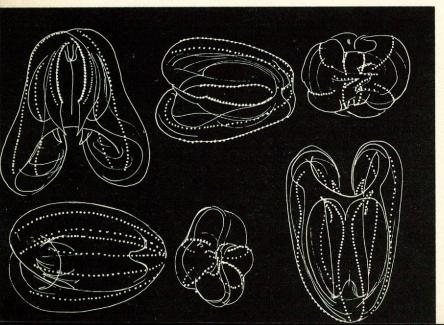
Mysterious Miðshipman . . little known curiosity of the sea

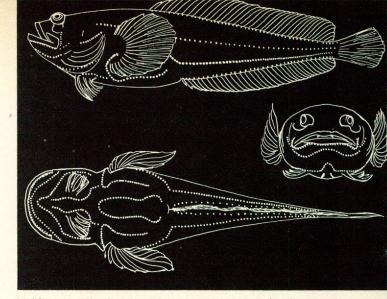
MOST FISHERMEN on the Texas coast have at one time or another reeled in their lines only to find dangling from the end a rather dark, slimy, largeheaded creature commonly known as a "dogfish." Few, if any, however, have been afforded the pleasure of catching the dogfish's close relative, the shiny "Midshipman," although this species (*Porichthys porosissi*mus) is frequently just as common as its ugly cousin.

The Midshipman, which is found on the Gulf and Atlantic coasts from South Carolina to Argentina, derives its name from the presence of several rows of tiny golden dots lining its body, which some imaginative fisherman, whose name goes unknown, likened to the buttons on a sailor's uniform. These dots are in reality photophores—that is, structures which emit light.

There are three long rows of these tiny light bulbs on each side of the Midshipman and an intricate pattern of them on his belly and under his head. In total, they number more than 700, but which may seem more amazing, the pattern of their distribution is the same in all specimens.

The Midshipman is unique in that it is the only fish found in the shallow waters of the Atlantic coast which possesses photophores. These luminescent organs are





Midshipman: side, front, and bottom views. In daylight, the luminescent organs (white dots) look like rows of bright gold buttons. Turned on at night, they glow with a greenish white light.

predominantly found in deep sea fishes. There are, however, several close relatives of the Midshipman in the shallow water on our Pacific coast which also have photophores.

Until recently the capability of luminescence by the Atlantic Midshipman was held in doubt, as such activity had never been observed. While maintaining several of these animals in laboratory aquaria at the University of Texas Marine Institute in Port Aransas, I have been able to make some elementary observations on the actions of the photophores. It is not difficult to understand why previously this fish had never been reported luminescing, for at no time during my retention of these forms did they luminesce without considerable provocation.

On one occasion I was able to elicit a light response by roughly handling a large specimen about eight inches long. The lights began to glow slowly and reached a peak intensity approaching in brightness the dial of a luminous watch. They were hardly visible on the sides of the animal, but were well developed on his belly and under his head. They appeared to be a soft white color. At night, in the darkness of the laboratory, all that could be seen in the aquarium was the undulating movement of the light pattern

> caused by the swimming of the fish. Gazing at this, I was immediately struck by the resemblance of this pattern to that of one of our local luminescent ctenophores, *Mnemiopsis*, commonly called "comb jellies," and similar in appearance to a small jelly fish.

By VICTOR G. SPRINGER Illustrated by Patricia Pew

Ctenophores: side, top, and bottom views. In daylight the luminescent structures are barely visible (white dots here). At night they also glow with a slightly greenish white light. The fact that ctenophores and Midshipmen are commonly present at the same time in our waters suggested to me the possibility that one of them had evolved a light pattern similar to that of the other. If the ctenophore is the mimic, it is possibly protecting itself by imitating an active predator. It would thus be benefited by the avoidance of some other organism which might prey upon it. If the Midshipman is the mimic, it might be that in appearing as a passive ctenophore, organisms upon which it feeds would not be frightened away. (They might even be attracted.) It is well known that certain small fishes commonly live closely associated with ctenophores. But such thoughts are pure conjecture and I have, as yet, obtained no direct evidence favoring a theory of mimicry.

In searching for a method by which I could stimulate my Midshipman to light, I found mentioned in the scientific literature that one of the Californian species had been so provoked by the addition of a small amount of ammonia to the sea water in which it was kept. This method also proved effective with the Texas fish, and by it I was even able to cause a specimen three-quarters of an inch long to glow. Such an individual could not have been alive for very long.

Another method of causing the Midshipman to show his colors, but not his true ones, is by shining an ultraviolet (black) light on him. The photophores respond brightly, not as white dots, however, but as green ones. This light does not persist when the ultra-violet source is turned off.

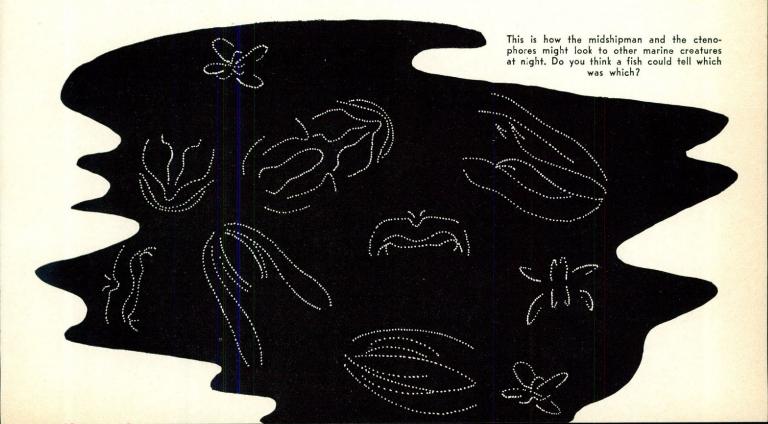
One evening I observed two dead Midshipmen in one of the aquaria. Upon removing them and turning off the lights I noted that they were alight, and they remained so for several hours. Apparently the substances producing the glow were interacting freely, having been released upon death. Nothing is known about the chemistry of the Midshipmen's luminescence, but in general, living light is the product of the reaction of two substances produced by the organism and mixed in a controlled manner. When the two substances meet they react and give off energy in the form of light. This living light is not accompanied by heat, as is that given off by light bulbs.

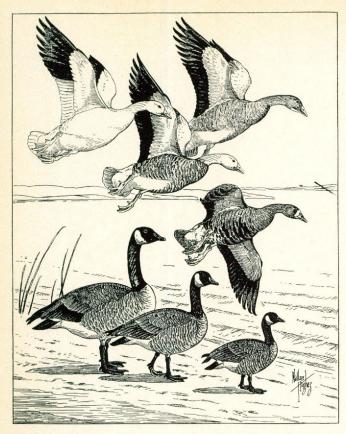
Light production is not the only unique character possessed by the Midshipman. Most people think of fishes as having a metallic silvery color. In contrast to this common type of piscine color, the Midshipman has a shining, metallic golden color, and is far more deserving of the name "gold fish" or "golden shiner" than the well known home aquarium and bait varieties.

Yet in addition to all that has been discussed above, the Midshipman possesses an air bladder which has the form of a pair of shapely legs. Each of these "legs" is accompanied by a well developed muscle. When the muscles are vibrated the air bladder acts as a sounding board, and the Midshipman emits a croaking sound which can be heard some distance above water.

It would seem that with the dual ability of producing light and sound that the Midshipman would not be a species which would be easily missed. Yet every year, as shown by records of the Rockport Marine Lab, this species completely disappears from our coast between October and April. It is believed that it spends these months in deep water (it has been collected in depths of almost 500 feet in the Caribbean Sea) and returns to the coast only to spawn. In support of this idea is the fact that newly hatched young and ripe adults are quite common during the summer months.

There is no doubt in my mind that this small and poorly known inhabitant of our shores deserves top billing as one of the more interesting curiosities of the sea—and I am quite sure that he is capable of supplying his own advertising media if so disposed.





SNOW GOOSE IMMATURE BLUE GOOSE MATURE BLUE GOOSE WHITE-FRONTED GOOSE CANADA GOOSE LESSER CANADA GOOSE HUTCHIN'S GOOSE

GEESE have left their far north summer breeding grounds, and many have arrived on the Texas coast to spend the winter. Huge flocks of snow and blue geese are gathering. A greater abundance of water will mean a better distribution of geese this fall, and the hunter can look forward to a good season.

Since bag limits vary for different species of geese, it becomes necessary for the hunter to be able to quickly identify the birds he is hunting. As an aid to easy identification, we offer the following descriptions of geese commonly found in Texas, listing the more obvious differences between species.

Both sexes are alike in all species of geese, with the variances in a species being in the juvenile birds. Geese generally fly in a V-formation in large, noisy flocks. Their wing motion in flight is much slower than that of ducks. Considering all species, geese reach their maximum abundance in the State during late November and December. Geese, more "land lubbers" than ducks, frequent grain fields, grassy prairies and larger lakes, particularly in the coastal regions. They often use river courses as lanes of travel.

LESSER SNOW GOOSE, a fall and spring migrant and winter resident, frequents river gravel-bars and sandbars, larger lakes, grain fields and grassy prairies along the entire Texas coast. Adults: both sexes all white, except for black wing-tips. Bill and feet, pink to red. Eye, brown. Juvenile birds, generally gray with black tips on the wings. Tail, white. Bill and feet, grayish, Can you identify your target in a group of thousands of birds? It is easier if you

Know Your Geese

Compiled by JEAN RICHMOND Illustrated by Wallace Hughes

becoming more pink as they mature. A medium-sized goose, it has a wingspread up to five feet. Weight up to five and one-half pounds.

BLUE GOOSE, a fall and spring migrant and winter resident, found in the eastern half of the state along the coast and inland coastal areas, often in flocks with snow geese. Adults: both sexes, dusky-gray body. Head and neck, white. Bill, pinkish with broad black "grinning patch." Feet, pink. Wing, grayish-blue, greater coverts plume-like, black edged with buffy white. Breast, variable but generally like back. Juvenile: very similar to adults, uniformly dark brownish-gray with whitish belly and rump, and lacking white on the head. White chin patch. Bill and feet, dark with pinkish cast. About the same size as snow goose, with a wingspread up to five feet. Weight up to five and onehalf pounds.

WHITE-FRONTED GOOSE, also called specklebelly, is a fall and spring migrant and winter resident. Winters along the entire Texas coast. Adults: grayish-brown, with a white band around face at base of bill. Breast, whitish irregularly splashed with black or dusky brown. Feet, yellowish. Juvenile: like adult but lacks white face band and speckled breast. A medium-sized goose, similar to snow and blue goose. Wingspread up to five feet. Weight up to six and one-half pounds.

CANADA GOOSE, the largest of all our wild geese, a fall and spring migrant and winter resident, is found all along the Texas coast. Adults: body, brownish-gray. Tail, black on top, white underneath. Head and neck, shiny black, with the black "stocking" ending abruptly at base of neck. White cheek patches meet under chin. • Continued on page 22 Things are looking up for Texas' largest game bird.

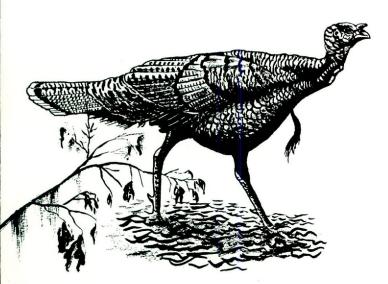
Something



Gobble About

By

JACK THOMAS and HOUSTON GREEN Biologists





The grandpappy of the American game birds, the wild turkey, is staging a comeback on the Edwards Plateau of Texas. After six years of drouth and many years of almost general unwise land use, the turkeys finally got what they needed—just half a chance.

