

Texas Game and Fish

JULY

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SCIENTIST AT WORK—Here the curious mind of childhood runs rampant on Mother's breakfast nook where the loss of a screw or the unwanted gain of a scratch can comprise the maximum damage. Whatever the profit and loss from this particular research, good will prevail in the end. For only good comes from the noble art of fishing. What fisherman ever heard of anyone wasting time overhauling a casting reel? And the fish that finally succumb to the humming reel may realize that they were harvested with equipment tuned and timed under strictly modern management.

Texas Game and Fish

A MONTHLY MAGAZINE DEVOTED TO THE PROTECTION AND CONSERVATION OF OUR NATIVE GAME AND FISH; AND TO THE IMPROVEMENT OF HUNTING AND FISHING IN TEXAS.

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The Cover

The anhinga, portrayed on this month's cover by Orville O. Rice, has a long fanlike tail, very long snakey neck and a small head which is held straight out in flight. Other common names for this bird are snake-bird and water turkey. They eat fish and other aquatic life and their preferred feeding grounds are small bodies of quiet or sluggishly flowing fresh water. This is generally common around the channels and open ponds of marshlands where these birds roost in clumps of willow or other trees.



Direct Aid for Quail



By

TOWNSEND MILLER

Assistant Director,

Departmental Publications



GIVE back to bobwhite quail their natural home and food, and usually they will increase and prosper.

The decline in quail populations can be blamed more on a lack of adequate food and shelter than on increased hunting pressure. This is generally true not only in Texas but throughout a great deal of the quail range over the nation. Farming and grazing have robbed the quail of his home and groceries.

Leave the land fallow and ungrazed in almost any bobwhite territory, and a startling increase will be noticed within a couple of years.

Restocking is not necessary. Adequate seed stock is present almost everywhere.

One exception to this rule occurs in brush or timbered regions, where, after a few additional years, uncontrolled expansion of brush and trees tends to shade out and overcome natural quail foods.

Allowing the land to return to its natural state is a simple way of giving Mr. Bobwhite the lift he needs. But it seldom is practical.

Farming and ranching often must be continued for economical reasons. In these cases, the many effects of agricultural land-use which work against the welfare of quail must be combatted by work in the other direction.

The encouraging part about it is that Mr. Bobwhite is ever ready to meet his benefactor more than halfway.

The Texas Game and Fish Commission is ready to help, too. The Commission now is accepting applications from landowners for bicolor lespedeza and multiflora rose plants to be transplanted as an aid to bobwhite quail.

Bicolor lespedeza is one of the best plants known for producing an abundance of quail food.

Multiflora rose provides the protective cover so necessary for survival and reproduction of the bobwhite.

These plants are distributed without charge each winter to landowners who agree to plant and care for them.

By developing plots or strips of these plants, quail can be encouraged to prosper and increase with only a minimum disruption of normal farming or grazing practices.

The success of bicolor lespedeza in attracting, holding, and supporting quail in recent years created a shortage of plants and seeds throughout the nation. The demand still exceeds the supply.

To help alleviate this shortage, the Commission in 1945 established its own nursery on its quail management area near Buna in Newton County. Daniel W. Lay*, veteran wildlife biologist and specialist in quail foods, has headed the nursery since its inception.

Last year, despite the handicapping drought, 392,000 plants were grown by the Commission and distributed to Texas landowners. This represented a substantial increase over the 129,000 produced the previous year.

An additional 200,000 bicolor plants were purchased from out-of-state nurseries for distribution last year and 240,000 the year before in an attempt to meet the demand. Still the supply was short.

Increased production was planned this year. However, excessive rainfall during the critical planting and early growing period this spring threatens to reduce the crop.

Bicolor lespedeza plants were grown in the Commission's nursery last year at a cost of \$3.53 per thousand as compared to a cost of \$8 per thousand for those purchased from the outside source.

Multiflora rose is not raised in the nursery for distribution to landowners. The 15,000 plants given to landowners last season and another 175,000 used on the Commission's wildlife management areas and research projects were purchased from an Illinois nursery at a cost of \$27.85 per thousand.

No charge is made the landowner for either species of plant. However, he must pick up the plants at the nursery or pay shipping charges.

Applications should be sent to the Texas Game and Fish Commission, Walton Building, Austin, before August 1. Plants will be delivered in November and December.

It should be emphasized that the use of bicolor lespedeza and multiflora rose is intended primarily for situations where economic considerations permit the use of only a very small percentage of the land for quail propagation.

* Leader, P-R Project 51-D.

Where cultivation or grazing is not so intense, the encouragement of natural foods and cover is a much more practical method. As Lay has pointed out, a "wildlife border" of natural quail food and cover eight feet wide and extending completely around a 40-acre field utilizes only one acre or two and one-half per cent of the land.