The heavy spring rains that came to ease drouthstricken Texas brought the turkeys the chance for which they had waited so long. The vegetation broke out with a vivid green that had not been seen for six long years. That greenness represented ground cover for turkeys to nest in, feed on, and use to hide from their enemies. In years past, nesting females were forced to use weeds and brush along roadsides for nesting areas because of the absence of cover in drouth depleted pastures.

The rains reminded seeds lying in the ground that there was still life in them and that they had a destiny to grow and mature for the sake of survival of their own kind, and in so doing, bring forth food in the form of seeds and foliage for wild things. The plants did well in the fulfillment of their destiny; weeds and grasses were present in abundance and were soon heavy with seeds. Food was plentiful for birds of the Plateau.

The plants provided not only food for turkeys but something they needed just as much—shelter from predators that preyed upon these birds, their eggs, and their young, and protection from the elements that can be alternately kind and cruel.

Drouth and resultant lack of cover had left the turkeys vulnerable to attack by many predators, such as raccoons, horned owls, gray foxes, and skunks. At last, the turkeys were able to hide their nests from prying eyes and, when little ones were hatched, adequate cover in which they could hide was present. This was their only means of protection during the critical two weeks before they become capable of flight and are able to spend their nights in the comparative safety of the trees. While predation is only a small factor in the over all life history of wild turkeys, it must be considered as a contributing cause to losses of young birds and eggs.

Turkeys are known to be prone to abandon nests



Excellent divide-type summer range, above, exists in Kerr County. In winter, wild turkeys favor roosting in pecan, elm, and large oak trees, lower right, near a live stream. Too many such sites are cleared. Roosting areas are the key to turkey management.

when disturbed, particularly during the egg laying time and during early incubation. It takes about 28 days for turkey eggs to hatch. This time lapse provides a considerable period for the disruption of the nesting activity, if the nest is not well hidden. During the drouth of the past six years, there was a general inability of hens to do a good job of hiding nests due to an almost complete lack of ground cover. This resulted in a high predation rate on nests and many nests were abandoned. Lack of nesting cover caused the eggs to be exposed directly to the elements during the absence of the hen from the nest. This exposure usually took the form of direct and extremely hot rays of the late spring and early summer sun. Heat, coupled with a nearly total absence of moisture, resulted in death for many developing turkeys before they broke the shell. Moisture has been proved to be a large factor in hatching rates.

Those young turkeys that managed to live long enough to peck their way through the shell faced even greater difficulties in surviving. The problem was a multiple one—very little food, insufficient water, exposure to the ever-present glare of the summer sun, and predation from furbearers whose natural foods of rats, mice and insects had practically disappeared because of the drouth.

It was no wonder reports were received during drouth years that indicated very low reproduction. Just one such incident was the observation of only 12 poults on one 72,000-acre ranch from an estimated adult population of 950 turkeys. This was in 1951. There were some years of high reproduction, even during the drouth years; 1952 was such a year. But survival of the good hatches did not materialize.

The turkey population on the Plateau has been go-



Flocks of wild turkeys such as these feed in the Hill Country.



ing down since 1938. This trend is indicated by landowner reports and recorded observations of Game and Fish Commission biologists who were working the Plateau region during these years. These biologists noted great fluctuations in the populations. But a general downward trend has been the rule. Wildlife workers steadfastly maintained that enough rain to bring vegetation back to normal and only moderate grazing pressure would result in a come-back by the great bronze birds.

One of these technicians, E. A. Walker, who worked in the Edwards Plateau region during the drouth years and is a specialist in the study of wild turkeys, compiled a list of conditions that had proved to be the primary causes of increases in turkey numbers. These factors were (1) suitable weather during the nesting and growing season, (2) adequate natural foods, especially in winter, (3) reduced seasons, and closed seasons, (4) effective predator control, (5) carefully planned restocking, (6) efficient game law enforcement, (7) excellent cooperation through publicity, and (8) planting of birds in virgin territory.

How does the present situation on the Edwards Plateau measure up to the conditions listed above? Let's take a look.

1. Heavy, prolonged spring rains came to the Plateau during the 1957 nesting period for wild turkeys, and although the rain was a God-send which brought out the vegetation, resultant high waters drowned out many nests and caused abandonment of others. This could have proved disastrous to the already depleted population. However, such was not the case. Snatching at that "half a chance" the turkeys, unsuccessful in their first attempts, nested again. Nests were reported as late as the fourth week in June, and the authors saw one flock of turkeys crossing a woodland lane that included half-grown poults, some one-quartergrown, and some not more than a week or 10 days old. These birds, of course, represented separate age groups and were not offspring of one hen. Several hens had come together with their young, and this represented three separate hatches over at least a six week's period. Although weather conditions were poor for early nests, conditions proved ideal for later nesting attempts. Adequate cover, abundant moisture, and moderate temperatures were the rule.

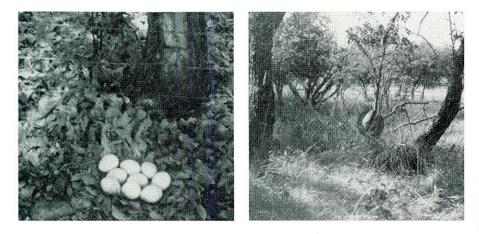
2. The rains brought favorable vegetative conditions and provided a bumper seed crop that served as food during the summer months. Oaks show promise of a generally good acorn crop that will provide food during the fall and winter. At the present time, the food supply appears sufficient to support the growing turkey population through the year ahead. One factor was primarily responsible for this condition. Ranchers were forced to drastically reduce the numbers of livestock they were carrying on their ranges during drouth years because the supply of range forage was inadequate to sustain them. Spring rains brought back vegetation, even though it was primarily annual growth that lives only one year and must grow from seed again the next. There were comparatively small numbers of livestock on hand when the heavy rains came in the spring, and most ranges have not been overstocked. If this condition continues, this year's crop of young turkeys will probably survive the winter ahead. However, some landowners are buying more and more livestock, and some pastures are already in drastically poor

condition. If this practice becomes the general rule, look for a scarcity of turkeys in these areas during the winter, as birds that are now present will seek more suitable conditions.

Taking into account the continued decrease in overall turkey numbers and the excellent chance for a reversal in the trend presented this year by improved conditions, wildlife biologists working on the Edwards Plateau recommended that the limit of turkeys per licensed hunter be placed at one gobbler-a recommendation which was accepted by the Game Commission. This regulation will provide adequate protection for turkeys and will still allow hunting on lands where landowners have used good management practices, such as observation of proper stocking rates to insure sufficient ground cover, preservation of roosting sites, harvest of proper numbers, supplemental winter feeding, and provision for water when needed. Landowners of this type have adequate numbers of turkeys to allow moderate hunting with no danger to brood stock.

3. Effective predator control has suffered in recent years because of the low demand for fur. Several occurances during the past several months may result in decreases in the number of furbearers. Closed seasons on these animals have been eliminated in the Edwards Plateau region in order to allow landowners to protect poultry, wild turkeys, and quail from overabundant numbers of these animals. This action should result in an increased kill of fur bearers and increased protection of wildfowl as well as domestic species.

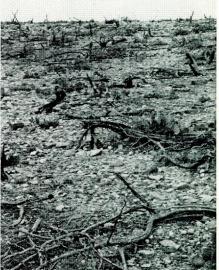
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Eggs are laid in exposed nests, such as that at far left, in Llano County when overgrazed pastures and drought left turkeys no choice. All these eggs were lost. Hat, right, covers nest in Kerr County where tall grass in an oak savannah furnished favorable nesting cover.

On upper Frio River in Real County, below, much favored winter range has been ruined because of the wide-scale cedar clearing programs. Turkey habitat destruction in the Kerr County area, right, was brought about by flat cutting, cedar burning, and overstocking.







To those in whom the pioneer spirit is still strong, one word holds a dream . . .

Wilderness

By THOMAS EBERHARD Illustrated by Gerda McMurry



Adapted from Pennsylvania Game News

"WILDERNESS AREAS? Never heard of 'em. You mean the federal game refuges? Or maybe some jagged peaks in the Guadalupe Mountains or Yellowstone Park? They're no good to me; can't hunt in 'em, too far away, and nothin' but a bunch of rock anyway. What I'm interested in is real, wild game country."

So goes the ordinary comment when wilderness areas enter a conversation. Most Texans enjoy good hunting right at home. They not only have fine hunting, but a wealth of wild creatures and habitats as well. Being so endowed, it's easy to understand why Texans consider wilderness areas out of their realm.

Surprisingly, though, these wilderness areas aren't out of reach at all. And they're not game refuges either. They're honest to gosh hunting, hiking, camping and fishing grounds, managed by the U.S. Forest Service for the public. These areas are parts of the National Forests, ranging in size from 5,000 to 100,000 acres. The larger tracts are called wilderness areas, while the smaller ones are termed wild, natural, or primitive areas. These lands should not be confused with our National Parks where no hunting is allowed.

Generally, these areas are rough back country, ideally suited for recreation and watershed protection, instead of timber and forage production. They've got some of the best habitat there is for mountain goats, bighorn sheep, and elk. And there are wonderful mountain meadows full of deer and bear, and rockslides just crazy with 'chucks. The clear cold waters and unmarred landscapes make these places hard to beat.

"Yeah, but what's so important about all that? What's my stake in 'em?" some will ask.

If you're an outdoorsman, this fact alone makes your stake in these lands tremendous. These areas are the last of primitive America; they are the last of undisturbed nature. True, most of these lands are in the west, but they are for everyone to use, for they are federally owned. Just look at some of the reasons for these wild areas.

Many hunters have often dreamed of hunts such as our forefather had, those where there is virgin, wild country, and where very few other men have trod. • Continued on page 26



Inhabitant by Accident

"Now just how in tarnation could the critter live that long down in a hole?" ponder Tom and Bill McNeil and author, Al Flury.

By AL FLURY, Biologist

An old abandoned well is home to a rattler which fell there at least a year ago.

Oh, the hue and cry! Marilyn is getting married, Billy is trying to "live-up" two years this summer before going back to A&M College next month—the showers, the parties, the running around, the house is in complete turmoil and mama is having conniptions three at a time and then—the old man, Bill McNeil, Sr., of Mathis, finds out that there's a live rattlesnake in a cistern on his brother Tom's ranch.

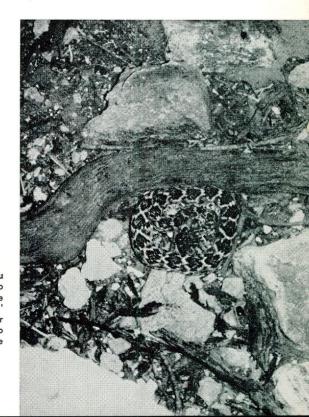
Well, there's just nothing else for it but to cancel everything, shake out everybody in sight, phone long distance and organize a safari, and go out to see what kind of a deal this is. The local snake catcher is called in with a photographer; brother Tom and a sister, Mrs. C. C. Cox, are located; the time and date is set; jeeps and pickups are rounded up—and everyone takes off for the wild and wooly west of southern Live Oak County.

The vaquero (Mexican cowboy) guides the lead truck over the pavement to Dinero, the county road, through the ranch roads, onto the sendero (path). Turn left on that car track, through the thorny brush, follow that cow trail to the windmill and then down the hill. No, the other way, around that mesquite mott; jump it across that gully. Whoa, now, it ought to be around here somewhere. There, 300 yards across that pear and granjeno clump—go on, you can buy new tires back in town. So there you are. There is the hole in the ground!

The McNeil family has lived and ranched in the area around Dinero and Lagarto for more than a hundred years. This ranch has been in the family nearly that long and none of them know the origin of the cistern. It was almost certainly dug sometime around 1850 right out in the middle of nowhere on the gentle slope of a caliche hill near a small rock outcrop. Thin soils, little grass, granjeno, huajillo, catclaw, prickly pear, sage, huisache and mesquite characterize these hills with live oak and hackberry trees found in the

arroyos. No signs of house or barn can be found near the cistern; perhaps it was the first construction of a proposed home, the plans later abandoned.

As it is now, a vase-shaped hole in the ground covered with logs and brush to keep cattle from falling in, it is about 8 or 9 feet deep, 4 feet in diameter at ground level and widening to about 10 feet at the bottom. The sides are plastered, the bottom covered with a few caliche rocks and a log or two. Camel crickets cling en masse on the walls, but right in the middle of the floor is the star performer: one of Texas' own, a diamond-back rattlesnake about 5 or $5\frac{1}{2}$ feet long. He is alive, apparently healthy, showing no signs • Continued on page 26



"Podnuh, you just stay up there where you belong," the rattler seemed to say. So we did.

WHEN DIFFERENCE DEFEATS

Albino fish, birds, and other game animals are considered rare, but they probably occur more often than the average person realizes. Partial albinos in nature are, of course, more common than total albinos. A partial albino blue catfish was caught in Lake

Corpus Christi on July 9, 1957, by L. B. McMains of

Charlotte, Texas. The fish was taken on a trotline baited with liver and set in the mouth of Pernitas Creek. After the regional aquatic biologist, Alvin Flury, was notified of the catch, he took the fish to his headquarters at Mathis, where he and the author examined and photographed it.

The blue catfish weighed 1 pound, 14 ounces and was 18 inches long. Instead of being a normal slate or dark blue with a whitish belly, it had only a few large patches of blue color on its body. The eyes, however, had a normal dark coloration. Most of the head, body, and fins was

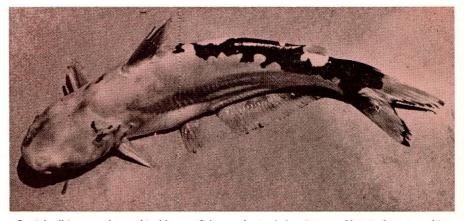
truly albinistic in condition, having little or no pigmentation. These areas had a pink color because of the blood vessels showing through the unpigmented skin and flesh. The peritoneum, or lining of the abdominal cavity, instead of being a silvery white with much black pigmentation, was pink with only a light flecking of extremely small black spots.

Animals which are totally albinistic have no pigmentation at all. Thus the entire animal, including such areas as the eyes and skin is pink in color because of the red color of the blood showing through all portions of the body. Albinism is caused by a change or modification (mutation) of the hereditary units (genes) of an animal which determine its physical and chemical characteristics.

In nature, albinistic animals seldom increase in numbers because of their rarity and the slim chance that they will find an albino mate.

Exceptions to this rule are the blind catfishes of

Albinos in Nature cope with overwhelming odds.



Partial albinos, such as this blue catfish caught in Lake Corpus Christi, face two big problems because of their unaccustomed appearance—evading enemies and getting food.

Texas and the blind cave fish (tetra) of Mexico, which live in total darkness of deep artesian wells or waters of caves where color has little meaning. In fact, these fish have even lost their eyes through disuse, since eyes are of little benefit in a habitat which has no light. Even albinos which occur among other animals have eyes which are weak and very sensitive to light.

Many people raise albino animals such as birds, mice, and tropical fish. Under artificial conditions these animals reproduce their own kind and increase their numbers because of the large number of people in many areas raising them and providing good care and complete protection.

Albinos in nature are not so fortunate. Wild animals which are abnormally colored seldom survive because of the many unaccustomed disadvantages of their new condition. One of the chief factors which defeats them is that they are more visible to both their enemies and their prey.

By WILLIAM H. BROWN, Aquatic Biologist



4-H'ers form their traditional emblem at the annual round-up.

THE LANDOWNERS of tomorrow hold the key to the future of Texas wildlife. With this in mind, conservationists with foresight and enthusiasm seek to instill an understanding of the needs of wildlife into the minds of young people who will some day manage the land and waters of this State.

If the approximately 117,000 Texas boys and girls enrolled in 4-H work have their way, the future for wildlife and other natural resources will be bright indeed. Their conservation study, developed by the Texas Agricultural Extension Service, expands their natural interest in wildlife and probes into the reasons behind practices which conservationists advocate.

Demonstrated in the program is the importance of habitat maintenance and improvement as a wildlife management tool. The 4-H Clubbers learn to encourage the growth of native wildlife food and cover producing plants, to properly stock and fertilize farm ponds, to take inventories of local wild animals, and many other worthwhile activities. land youth and wildlife

Texas 4-H'ers learn tactics to insure future abundance for the state's natural resources.

By ED COOPER, Wildlife Specialist

Conservation fits quite naturally into the fundamental ideals on which 4-H work is based. This is the 4-H Creed:

I believe in 4-H Club work for the opportunity it gives me to become a useful citizen.

I believe in the training of my HEAD for the power it will give me to think, to plan, and to reason.

I believe in the training of my HEART for the nobleness it will give me to be kind, sympathetic, and true.

I believe in the training of my HANDS for the dignity it will give me to be helpful, useful, and skillful. I believe in the training of my HEALTH for the strength it will give me to enjoy life, resist disease, and to work efficiently.

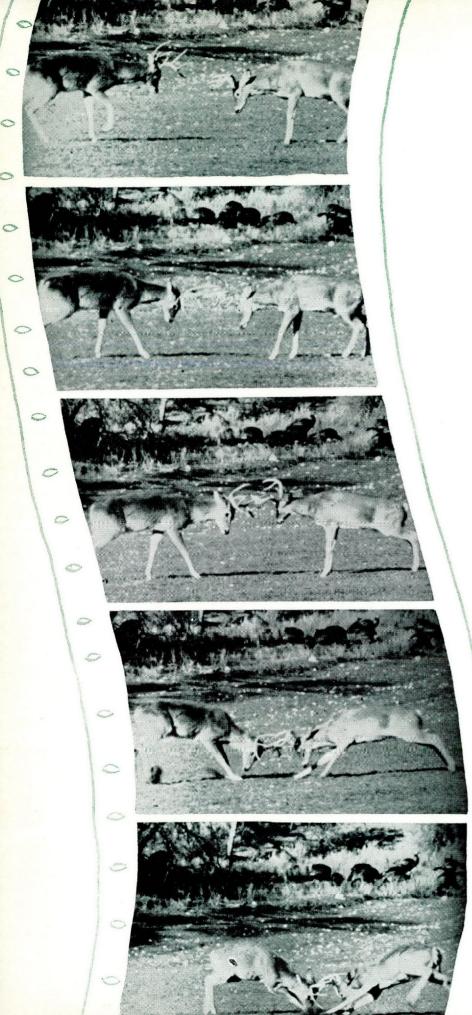
I believe in my country, my state, and my community and in my responsibility for their development. In all of these things I believe, and I am willing to dedicate my efforts to their fulfillment.

Continued on page 27



Bird species are studied by 4-H'ers at Bastrop State Park, left. Range condition's effect on wildlife and livestock is considered by 4-H members, right, on a Texas A&M range.





A dramatic moment was recoled on film when two whitetail bucks fought in the fill Country.

60-Seconds of Fury

By THERO CARROLL Movie Sequence by DN FITZGERALD

Three days we had waited for something "spectacular" to happen. Lon Fitzgerald, wildlife photographer, and I had seen droves of bucks and does and parades of turkeys bearded hens, old gobblers, and young toms—from our homemade tent blind on a well-stocked Hill Country ranch.

Lon had shot about five or six hundred feet of color, but was holding a couple of hundred-foot rolls for something unusually dramatic a big scene!

That morning, before we entered the blind, we had carefully measured the distances from the camera to certain rocks and twigs scattered throughout the trampled oat patch in front of us. This was our wildlife stage and we wanted to be doubly sure that all our actors would be in sharp focus when the cameras began to roll. All day we watched and waited.

The time was 4:15-almost too late to shoot color. Lon wanted a scene of turkeys in flight so I was assigned the job of frightening the feeding flocks in front of us while he shot his pictures. Just as I was preparing to crawl under the side of our tent hideaway, we noticed a white-tailed buck-a sleek six-pointer-walking stiff-legged toward a slightly larger eight-pointer. The small challenger had some of his hair "turned the wrong way" so we could tell he was asking for trouble. As luck would have it, the challenged buck was standing nearly astride one of the small white stones we had used as a focusing point 150 feet from the blind. With a fresh roll of film and the six-inch lens in position, Lon was ready!

TEXAS GAME AND FISH

The challenged buck, a lean, gaunt specimen, looked up as the cocky youngster approached. When they were about three feet apart, the challenger stopped and braced himself. Deliberately the eight-pointer moved forward to teach the upstart a lesson. 5

C

Lon was grinding away with the Bell and Howell. I was just a spectator, but not the only one—approximately two dozen tom turkeys and 15 or 20 deer had ringside seats.

Challenger and challenged eyed each other as they came together. At the moment their antlers touched, there was a brief session of thrust and parry. Then the six-pointer, who had his feet well set, made the first lunge as antlers interlocked.

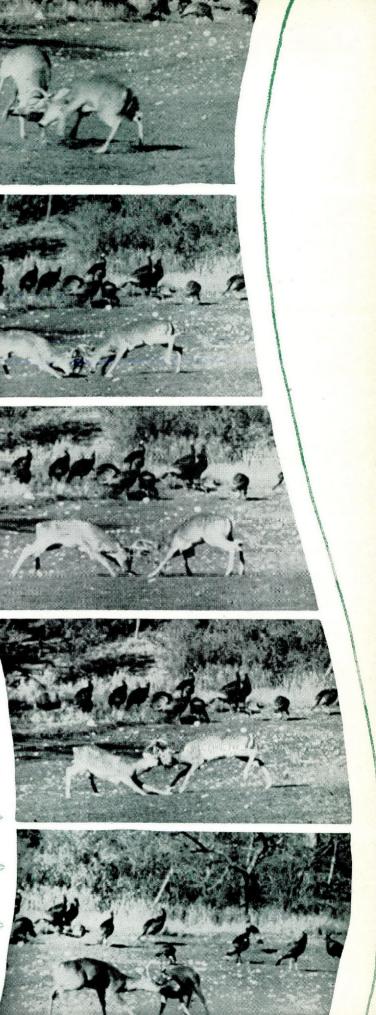
Big boy took a temporary setback. Then, with dust flying, he launched his attack. Six-point was almost thrown off balance but managed to keep his feet. Heads were nearly touching the ground now as the fight developed into a series of shoves, twists, pushes, and turns.

With antlers securely meshed, both opponents suddenly shifted to a neck-twisting contest. The bucks acted as if they were trying to climb an invisible wall—sideways.

There were breaks in the headknocking duel. Several times the bucks drew apart just enough to unlock the antlers, then both would shove forward with a scraping clash, each trying to gain an advantage.

The fight lasted less than a minute. Mr. Six-point finally decided he had all the workout he wanted. The gauntier ol' boy made a couple of half-hearted hooks at the smaller

Continued on page 25



Sea otters with their fabulous fur were almost destroyed by man's greed.