This type of management practice was discussed in detail by Lay in the May and June issues of *TEXAS GAME AND FISH*.

Bicolor lespedeza and multiflora rose play their part where plots of as little as one-fifth of an acre can be spared.

Bicolor lespedeza is the real food-producer. It grows in the form of a

shrub with long woody stems, reaching a height of six to ten feet. Each spring it greens out anew and during the summer blossoms in blue and white clusters. Bicolor is a deep-rooted legume, which has value in erosion control and in the improvement of soil fertility.

Seed production is high, and many of the seeds do not drop until far into the winter when most needed by the quail.

Unfortunately, bicolor does not grow well west of a general line running through Fort Worth, Waco, and Bastrop.

Multiflora rose is the answer where proper protective cover is the missing factor. It forms a tangled mass of

thorny stems, each plant growing four to six feet in height and about the same in width. Clusters of small flat white flowers produce tiny red fruits, which may linger into winter.

When planted in rows, multiflora in four years forms an inexpensive fence which will block the passage of stock or humans. Its value for fencing is enthusiastically accepted in many parts of the country, particularly in Missouri.

The western range of multiflora is limited by rainfall to a line only slightly farther west than bicolor. Multiflora is unaffected by cold. It does well in the sub-irrigated land of the Panhandle, such as that along the Canadian River, and grows bet-



A good stand of bicolor lespedeza one year old.



This bicolor lespedeza food plot for quail paid off! Plants are distributed by the Game and Fish Commission without charge to landowners interested in giving the bobwhite the help he needs.

ter than bicolor in black land.

The value of bicolor lespedeza as quail food has been popularized to a great extent by successes in the Southern states, particularly Georgia. There it has been utilized most notably on large plantations where concentrated efforts have been made to produce large populations of quail for hunting or as sites for field trials.

The success stories from this region have spread, and Texas can claim its share where growing conditions for lespedeza have been favorable and the landowner has given the plants the proper care.

Twelve patches were planted in Nacogdoches County. A year later, during the 1951 quail season which was notably poor throughout East Texas, every one of these patches produced a covey, much to the delight of the landowner. Needless to say, he was the envy of his fellow hunters during that year of bird scarcity.

The stock farm of Ed Stedman in Orange County provides a typical example of how bicolor lespedeza and multiflora rose can be used where a very limited amount of land can be spared for quail management.

This relatively small ranch necessitated intense grazing on the land available. Three plots of rose and lespedeza were planted.

No coveys at all had been seen on this property in recent years. The second year after the original plantings were made two coveys made their homes there.

Bicolor and multiflora are not "miracle" plants. Results aren't always so outstanding. But generally, if the plants can be grown and the territory is at all suitable to quail, a definite increase in quail numbers will be noted.

The good things seldom come easy, and both bicolor lespedeza and multiflora rose require certain care in

planting and a moderate amount of attention afterward to do well. This is particularly true during the first year of growth.

However, once growth is firmly established, little care is needed.

Both plants require ample rainfall, although neither prospers where drainage is poor. Sandy loam produces bicolor better than blackland. However, roses seem to do well in blackland. Good growth seldom is obtained for either plant in deep sand if water-holding qualities are poor.

In planting lespedeza, proper spacing of the plants is a most important factor. Experience has shown that in Texas the best results are obtained when lespedeza is set with plants 24 to 30 inches apart and rows are spaced three to four feet from each other. Recommended plot for a thousand plants consists of five rows in an area 20 feet wide by 400 feet long.

This is approximately one-fifth of an acre.

Spacing of multiflora rose is less important. It may be planted in a single row, in two or more rows, or in clusters of six or more plants. Spacing between plants may be from 12 to 36 inches. If a stockproof fence is desired from a single-row arrangement, plants should be about 12 inches apart. Rows 20 feet apart may have lespedeza or other food plants grown between them, providing an ideal combination with the shelter offered quail by the multiflora rose.

Fencing of the plots to provide complete protection from livestock is a must. This is particularly true of bicolor, although the fencing of multiflora is generally not needed after the first year or two.