Fortunes in Fur

By DR. RAYMOND L. GILMORE

A SIGHT NEVER TO BE FORGOTTEN is that of a sea otter furrowing through the quiet waters of a thick kelp bed along the rocky coast of central California, its head barely distinguishable among the brown float bulbs of kelp. Here is one of the fabulous animals of the world. Its exceedingly valuable pelt once sent hundreds of men into danger and even crime, carried the Russians and their Aleut hunters far down our northwestern coast, and was one of the irresistible incentives for Americans to open up the waters and lands of this far flung empire—thereby almost causing the animal's extinction.

All this happened to the sea otter in the late 18th and entire 19th centuries—when the greed of men demanded more and more of the lustrous skins to decorate their women and their royalty. The pelt of the sea otter is the most beautiful and finest of all the world's animals—a fact recognized early by the Manchu mandarins of China and the Romanoffs of Imperial Russia, both of whom used the fur as a badge of royalty and unequalled opulence.

The underfur of the sea otter is unbelievably dense; and in addition, is durable, silky fine, with an oily sheen which is resplendent. Little wonder that at one time a pelt could sell for as much as \$1,000 and the record prices were said to have been as high as \$2,500 on the London market. The color is deep, velvety, blackish-brown, with a frosting of whitish guard hairs. The head is often brownish or whitish.

The sea otter ranged from Japan across the entire North Pacific to Baha California. It was hunted down by hard-bitten men of the frontier until, by the early 1900's, none could be found except in the most rugged and wild parts of the Kurile, Commander and Aleutian Islands, the Alaskan Peninsula, west coast of Vancouver Island, the rugged Monterey Peninsula and the Santa Barbara Islands of southern California.

Rigid protection was given the species by the United States government over its territories and possessions in 1912, and soon a few more otters began to be seen in the Aleutian Islands and the Alaskan Peninsula. But until 1938, the status of the species was in doubt in southern California. With the opening of the highway from Monterey to San Luis Obispo, California, 94 sea otters were seen in one herd at Bixby Creek, and the scientific world became enthusiastic that the sea otter would again repopulate its southern home. This hope has already been partially fulfilled and I believe that about 500 inhabit the coast from Monterey to San Miguel Island. In Alaska, the population may number 5,000. Conservation in the form of protection has paid off; someday many sea otter will be seen along the rocky, wave-dashed coast of California, Oregon and Washington, and under rigidly controlled conditions the animal will again be taken for its luxurious fur.

The sea otter is 4 to 5 feet long and weighs 75 to 85 pounds. It has a tail 12 to 18 inches long which • Continued on page 28

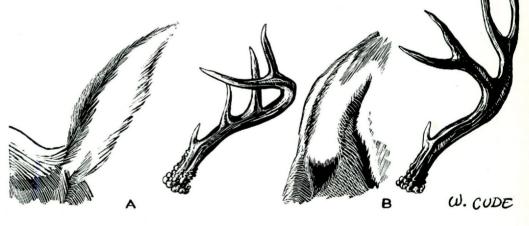


National Wildlife Federation Photo



MULE DEER

Mule deer, largest Texas deer, are found in the Trans-Pecos and parts of the High Plains. The name "mule" deer comes from their very large ears. Other differences of the mule deer and whitetail are in the tail and antlers. Note, A, the long, wide tail with pure white underside that gives the whitetail its name, and the single-tined antlers which stem from a heavier main branch. The narrow, black-tipped tail of the mule deer, B, gives it a common name of blacktail. Its antlers are heavy, with the main branch forking and the tines coming from both forks.





B

С

Mule deer hoofprints are larger than the whitetail's. The larger impression of a mule deer buck, A, averages 3¹/₄ inches long. Tracks of front and hind hoof of a mule deer fawn, B, average 1—2 inches, and the fore and hind track of a mule deer doe, C, averages 2-3/8 inches. Whitetail tracks, on the average, are smaller. UNS

By JOHN A. MASTERS

In the course of a number of years of shooting in Texas, I probably have shot more .22 caliber cartridges than all others combined. Even disregarding the literally thousands of rounds I have fired in various rifles chambered for the .22 Long Rifle cartridges, this statement is still true.

My first centerfire .22 caliber was a Model 43 Winchester in .218 Bee. I fitted it with a Weaver Side Mount and a B-6 Weaver scope. Even with factory loads, it was accurate, and I dispatched many a jackrabbit with the little gun.

I next tried a .222 Remington, in the fine little 722 Remington. I fitted it with a Weaver K-6 scope in a Weaver QD top mount, and after a few trips out, became enamored of the rig. It served as my varmint rig until one day George Curry and I went out to a prairie dog town, and he proceeded to knock off dogs at ranges that I never dreamed of with a .220 Swift.

Back home, I scurried to the gun library, and after several hours of searching, concluded that the 22/250 Varminter was the Swift's equal, and that I wouldn't be able to sleep until I had one. A few days later, I was in Roscoe Stockton's gun shop in Groesbeck, and found that he had a Varminter he was willing to part with. My memory is a bit dim, but as I recall, I parted with my .250-3000 and a bit of folding green before the deal was consummated.

I soon learned that the gun writers had been right. I fed the little gun a variety of handloads, and found that it would work equally well with just about any load I dreamed up. At that time, I was working in the oil fields, and the little gun rode beside me on most of my trips out.

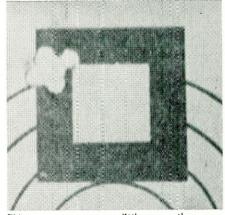
Late in the deer season, I got a

chance to go deer hunting, and found that the only rifle I had ready to go was the varmint rig. Rather than miss the chance, I took the gun, fitted with a Weaver 8X glass, and went out with a great deal of fine resolution not to use it unless I had a good clear shot where I could place the bullet. My loads were home brewed, a 55 grain Riggs hand-made bullet ahead of 35 grains of 4320. Late in the afternoon, I got a chance at a shot hunters dream of. A fine ten-point buck, the best one I have ever taken, walked out into the clear. I was in a good firm sitting position, so I leveled down on him, and at 210 yards, poked the little slug right back of his shoulder. The bullet performed perfectly, and the buck was dead by the time I reached him.

Since that time, I have had several rifles chambered for the case. The best one is the one that currently hangs in the rack. It is built on an Obendorf Mauser action, with double set triggers. The barrel is 22 inches overall, and tapers from about one inch at the receiver to about $\frac{3}{4}$ -inch at the muzzle. It is presently fitted with a Weaver K-6 and a Weaver Side Mount.

I have shot a number of groups with the rifle that went under one inch. The accompanying illustration is of one of the better ones. It measures just a bit over $\frac{1}{2}$ -inch center to center of the widest spaced holes. The white square is one inch on a side.

As mentioned earlier, the Varminter, or 22/250, is the world's most popular wildcat. It is formed by simply necking the fine little 250-3000 Savage case down to 22 caliber, and reloading with 22 caliber bullets. Grosvenor Watkins is credited with first coming up with the design, but others lay claim to the idea. I have



This group measures a little more than onehalf inch to the center of the widest spaced holes.

no idea who is right. I do know that whoever is responsible came up with a fine cartridge. For the life of me, I can't understand why someone hasn't brought out a factory rifle for the case, or at least made factory ammunition, but to date, no one has, and the Varminter owner must of necessity be a handloader.

The easiest way to obtain a Varminter is to have a gunsmith barrel an action for the cartridge. Or you can obtain one from a number of gun houses such as Flaig's of Millvale, Pennsylvania. Brass for forming cases used to be quite a problem, but primed or unprimed brass is readily available now.

One of the nice things about owning a Varminter is the multiple uses one can put it to. You can approximate the velocity of the .22 Long Rifle cartridge without difficulty, with fine accuracy, or you can load up to the place where you equal the 220 Swift. I would not suggest the Varminter as a deer cartridge unless you plan to hunt open country where you can place your shots without interference from brush or leaves. Also, you should use heavy jacketed bullets to prevent a surface blowup.

The Varminter, however, comes

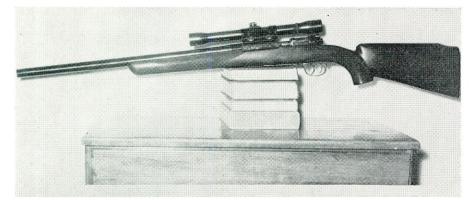
and Shooting This Month: Most Popular "Wildcat"

into its own when used in longrange shooting at such creatures as prairie dogs, coyotes and the like. I have taken many such creatures at ranges in excess of 200 yards, and a few as far as 350 yards.

The Varminter will make good use of high-powered telescopic sights. Right now, I am using a sixpower glass, but I sometimes go up to ten power. It's a wonderful feeling to be able to pick off as small a target as a prairie dog at long ranges, and it is a fine way to train your shooting eye for bigger game taken with bigger rifles. accurate cartridge has yet been devised.

Any light loading press with the proper dies can be used to reload the Varminter. It works well with almost any of the IMR series of powders such as 4320, 4064, 3031 or 4350. My best results have come with 55-grain bullets, although there is little difference when 50-grain bullets are used. My favorite load, and one that works well in any Varminter I have ever shot, is 35 grains of 4320 and a Sierra 55-grain semipoint bullet.

The rifle for the Varminter should



High-powered telescopic sights and a good trigger are helpful items on the Varminter rifle.

The cartridge had won more bench rest shoots than any other until recently. The Remington .222 may have replaced it, since it has come into wide use in late years in bench shooting. I don't have the necessary data to say which is in the lead, but I do not believe a more by all means have a good trigger if the best results are to be obtained. The heart of any good accurate rifle is a good trigger, and with the capabilities of the fine little cartridge in long-range shooting, one should definitely give himself every advantage.

Shootin' Shorts

Hardly a day goes by that I don't hear some hot stove league argument about guns. One way to be sure you know Browning guns is to send for the new Browning gun catalog. A complete listing of all Brownings, together with some excellent pictures, is available for the asking.

Colt, long known for fine pistols, is now entering the bolt action rifle field. I haven't seen one yet, but it



is based on an FN Mauser action, and will be available in 30-06 and 243 Winchester, with probably other calibers coming along later.

After all these years, I finally came into a Ruger Single Six revolver. Little gun looks and feels like the Colt Frontier or Single Action Army, just as it was intended to do. Handles well, works well. Deserves the popularity it has attained.

BUCK SCENT

Kills human scent. Game unafraid to come close. Tested and proved. Satisfaction guaranteed. \$2.50 postpaid anywhere in Texas. J. W. E., 459 Drake, San Antonio 4, Texas.

It Happened This Way...

One night one of the warden supervisors received a call from a game warden, who asked him to come down to the jail. When the supervisor arrived, he noticed a car parked in front of the jail with three fawns, legs tied together, hanging from the spot light. He went inside and asked the warden what had happened, and the warden said, "Well, it happened this way . . .

"I was driving down a back country lane this evening when I noticed a green limb that had apparently been dropped in the middle of the road. Just naturally suspicious, I guess, I began to look around to see what was going on. While I was nosing around I noticed a car pass with a fellow and a girl in it, but I didn't pay much attention to it. Well, I decided to park off the road there, and wait to see what would happen, figuring someone had put that branch there to mark a meeting place.

"A while later the same fellow and girl drove by again, very slowly. This time I stopped them and asked the guy his name. He told me, and since they weren't doing anything, I let them go on. I guess I waited there a couple of hours, and it was plenty dark. I lit up a cigarette, and when I did, someone called real low from the brush near the car. He called the name of the fellow that had been with the girl. I answered real low, and he hollered back, 'Come over here and help me.' Well, I went on over there, and about the time I got to the clearing, I flashed on my light. The guy started to run, but thought better of it when I yelled at him to stop. He had those three little fawns all tied up.

"I just brought him and the deer on in. Got the fellow who was with the girl, too."

It took the violator about three years to get all the fines paid.

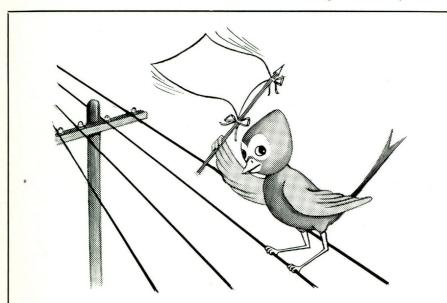
Fish Counts Soar in Texas With Natural and Hatchery Production

With more than 14 million fish produced by Texas hatcheries and a tremendous natural spawn, there are probably more fish swimming in the State this year than ever before. This is the opinion of biologists of the Game and Fish Commission, who have been making spot checks on the crop of young fishes.

In a report by Marion Toole, Director of Inland Fisheries, 10,446,- 920 bass were produced artificially during the 1956-57 season. Channel catfish took the next spot with a total of 2,082,515 from the hatcheries.

Other productions included 25,150 rock bass; 211,020 warmouth bass; 384,198 bluegill; 901,758 redear sunfish; 103,800 green sunfish; 295,033 yellowbreast sunfish; 465,760 black crappie and 14,825 white crappie.

The San Angelo hatchery with 2,-



TRUCE FLAG FOR THE BIRDS

If a bird could, he'd probably carry a white flag to wave when hunters start to shoot at him—especially when he's sitting on a telephone line. Because then he's defenseless, sitting out in the open like that.

Telephone lines are defenseless, too.

Each year many hunters shoot at birds on telephone wires. In so doing they frequently shoot the wires in two, cutting off important business and emergency calls.

So, good luck with your game hunting, sportsmen. But please remember: Don't shoot at birds on telephone lines.

Incidentally, most birds that you'll find sitting on telephone lines are protected by state or Federal law.

Southwestern Bell Telephone Company



Call By Number . . . It's Twice As Fast

260,925 produced the greatest number. Eagle Mountain was second with 2,160,194.

Fish hatcheries suffered from too little and too much water during the year. During the 1956 fall and winter months, they were hard hit by the drouth. In the 1957 spring they were almost washed away by flood waters.

Because every lake and farm tank in Texas was filled by the spring rains, the demand for hatchery production was very heavy from all sources. Meantime, however, the natural spawn in all the major impoundments was tremendous.

Fishermen are reporting that small bass, just under the legal size, are in all the lakes. Fall rains have refilled the lakes with food and growth of the fish will be very rapid, according to the Director. This will mean that by next spring fishing should be the best it has ever been in Texas.

Bag limits vary for species Know Your Geese

• Continued from page 8 Bill, black. Feet, black. Juvenile: very similar to adult. Wingspread up to six feet. Weight up to nine pounds.

LESSER CANADA GOOSE, fall and spring migrant and winter resident, is a sub-species of the Canada goose and is similar but smaller, with shorter neck and smaller bill. Frequents most of the Texas coast and may be found on inland water areas. Coloration is similar to the Canada goose, but with a proportionately shorter black neck "stocking." Same size as snow and blue goose and often found in company with them. Wingspread, up to five feet. Weight up to five and one-half pounds.

HUTCHINS' GOOSE, better known as RICHARDSON'S GOOSE, is another sub-species of Canada goose frequenting the Texas coast. A fall and spring migrant and winter resident, it is less common than other Canadas. General appearance the same as for the Canada goose, but much smaller—only slightly larger than a mallard duck. Wingspread may be about four feet. Weight up to four pounds. **

9166

Correction!

An error was made in the article "Hunting Forecast for 1957," which appeared in the October issue of TEXAS GAME AND FISH. On page 24, under the section for the Piney Woods, the heading 'White-winged Doves' was included. This heading should have read 'Mourning Doves.' White-winged doves are not usually found in East Texas.

Alabama Creek Area Gets Hunts Underway

A 15-day hunting season on both deer and wild turkey will be held in the Alabama Creek Wildlife Management Area of Tyler County, Bill Jennings, Assistant Director of Wildlife Restoration, has announced. On wild deer the season will be November 16 to November 30, both days inclusive, with a bag limit of one buck with pronged antlers. Shotguns using slugs or rifles, except .22 rim-fire, may be used.

The season is the same on wild turkey. One gobbler is bag limit.

Squirrel, which opened October 15, will be open until January 15, with a bag limit of 10 and a possession of 20. Quail shooting will be December 1 to January 16, both days inclusive, with a bag limit of 12 and a possession of 24. Trapping or shooting of fur-bearing animals will be allowed from December 1 to January 31.

The Alabama Creek Area is located on U. S. Forest Service land, under regulatory authority of the Game and Fish Commission. Hunting on some 12,000 acres of privately owned land leased to the Game Department for public hunting in Tyler County will not be held this season because some land owners did not sign up for the hunt. All landowners must approve the hunt before it can be held.

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Season Summary

FISH — GAME — FURBEARERS

WARNING—The open seasons listed below are general state laws. Many counties, by action of the legislature, have special laws which differ from the general laws. A digest of Game and Fish Laws, which notes these exceptions, may be obtained from your local game warden, from your gun and tackle dealer, or by writing the Texas Game and Fish Commission, Austin.

Game Animals and Birds

White-winged Doves-Season closed.

- Mourning Doves—North Zone—Season closed. South Zone opens 12 noon Oct. 1; closes sunset Nov. 17. Season closes Nov. 14 in whitewing zone. Bag limits: 10 mourning doves per day, 10 in possession.
- Rails and Gallinules (except coots)—Sept. 1 to Nov. 9, both days inclusive. Shooting hours one-half hour before sunrise to sunset. Bag limit: 15 total of all kinds daily or in possession, except coots and soras; soras 25 daily or in possession. Coots, see Ducks.
- Woodcock—Dec. 8 to Jan. 16, both days inclusive. Shooting hours onehalf hour before sunrise to sunset. Limit: 4 per day, 8 in possession.
- Ducks and Coots—Nov. 1 to Jan. 14, both days inclusive. Shooting hours, one-half hour before sunrise to sunset. No open season on blackbellied tree duck. Daily bag limit on ducks: 5 in the aggregate of all kinds, including not more than 1 wood duck and not more than 1 hooded merganser. Possession limit: 10 in the aggregate, not to include more than 1 wood duck and not more than 1 hooded merganser. Bag limits on coots: 10 daily or in possession.
- Geese—Nov. 1 to Dec. 30, both days inclusive. Shooting hours, one-half hour before sunrise to sunset. Daily bag limit on geese and brant: 6 birds. Such limit shall not contain more than 2 Canada geese or its subspecies or 1 white-fronted goose, or 1 of each. Possession limit: 1 day's kill.
- Wilson Snipe or Jacksnipe—Dec. 16 to Jan. 14, both days inclusive. Shooting hours, one-half hour before sunrise to sunset. Daily bag and possession limit: 8 birds.
- Chachalaca and Quail—General season open Dec. 1 to Jan. 16, both days inclusive. Limits: 5 chachalaca per day, 10 per week or in possession; 12 quail per day, 36 per week or in possession. Panhandle, quail season Dec. 1 to Jan. 16, both days inclusive; limit: 12 per day, or not more than 36 in any seven-day period; possession limit 36. West of Pecos, quail season Dec. 1 to Dec. 31, both days inclusive; Mearns quail and chachalaca season closed; limits: 12 per day, 24 in possession.
- Deer, Javelina, Turkey, Bear-General open season Nov. 16 through Dec. 31. Bear season closed in Trans-Pecos Region. Limits per season: 1 bear, 2 buck deer with pronged horns, 2 javelina, 3 turkey gobblers. Panhandle season open on deer and turkey Nov. 16-25, both days inclusive; season closed all year on javelina. Panhandle limits: 1 buck deer with pronged antlers, 2 turkey gobblers, per season. West of Pecos, deer season Nov. 20-27, both days inclusive, antlerless mule deer (hunting by special permit only) Nov. 20-27, both days inclusive; javelina season Nov. 1 to Dec. 31, both days inclusive; turkey season closed. West of Pecos limits for season: 2 buck deer (1 mule and 1 whitetail or 2 whitetail). One antlerless mule or white-tailed deer may be taken. If an antlerless mule deer is taken, the bag shall be one antlerless mule deer and one whitetail buck; and if an antlerless white-tailed deer is taken, either a mule or whitetail buck may be taken, not to exceed 2 deer in the aggregate. Buck deer must have at least one pronged horn; 2 javelina may be taken. Note-javelina season open all year in seventeen counties; no bag limit. See Game and Fish Law Digest.

Antelope—Season closed.

Game Fish

There are no closed seasons on game fish in Texas (except for special county laws).

Furbearers

See Game and Fish Law Digest.

M'lady's coat may save wild turkeys

Something to Gobble About_

Reports indicate an anticipated increase in fur prices this fall as a result of the return to fashion of fur coats for college students, male and female. Whether or not this occurs remains to be seen. But if a price increase does occur, it will result in a greater harvest.

It must be kept in mind that a predator control program is only one minor portion of the solution of the problem and has proved unprofitable on a large scale basis. Presence of ample food and cover is much more important in attaining a sustained yield of turkeys than any type of predator control. The wild turkey is well able to take care of himself, if he has favorable habitat.

4. Restocking is not generally necessary on the Edwards Plateau of Texas due to the brood stock already on hand. The management principle that if suitable habitat is available and wild brood stock is anywhere near the area there will soon be turkeys, holds good for the Edwards Plateau in general. However, in some cases restocking is be-



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ing undertaken by individual ranch owners and has met with some success. It should be noted that these successful restocking instances involved trapped wild turkeys and not pen-raised birds.

5. The stocking of virgin territory does not apply on the Edwards Plateau because turkeys have lived here for thousands of years.

The above discussion shows how present conditions on the Edwards Plateau compare with the requirements for an increasing turkey population. Now for that all-important question: Just how good have the turkeys done this year? Here is the picture.

Interviews with landowners and field work carried out in four counties of the Edwards Plateau by biologists of the Game and Fish Commission yielded the following summarized information: -• Continued from page 11

There is promise of a bumper mast crop.

The entire situation might be summarized by a statement made by one rancher during an interview with the authors: "When I came here in 1909 this country was swarming with wild turkeys and a few deer. I've seen the turkeys increase and decrease since then, and I think this year has been one of the best I've seen. They've got a good start and ought to do real good."

That is all fine for this year, but what about next year and the years after? Can the turkeys continue to hold their own?

The turkeys can and will hold hold their own if they continue to get that "half a chance." The turkeys can't manufacture that "half a chance" for themselves; it's either there or it's not, and the turkeys

| COUNTY | EDWARDS | 6 MEDINA | KERR | BANDERA |
|--|------------------|-----------------------|------------------|-----------------------|
| Acres per adult turkey | 75.6 | 49.6 | * | * |
| Male adults per female adult Per cent of females | 1:2.22 | 1:8.00 | 1:4.40 | 1:17.6 |
| with young Average brood size | $19.9\% \\ 6.48$ | $\frac{3.75\%}{10.7}$ | $39.3\% \\ 6.30$ | $\frac{83.8\%}{7.60}$ |
| Per cent increase in population | 84.9% | 35.9% | 203.7% | 378.3% |
| *Information not available | | | | |

This summarized information is considered reasonably accurate and at its worst gives an overall picture of the situation in mid-July. When considering the "per cent increase in population figure" it must be kept in mind that many little turkeys will not live to become adults and many adults alive when these data were collected will not survive until the 1957 hunting season. However, the figure does approximate the increment in the population at the end of the hatching season.

Surface water was still plentiful as late as the middle of August. Some tanks and streams have dried up, but it appears that there is sufficient water to last through the winter even without additional rain. will react accordingly.