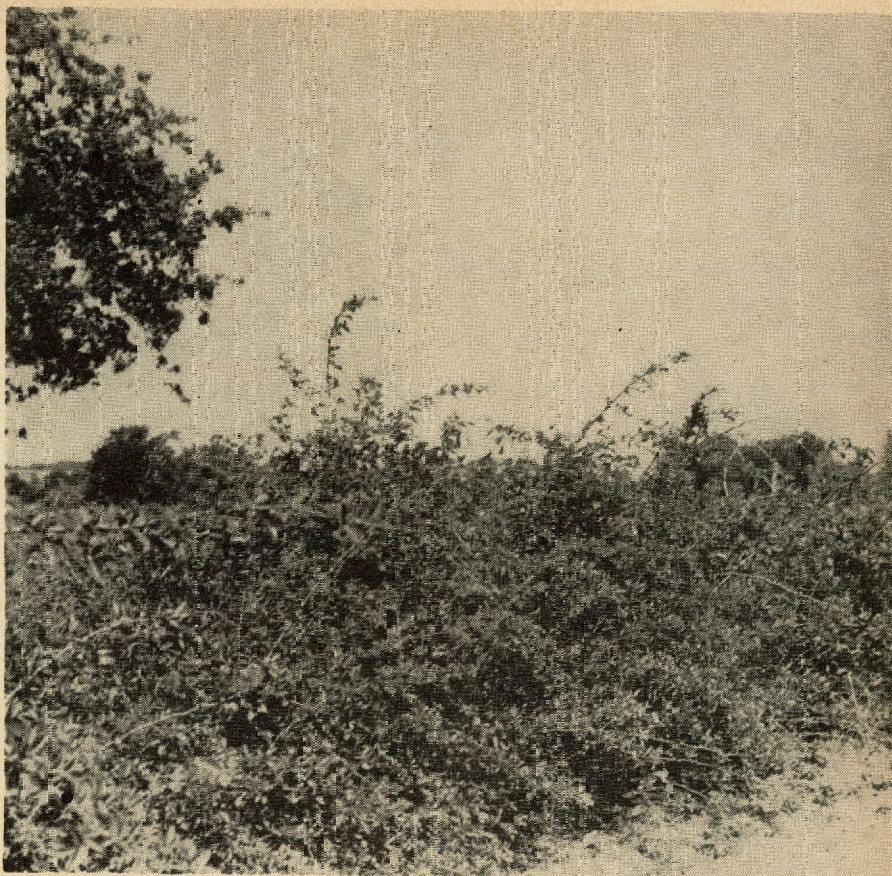
Cultivation is necessary the first year to help both species combat competition from weeds until a good growth is established. Proper fertilization also is important.

Once the plants are firmly established, however, little care is required. Experience has shown that proper care the first year results in overall savings in time and labor throughout the life of the plants.

The Soil Conservation Service has been most cooperative in aiding landowners and the Game and Fish Commission with lespedeza and rose plantings. Representatives of the SCS usually are prepared to offer the landowner valuable assistance in determining the advisability of planting food and cover plots and in the selection of proper sites.

Biologists of the Commission also may be made available in many localities for consultation regarding quail management problems.

Multiflora rose (top photo) provides ideal protective cover, a vital factor in quail survival. Multiflora forms an inexpensive stockproof fence in four years or less. One big reason for the decline in quail population is told simply and directly in this picture (below) of severely overgrazed land. Another scene showing fields plowed clean with no room left along fence lines for weeds or protective cover would complete the story.



Game Regions of Texas—*

THE PLAINS

THIS game region includes what are ordinarily regarded as two separate regions, the West Texas Rolling Plains and the High Plains. The Rolling Plains are a part of the North Central Plains region, while the High Plains are a continuation of the Great Plains Province into Texas from the eastern base of the Rocky Mountains. This region occupies all of Northwest Texas. Its discussion as a single region, although recognizing the important differences, is based on the fact that grassland is the major land type and wildlife problems are similar.

The eastern part of the region, the Rolling Plains, has a level to rolling topography with scattered flat-topped

and steep-sloped hills along areas like the Callahan Divide that are covered with short grasses. The lower areas are mixed-grass plains, the short buffalo and grama grasses intermixed with the taller grammas and bunch grasses. During extremely dry periods and under intensive grazing, these mixed-grass areas may take on the appearance of the short-grass plains. Tall grasses predominate in the moist bottomlands adjoining streams or in areas with considerable sub-irrigation.

Cedar brakes occur on the rough lands with heavier soils. Shinnery oak and sagebrush occur on the looser sands along the Canadian River and elsewhere in the region. Mesquite has invaded most of the original prairie in the southern half of the region to