With ever greater pressure placed on the land to produce beef, mohair, wool, venison and farm crops, there is a growing tendency to destroy favorable wild turkey habitat. Preservation of favorable habitat will insure a continued yield of wild turkeys through the years to come.



Game Regulations Planned at Austin By Commissioners

Members of the Game and Fish Commission met in regular meeting October 11, in Austin. The meeting, originally planned for Lubbock, was held in Austin as proclamations passed at the July meeting were due to be reconsidered. The law requires that all hearings on and discussions of proclamations be held in the Austin office.

The Commission outlawed the use of electronic devices for calling ducks and geese. The measure was adopted so that Texas regulations would conform to Federal regulations. Old-style mechanical callers are still lawful.

After a lengthy discussion by Commission members and E. A. Walker, Director of the Wildlife Restoration Division, and James Teer, Biologist, about the deer situation in Kerr County, the Commission voted four to three in a rollcall vote against killing does in Kerr County. This was the first split vote to be taken on an issue in more

Attentive Commissioners listen to Eugene A. Walker, Director of Wildlife Restoration, explain the charts showing the deer situation in Kerr County.

than 10 years. The biologists recommended a permissive doe kill in the county because certain areas in the county are over-grazed and overstocked, a condition which may lead to a deer die-off during the winter. Under the law giving regulatory authority in Kerr County, the County Commissioners have the right to reject any recommended program.

A measure was passed by which Denton County will be included in the Possum Kingdom Area, and

Now the drama was captured on film

60-Seconds of Fury-

deer's flanks, but he too was satisfied to call it a draw.

Lon and I just sat and looked at each other for a minute or two. We both found our voices at the same time. "Did you see that," gasped Lon as he tried to light a match with his cigarette. "That's terrific," I replied as I lit the filter end of mine.

"Do you still want a shot of the turkeys flying?" I choked. "I doubt you can make 'em fly," snorted Lon, "they didn't even get excited with those bucks throwing dirt all around 'em."

Well—we made the turkeys fly and got our pictures, then we examined the battle field. In places, the ground was rutted and scarred nearly an inch deep.

"Just to make sure, let's check the distance from here to the blind again," Lon said. We checked it. Most of the battle scars were 150

-• Continued from page 17

feet—right on the money!

Few people, even residents of deer country, have ever seen a deer fight. We knew we were lucky. Not only did we see it, but we had recorded it on film. The buck fight turned out to be the highlight in the Game and Fish Commission's television series film, "Hill Country." **

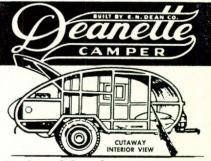


proclamations pertaining to that area will pertain to Denton County.

The annual Game Warden school which is held at Texas A. & M. College was approved for another year, and will be held in the spring of 1958.

Hal Lavery, city secretary and representative of the Cisco City Council, appeared before the Commission to present a rate of 20 cents per thousand gallons for water to supply the Cisco Fish Hatchery. The charges were considered too high, and it was decided to dismantle the present fish hatchery.

The Commission plans to hold its next regular meeting in Lubbock, January 17. A special meeting is scheduled for January 30, in Wichita Falls.



Designed for the SPORTSMAN!

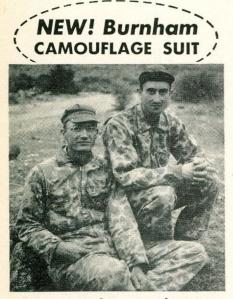
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It's where Nature is still "natural"

Wilderness Often they think of Africa and India as the last remote hunting grounds. These thoughts seem especially far fetched today when one looks at the maze of new towns, expanding cities, and endless highways. Our growing population with more hunters every year makes the picture even dimmer. Oddly enough, though, the U.S. still has some primitive hunting grounds; our National Forest Wilderness Areas offer some of the finest remote hunting country there is today anywhere.

Primarily, these lands were set aside to furnish everlasting examples of primitive America. Also these lands are to provide solitude for those who seek it, many kinds of outdoor recreation, and virgin habitats for scientific study and educa-



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Two-piece Marine Corps-Type suit, scientifically camouflaged in 5 dull colors. Big pockets, colorfast, easy to fold and carry, long-wearing.



 Continued from page 12 tion. Naturally, if man and his machines move in, the primitive character is gone. Roads, mines, overgrazing, and dwellings would leave their scar and effect for centuries. In order that these lands would not be spoiled, they were created to be permanently roadless, and void of other improvements except for horse and foot trails. It is still the policy to keep these areas truly wild, but with more people and hungry eyes glued on any "unexploited" lands, the wilderness areas could easily be consumed. They would be lost forever.

It's quite a treat to camp out in vast country, still unmolested, and watch deer and elk graze where only wild creatures inhabit the land. Or to glide through the unspoiled Quetico-Superior lake country by canoe, where there are no motels, beer joints, and highways littered with trash. The drum of the ruffed grouse, splash of the beaver and muskrat, and calls of the waterfowl are sweet music indeed in this solitude. And in the mountains of the west, the whistle of the bull elk, pika, 'chuck, and eagle too, have no competition from the noise of trains, buses, and other machines. No mines are there to yellow the water with sulphur, or make it black with cyanide or coal silt. Although these lands are free for everyone to enjoy,

Inhabitant by Accident_

of starvation and as ready as ever to fight the stick we poke at him to make him move.

Brother Tom says he knows for certain that the snake has been there, trapped, at least since the fall of 1956; he stopped and saw the beast during deer season. The vaquero thinks he remembers seeing the snake there as early as the spring of 1956, in March. Our present safari date is July, 1957.

The only entrance to the cistern is the hole in the top. No cracks or holes are visible in the bottom or walls. Obviously, the snake fell in the hole while crawling through the brush covering and has been unable to escape, since he could not possibly crawl up the walls. The probable answer to the snake's food needs

Coastal Fisheries Need More Marine Biologists

Marine fisheries biologists are now being sought by the Game and Fish Commission for work along the Texas Coast line, according to Howard Lee, Director of Coastal Fisheries.

The applicant must be a graduate of an approved college with a major in biology or fisheries management. Starting salary will be \$3,900 a year, with usual state vacation and other state employment benefits. Interested persons are asked to write to the Director of Coastal Fisheries at Rockport.

their value is infinite.

Needless to say, there was considerable foresight in the men who created the wilderness areas. They fought hard to save some bits of virgin land from the onrush of steel and machines. And because of their efforts, our kids, and, in turn, their kids will be able to see and enjoy primitive country. Such assurance for future Americans is priceless.

Your share in these wild lands, then, is immense. Anyone who loves the out-of-doors cannot be indifferent. Hunters and non-hunters from the east, south, and west own equal shares. These lands are yours and your children's. Use and enjoy them, and be their guardian. **

-• Continued from page 13

lies in the rabbits, ground squirrels, pack rats and mice that just happen to fall in the pit in the same way he did. Perhaps he may eat some of the camel crickets, although they are not normal food items for a rattler. Water could only come from the few and far-between rains, but a rattlesnake needs very little water to survive.

Now that a definite date has been established that the snake is in the pit, we hope to keep a check on it. If the snake stays alive and healthy for any considerable time, we will offer more reports later. Growth in length and weight would be interesting records, but we hesitate to risk injuring the snake by catching him for measuring. Besides, we have a noticeable lack of volunteers to enter the pit to make the capture. **



At the ceremony were, left to right, Cecil Reid of SCOT, H. D. Dodgen of the Game Commission, Governor Daniel, Tom Waddell, and Ben Stone.

Governor Honors 8 Retiring Men

Two retired Game and Fish Commission employees representing six other retiring wardens and superintendents recently were presented plaques by Governor Price Daniel. The plaques were awarded on behalf of the Sportsmen's Clubs of Texas. The plaques, presented by

Others throw their help behind the program

Land, Youth, and Wildlife_

And in many of these ideals do others believe, and they want to enter the educational program of the youngsters. Local sportsmen organizations, civic groups, landowners, game associations, and business firms often encourage 4-H work as a part of their regular program. But still there is a definite need for more help from such organizations.

The Folgers Coffee Company has made funds available to offer county, district and state awards each year for the outstanding 4-H wildlife conservation demonstrations. A \$1,200 college scholarship is awarded the state winner each year, allowing the boy or girl free choice of his college and major subject. Each of the 12 Extension Service district winners receives a \$50 savings bond. Two award programs are set up one for white 4-H members and one for Negro 4-H members.

The Federal Cartridge Company donates a substantial sum of money each year to defray expenses for 4-H conservation camps. At these camps wildlife, soil and water, plant life, forestry and other subjects channel youthful energy and interests into worthwhile activities. The overall purpose of the effort is to create strong, intelligent citizens, who in turn will build a more prosperous and beautiful Texas. • Continued from page 15 A leaders' guide in wildlife conservation is entering the educational picture to assist the county agricultural agents and the more than 10,-000 volunteer adult leaders who help 4-H'ers with their projects. Other aids to the program are bulletins and suggestions from the extension service specialist in wildlife conservation at Texas A&M College, and the Game and Fish Commission field workers who are familiar with wildlife needs in their particular areas.

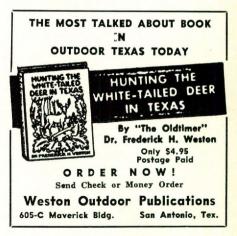
Any one with an interest in wildlife can join the program—whether it's because of hunting and fishing, bird-watching, selling sports gear, or just reading about outdoor life. Nature lovers could lend a hand to the Future Farmers of America, the Boy Scouts, or other youth organizations which sponsor conservation activities, as well as to the 4-H'ers.

Most 4-H members in Texas have access to some farm or ranch on which wildlife conservation demonstrations can be set up. When talking with young people it is surprising to discover the great amount of information they already have about wildlife. This surely shows an interest—what remains is the need for guidance, so they can use what they are learning to best advantage; for the future of Texas wildlife lies in the balance. *** Governor Daniel in a ceremony in his office October 16, state: "In recognition of faithful and meritorious service to wildlife conservation in the State of Texas."

Game Warden Supervisor Tom Waddell of Eagle Lake and Superintendent Ben Stone of Eagle Mountain Fish Hatchery were present at the ceremony. Other recipients of plaques who were not on hand were Warden Supervisor H. A. Ellis of Tyler, Warden James J. White of San Angelo, Warden Frank Smith of Pearsall, Warden Oma Puckett of Annona, Warden Bill Garrett of Comfort, and Hatchery Superintendent E. C. Brady of Tyler.

"It is a privilege to cooperate with Sportsmen's Clubs of Texas in presenting these plaques to two men representing the eight field men of the Game and Fish Commission recently retired under the maximum age limitations for service," Governor Daniel said at the ceremony. "These two men symbolize meritorious public employees from all departments of our state government whose contributions to the people of Texas are so often taken for granted.

"I want to compliment the Sportsmen's Clubs of Texas for making this ceremony possible, and take this opportunity to acknowledge again the fine contribution SCOT is making to wildlife conservation in this state. Certainly there is no better way of directing attention to the need for proper conservation of our natural resources than by citing men such as these who have spent a lifetime in this important field," the Governor concluded.



Attempts to Regulate Firearms Come Under Fire

Texas Senator Ralph W. Yarborough's query, "Who is afraid of the people? This regulation smacks of a police state," at the hearing held by the Alcohol and Tobacco Tax Division, Internal Revenue Service, on a proposal to amend and reissue regulations relating to firearms and ammunition summarizes the widespread opposition that was expressed by a long series of witnesses, according to the Wildlife Management Institute.

Nearly 30 Congressmen and Senators, or their assistants, headed the list of about 400 persons who attended the hearing late in August in Washington. Two full days were occupied as witness after witness delivered verbal volleys at the proposed regulations. Rifle clubs and shooting organizations, gun collectors, conservation and recreation groups, arms and ammunition manufacturers, and individual sportsmen were amply represented.

Only four persons spoke in favor of the proposals. Three represented the law enforcement groups that had prompted the Internal Revenue Service to seek the changes. The fourth individual, a lawyer for the Senate subcommittee on juvenile de-



104 Red River

Austin, Texas

linquency, echoed the testimony heard from enforcement groups during the subcommittee's recent investigation.

The Alcohol and Tobacco Tax Division also received "several thousand" communications in opposition to the proposed changes.

The sections of the suggested regulations which were criticized repeatedly are new. Briefly, they would require that all firearms be imprinted with a serial number; that manufacturers and dealers maintain permanent records of the production, disposition, and sale of all pistol and revolver ammunition right down to the individual purchaser; that persons buying firearms acknowledge receipt thereof in their own handwriting and the records be kept permanently; and that the Federal agents have authority to examine during business hours and without warrant the books, stocks, and premises of all licensees affected by the firearms regulations.

Objective and forceful for the most part, the oral statements given at the hearing left no doubt that the American people view the new

Nature gave him the knack of "hide 'n seek" Fortunes in Fur______ Continued

trails along conspicuously as the animal swims, making a telltale furrow and wake in the smooth water amidst the kelp. The float bulbs of the huge kelp so closely resemble the head of the sea otter that nature has no doubt made the animal aware of this natural protection. But the otter is often betrayed in the vast fields of kelp by its wake as it swims,



sections as an infringement of personal rights.

The 30-day waiting period that was granted at the termination of the hearing for public study of the testimony given and for the submittal of further statements ends September 27. Treasury Department officials ostensibly will review the testimony and many expressions received and give thought to a final draft of the regulations. From this point on, the public has no further recourse by way of public hearings on the executive departmental level to comment on the regulations that might be promulgated.

There are a m ple indications, however, that the public will have an opportunity to make its feelings known through the medium of Congressional hearings if the most criticized sections of the proposals are adapted. Many Congressmen are prepared to introduce suitable legislation and take other steps if the regulations are not modified considerably from the form in which they were proposed. Such action surely would receive vigorous support both in Congress and throughout the nation.

• Continued from page 18 and also by the harrying action of sea gulls intent on getting a morsel of food from the table set on its chest. For the sea otter brings its food up from the bottom—abalone, sea urchin, or some other item—and rolling over on its back, proceeds to eat in leisure, discarding the shell by a slight toss. Sea otters are reported to use a rock in breaking the shells. The spectator gasps in wonder as he watches this sleek animal use a tool like man.

The kelp bed is the sea otter's home and castle, and rarely does it leave to go to sea or ashore. Protection from enemies and calmness of water, with the great supply of food in the forest of stems and leaves and on the rocks to which the holdfasts attach, are the main advantages of the kelp bed. But not all the kelp beds are made up of the huge Nereocystis type with the conspicuous • Continued on next page

There is no end to the interest these animals hold for the spectator

Fortunes in Fur-

float bulbs which so closely resemble the head of the otter. The longstemmed and leaved Macrocystis is also a favorite habitat, either mixed with the Nereocystis, or alone as it grows by itself farther south than the Nereocystis. In the Aleutians, Alaria is the only common kelp.

Kelp and the inevitable sea gull are the two things to look for when searching for this animal. In stormy weather, or under other stresses, it may take to the shore; and in the far north it hauls out on beaches like a fur seal, or moves into rank herbaceous vegetation like a land animal.

Swimming is done mainly by the webbed hind feet, with occasional sinuous propulsions of the body in a vertical plane. The front feet are used mainly for grasping food, a

Careless Boating

An abundance of water and fine new boats and motors can provide some wonderful recreation, but it is a combination for tragedy, too. That is the warning of E. M. Sprott, Director of Law Enforcement of the Texas Game and Fish Commission.

"There is more water this year than most people in Texas have seen before," he says. "Every lake and stream is filled to the brim. This offers a much greater area for pleasure boating and fishing.

"The ratio of tragedy also can increase, because so many members of the family now enjoy boating. Formerly water sports were limited mostly to men and boys. Now the entire family is participating. This means extreme caution should be used by everyone."

Sprott pointed to a few simple precautions:

First, know what you are doing when you take charge of a boat.

Second, there should be an approved life preserver for every occupant of the boat.

These are fundamentals, the director pointed out. Other things, however, are just as important. One of these is courtesy. Boating courtesy not only will save tempers, but it will save lives, he said. rock, the offspring and for preening the fur.

You may not hear the mewing cry of the baby otter as it frets for the return of its mother from the depths, but you are likely to see the almost human solicitude and affection shown as she fondles and caresses her offspring, rubs noses with it as if kissing, and takes it on her broad chest perhaps to sleep or at least travel de luxe as she swims on her back. A single young is the rule, but twins are known. Nursing is long, perhaps nearly a year, and the young stays with the family even after the next season's baby is born. The breeding and pupping season extend over most of the year.

Play, and perhaps curiosity, best characterize the sea otter's behavior. The old and young gambol and ca-

Breeds Tragedy

Among these simple precautions he suggests:

Be sure and use the right motor. (Not too big.)

Avoid sharp turns.

Balance your load.

Head INTO the waves.

Slow down when you are passing smaller boats or parked fishermen.

If you don't know how to operate the boat, *don't!*

By following these few simple precautions you'll have little trouble and you'll get back home alive.



• Continued from page 28 vort in the water, doing cartwheels while chasing their own tails, or porpoising in pursuit of each other, or in sheer exhuberance of pure animal spirits. When danger intrudes, they may raise their bodies out of the water, hold this position, and then dive quickly out of sight. At times they come near intruders and show a great deal of curiosity and, some when captured, feed at once, paying little attention to their surroundings. Most do not survive in captivity.

The otter can wash its face like a cat, scratch itself like a dog, and rear up like a merman. There is no end to the interest which this intelligent and mysterious animal holds for the human spectator. Small wonder that the sea otter will be one of our most prized natural resources to be enjoyed by the vast number of devotees of nature. With our continued support, this animal need never disappear from our coasts.

DR. RAYMOND M. GILMORE is one of the country's leading authorities on the present status of sea mammals. He is currently responsible for the investigation of Pacific Coast whales which is being carried on by the U. S. Fish and Wildlife Service.

Are You Changing Your Address?

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Bob Kemp holds an unusual Giant Spider Crab, which was brought in to the Marine Laboratory at Rockport. This specimen, having a spread of 30 inches between its large claws, was picked up by a shrimp boat that had been trawling in deep water in the Gulf. A Japanese species of this crab may have a spread up to six feet.

Electronic Calls Banned on Ducks

Do not plan to use an electronic duck call or a phonograph record for calling ducks this season, warns E. M. Sprott, Director of Law Enforcement of the Game and Fish Commission. The standard regulations for taking migratory birds now prohibit the taking of such birds "by use or aid of recorded bird calls or sounds recorded or amplified imitations of bird calls or sounds." The maximum penalties call for a six-month jail sentence, a fine of \$200, or both.

Conventional mouth callers will be permitted, Sprott pointed out.



Duck Limits Could Be Raised If Hunters Shot Clean and Retrieved All Their Birds

If every hunter made a conscientious effort to kill cleanly and to pick up every bird that dropped, the daily bag limit of ducks could be raised by at least one and possibly more. Based on data gathered by Federal, state, and private agencies, the annual waste of unretrieved waterfowl is at least a disgraceful 25 per cent.

An intensive study by the U. S. Fish and Wildlife Service during the 1955-56 season showed that the unretrieved kill of ducks and geese that season totalled 3,070,964 birds, or 21 per cent of the total national bag; and this included only birds knocked down within sight of the h u n t e r s. X-ray examinations of wild-trapped birds indicate that a staggering number of birds fly away from the blinds and decoys carrying wounds that later prove fatal.

What is the cause of crippling loss? How can it be reduced? Two questions, simple in nature but involving a mighty tough factor to work with, for the one real controlling element is the "human being."

If there were perfect understanding and coordination between gun and man, the loss of cripples would be within reason. Where reason would lie is debatable, but it certainly shouldn't be 25 per cent. We always will have some crippling in all forms of shooting-it's inevitable -but as sportsmen and conservationists, we want to cut this loss to a minimum. Primary responsibility for waterfowl waste rests with the gunner. The loss by the average and veteran hunter was reduced by more than 40 per cent when retrievers were used.



Here is a rundown on some of the causes of crippling and duck losses.

1. Inability to judge distance— This undoubtedly is the greatest single cause of avoidable loss. The skyshooters cripple more ducks than all other hunters put together. A real sportsman waits until the bird is well within range so that if one is crippled a quick second or third shot will help erase the blunder of a partial hit. The extra shot carried in many duck guns should be reserved to rake a cripple the moment it is down.

2. Poor marksmanship—One Federal official, who has observed gunners in the field for many years, said that many of the cripples of the first few days are caused by "good" gunners, but "good" g u n n e r s who haven't shot since last season and consequently the first day out often becomes a "sighting-in" time that costs plenty of lost ducks.

3. Inability to judge the range— A fundamental knowledge of the proper range and killing power of the shooting equipment is basic.

4. Failure to retrieve birds—The causes for failure to retrieve birds ranges from the lack of a retrieving dog to just downright piggishness, in cases where birds are shot just for target practice or where a fellow is too lazy to exert himself to pick up a downed bird. Many shooters do not own or use dogs and must rely upon their own resources to retrieve. It takes will power to shove out after a downed bird, especially when the "limit" still is to be reached and there is danger of flaring any incoming birds.

Failure to retrieve birds can't be passed over without a few words about the "eatin' ducks." How many of our smaller and "inferior" ducks are knocked down before the legal limit of good ducks is obtained?

As far as cripple and dead bird losses are concerned, one of the best ways in which we can help to reduce this tragic loss is to readjust our sights and our standards of sportsmanship.

A Honker Stakes His Claim

By ORVILLE HOWARD, Amarillo Daily News

After cutting through strands of "red tape" and using his backyard for a game refuge, a retired Canyon farmer has become the legal owner of a wild Canadian Goose.

Floyd Bond, who enjoys any type of hunting, downed the goose in mid-air a couple of years ago but didn't finish killing it after hearing the lonesome "cry" of the wounded bird. He brought the honker in alive.

"I just couldn't kill it," said Bond. "I have shot a lot of ducks and geese in my lifetime, but never before did I feel like keeping one."

For several weeks Bond applied medication and bandages to the proud honker, who defied his friendly overtures by biting and slapping with the good wing. Then one day the goose was well, but she didn't want to leave.

"I was glad the goose liked our place," said Bond, "because our

Refuge Area Gained For Migratory Birds

Steps have been taken by the Migratory Bird Conservation Commission to add approximately 10,500 acres to the national wildlife refuge system. Authorization was given for the purchase of 6,127 acres and for leasing 4,340 acres.

The largest addition will be to the Salton Sea National Wildlife Refuge in California, where the leasing of 3,540 acres was approved.

The largest purchase authorization was at Monte Vista, Colorado, which is scheduled to get 2,582 additional acres. This includes excellent nesting grounds as well as water rights which will have considerable value in the general management plans of the refuge. Approval was also given for the leasing of 800 acres of land for this refuge.

Other acquisitions authorized included a creage for Chase Lake, North Dakota, Malheur Refuge in Oregon, Martin National Wildlife Refuge in Maryland, and Quivira, Kansas. whole family had accepted her as one of the family."

"I decided to keep her," Bond said, "so I wrote the National Game Reserve in Washington, D. C., to get a permit."

In reply, he got a bundle of legal forms to be filled out in detail. All questions were answered carefully, and the replies sent back to Washington. Bond had for one lonely goose knowingly signed over his 640acre ranch as a "wildlife refuge."

"I don't think I would have gotten those forms completed," said Bond, "but my son-in-law helped me."

However he was not through—a few days later another stack of "red tape" arrived for Bond to sign and return. "I never realized one little goose was so important," Bond chuckled, "but I followed through." He processed the second stack of papers.

Several weeks lapsed without a word from Washington. Bond had about decided the whole thing was a farce, when Don Kreible, Federal Fish and Wildlife Service agent arrived in Amarillo by plane to look over Bond's "big goose ranch."

"It was really funny in a way," said Bond. "Somewhere in the shuffle the agents in Washington got the idea I was starting a 640-acre goose farm, and all I wanted was a permit to keep one crippled goose."

Kreible was astonished by the scarcity of geese, but Game Warden Woody Pond of Canyon explained the situation, and Kreible went back to Washington with a story, and Bond went home with a permit.

"The goose has been legally mine for about a year," said Bond, "and now I'm really glad I kept it. Every time a change is coming in the weather, the old goose starts honking and seldom gives a false alarm."

The Canadian honker stands 30 inches high and has a tremendous appetite for grain. Bond said he wouldn't part with the pet, and as longs as she wants to stay, room and board will be free.

Field Care Determines Game Meat Taste

Many persons who sincerely believe they don't like the taste of wild game probably have never eaten wild meat that has received the proper field care. Generally speaking, the nearer a hunter can come to packinghouse methods in the handling of game meat, the better it will taste.

Three common practices which detract most from the quality of big game meat are, (1) failure to cool the meat properly before hauling it home; (2) hauling meat on the fenders of cars or any place where it won't stay cool; and (3) in the case of antelope, failure to skin the animals immediately.

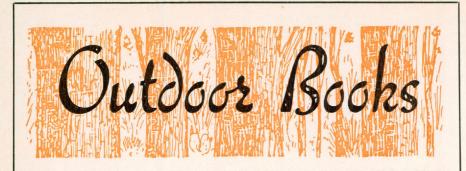
The following steps in field care are recommended, "when they are at all practical and possible:"

1. Skin and field dress the animal. If it's an antelope, skin it first.

2. Wash the meat with cold water if you want to. Water won't hurt the meat, if allowed to drain off. 3. Let the meat cool several hours before transporting it. The meat should be placed so air can circulate around it. Quartering the animal and sacking it in cheesecloth permits quicker cooling and easier transporting.

4. When hauling the meat, put it where it won't get hot. In the back seat with the windows rolled down is a good place. Under no circumstances haul the meat on the front fender, near the motor.

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BY WHICH WE LIVE by Ernest Swift, executive director of the National Wildlife Federation. 38 pages. Published 1957 by The National Wildlife Federation, 232 Carroll Street, N.W., Washington, D.C. Single copies free; quantity orders, 25¢ copy.

Raking through the ashes of history, both ancient and recent, provokes a constantly recurring vision: men taking splendid natural resources, creating from them a complex civilization, and burning both out in gross misuse. But the tragedy seems to lie in the fact that it is not always indifference which causes ruin, it is often the very evangelism which is trying to spur "progress."

Ernest Swift points to one after another in our own society who has within him the power to defeat the foundation of our country. What is your role? Who is responsible for saving the land and molding it to its highest fulfillment? Just what is its fulfillment? When we progress, do we progress toward perfection or toward ruin?

Swift's essays hit hard, showering the reader with the varied aspects of the problem and opposing opinions about it. You may argue with him, but you will not want to miss a single of the essays in BY WHICH WE LIVE. -J.B. OWYHEE: THE LIFE OF A NORTH-ERN DESERT by Earl J. Larrison. 357 pages. Illustrated with numerous black-and-white thumbnail sketches by Don Fritts. Published 1957 by The Caxton Printers, Ltd., Caldwell, Idaho. \$5.

A desert is not nearly so "deserted" as its seemingly barren sands appear. Reptiles which blend into the sunsoaked plain, birds which look like the ground-hugging foliage they hide in, animals which travel through and live in the ground—all have made the way of the desert their way of life.

The way of life is that of adaptation, one which makes the best of the situation as it stands. The desperate need for water, and protection from the heat or sudden spring storms must be met by each inhabitant of the Owyhee Desert in Idaho, both plant and animal.

For instance, 95 per cent of the animals which live there are burrowers. Some "literally climb in a hole and pull the hole in after them," says the author, "in order to keep out the heavy heat of the day." While the temperature outside may soar to 125 degrees Fahrenheit, the nest surrounded by closed-in sand may stay a comfortable 60 degrees.

Man's adjustments to the countryside are many. His occupation, his traveling, his camping habits reflect

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the influence of the desert atmosphere. A full radiator, spare gasoline and extra water assume new significance when he faces a desert trip. Rattlers seeking warmth in his tent strain away the appeal of sleeping on the ground. Even the camper's traditional campfire for warmth and cooking at night makes way for the more practical pressure gas stove and lamp.

Author Larrison, assistant professor of zoology at the University of Idaho, has molded his own observations into a readable account by three characters. Desert folklore and native attitudes come into play through a fresh-fromcollege scientist, Wyomin'; scientific data and Owyhee County history through an ecologist with about 30 years field experience, "Doc," and colorful descriptions of the countryside through an "adventurer in conservation," the narrator.—J.B.

LONG DISTANCE SWIMMING by Gerald Forsberg. 173 pages plus black and white photographs and race maps. Published 1957 by Philosophical Library, Inc., 15 East 40th Street. \$4.75.

When an exhausted swimmer drags himself up on the shore of the English Channel, you wonder why anyone would tackle that grueling 20½-mile race. Sure, dramatic glory awaits the swim's completion. But is that enough to justify long hours of soaking cold water, restless waves, and tortuous exertion of a Channel swim?

Gerald Forsberg, who has made the swim, has many reasons to back up his love of long-distance racing. Being at home in the water, satisfaction in the mastering of a distance which has defeated many competitors, enjoyment of the free strokes and form used in the sport-all have their place in the answer to the "why" of marathon swims. Surprisingly enough, long-distance swimming can accommodate many more persons than indoor racing, including oldsters and physically handicapped swimmers. Sheer physical endurance instead of simple speed governs the sport.

In LONG DISTANCE SWIMMING, Forsberg makes no attempt to instruct swimming. He includes local color of actual experiences of marathon swimmers, as well as the history of the sport. He includes rules for the Butlin's English Channel race, an index of swimmers and topics discussed, useful addresses for marathoneers, a list of successful individual Channel swimmers, and a list of champions of the Morecambe Cross Bay swim. Maps show principal race areas and routes in Great Britain.

Forsberg gives valuable training advice to marathon swimmers on their training and living habits, imparting a background knowledge at the same time which will interest commentators and fans who follow the sport.—J.B.



ELK IN TEXAS

Did you know there are elk in Texas? These large animals with stately, wide-spread antlers range in the Guadalupe Mountains. They were introduced there in 1927 by Judge J. C. Hunter of Abilene.

Judge Hunter imported 44 head of Canadian elk from the Black Hills of North Dakota and released them in McKittrick Canyon in the Guadalupe Mountains of northwestern Culberson County. By 1939, they had increased to about 400 head. More elk were introduced in the Davis Mountains in Jeff Davis County, and they did well, too.

Elk prefer the higher parts of the mountains, and are often found in high mountain pastures. The leaves of such plants as dwarf oak, service berry, buckthorn, as well as the flowering stalks of sotol are used for food.



WHO'S WHO: Johnny Bill Hughes, 12, of Vernon, displays four carp he caught in Lake Kemp with dough bait made from a recipe in the July, 1956, issue of TEXAS GAME AND FISH. Johnny said, "If you want a real fight, hook one of these on spinning tackle."

Junior Sportsmen

Wildlife Looks To You

For Help

Letter of the Month:

Dear Editor:

I have two questions I wish you would answer for me. 1. Why is the whooping crane so extinct, and how many are left? 2. Is it true that carp aren't good to eat because they are so bony? Is that the reason Sweetwater Lake is being rid of all the carp, or is it because carp eat all the other fish's food? (I rid the lake of more than 50 carp.)

Gail Maner, age 12 Sweetwater

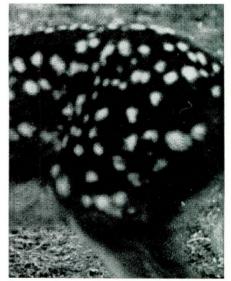
(Whooping cranes fly twice a year over the thousands of miles between the Northwest Territory in Canada which is their breeding ground and the Aransas Wildlife Refuge in Texas, their winter home. During these flights for many years, hunters have gradually picked them off. Other common dangers as weather elements, diseases, and predators have done their share of killing, too. Only 30 whoopers exist now.

(Another reason why whooping cranes are dying out is that the female does not always lay her clutch of one or two eggs each year. Even after the young are produced, they are not able to breed more birds until they are two or three years old, and they do not always live that long.

(Steps have been taken to protect the bird from hunters—bird sanctuaries have been set up and the public has been educated to the near-extinction of the whoopers. But apparently little can be done to alter the bird's migrating habits so he could better protect himself.

(You also asked if carp are good to eat. Yes, their flavor is good, but their boniness does make them hard to eat. Many people like to can them. The larger carp can be sliced into fish fillets on top to avoid most of the bones. The reason some Texas lakes are being rid of some of the carp and other rough fish is to improve game fishing in the areas. A body of water can support only so many pounds of fish. Any time rough fish overpopulate an area, game fish are crowded out, and vice versa. The Game Commission tries to keep a fair balance.)

WILDLIFE QUIZ:



Do you know what this is?

- (1) River otters and muskrats are among the most important furproducers in Texas.
- (2) The Texas grizzly bear, now extinct, was a shy, retiring animal.
- (3) Raccoons are easily killed out if their favorite source of food disappears.
- (4) Gray and fox squirrels have decreased in numbers since man has invaded their habitats.
- (5) Gray squirrels sometimes forget acorns and nuts they have buried, and thereby help tree reproduction.
- (6) Kangaroo rats are neither kangaroos nor rats.
- (7) Squirrels cannot go long periods without water.
- (8) Javelinas do not need water if they have juicy plants to eat.
- (9) Prairie dogs like to prowl at night.
- (10) Jaguars are the largest of North American cats.

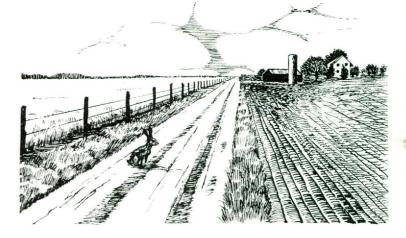
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Jack Rabbit

The blacktailed jack rabbit, an American hare, is found generally throughout south and west Texas. Its grizzled gray coloration blends well with its surroundings on the open range. They are seldom found in thick brush or heavy cover. Jack rabbits build no nests in the ground, and the young are able to run soon after birth.



Cactus, mesquite, grasses and weeds, and occasionally farm crops such as corn, wheat, and oats are used for food. Because it uses many of the same foods as cattle and sheep, jackrabbits are unwanted by some farmers and ranchers. However, the jack rabbit is edible and furnishes both food and sport for man.



Jack rabbits provide an important source of food for many animals such as coyotes, foxes, ringtails, and bobcats, diverting the attention of these animals from domestic animals, poultry, and game.

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