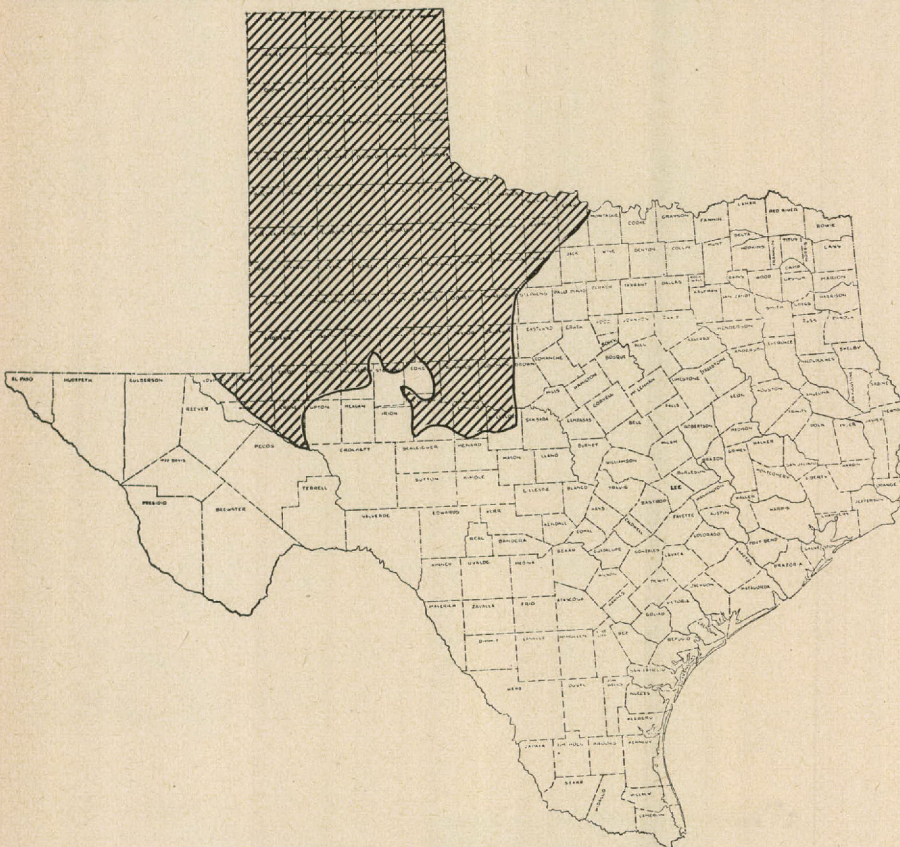
form a mesquite-prairie type. Most of the creeks which are tributaries of the Colorado, Brazos, Canadian, and Red Rivers originally were well wooded. Cottonwood, willow, hackberry, elm, and wild china were characteristic of the northern streams with the addition of persimmon along the Canadian River in the eastern portion of the Panhandle. Pecan and walnut frequently occurred in the more diversified flora of the southern streams.

Rainfall on the Rolling Plains varies from about 20 inches along the western boundary, the Cap Rock, to 30 inches in the eastern portion. Altitude varies from 900 to 2,000 feet. The climate is temperate with distinctly warmer winter weather than that which characterizes the High Plains; there is also less wind and snow on the Rolling Plains.

The Rolling Plains region has a wide variety of soil types, with sandy and sandy loam soils prevailing along the Red and Canadian rivers. A large area of red soils of Permian origin occur in the north portion. Heavier soils with a higher level of fertility predominate in the southern portion, giving rise to a more intensive agriculture.

As in the High Plains, land use in the Rolling Plains has shifted from an original cattle economy to more diversified forms of agriculture. Cultivated land devoted to wheat, cotton, and feed crop production now makes up a substantial part of the total acreage, and on all but a few of the larger cattle ranches at least some supplementary feed crops are raised. In recent years sheep production in the lower third of this region has increased considerably on lands heretofore devoted to cattle production.

The High Plains are separated from the Rolling Plains by the so-called Cap Rock Escarpment that rises abruptly 300 to 1,000 feet to the level of the gently undulating plateau. This level surface of the Llano Esta-



Shaded area indicates the Plains.

cado, as the High Plains are often called, is broken only by the head-water channels of the larger streams. The channels of these rivers form deep canyons in some places and wide shallow draws in others, but where they occur they may be considered as extensions of the Rolling Plains north and west into the High Plains.

Rainfall on the High Plains varies from 17 inches on the western border of the state to about 20 inches along the Cap Rock Escarpment. Altitude varies between 2,500 and 4,000 feet, the highest parts occurring in the northwest portion. The climate is middle temperate, with frequent strong winds and occasional sub-freezing temperature and snow in the winter months.

Soils vary from loams to sandy loams and sands. During dry periods many of these soils suffer from wind erosion, the area being a part of the familiar "dust bowl" of the Southwest. Original native vegetation consisted chiefly of short grasses, mainly buffalo and the short grammas. On the sandier soils, shinnery oak, sagebrush, and yucca were interspersed with the grasses. Mesquite has invaded parts of the High Plains from the south, but because of the lower rainfall and colder winter temperatures it has not made the progress here that it has in the Rolling Plains.

Once entirely a cattle country with practically no cultivation, during the past 20 years the economy has shifted toward wheat farming in the northern and cotton farming in the southern portions. Oil production is exten-

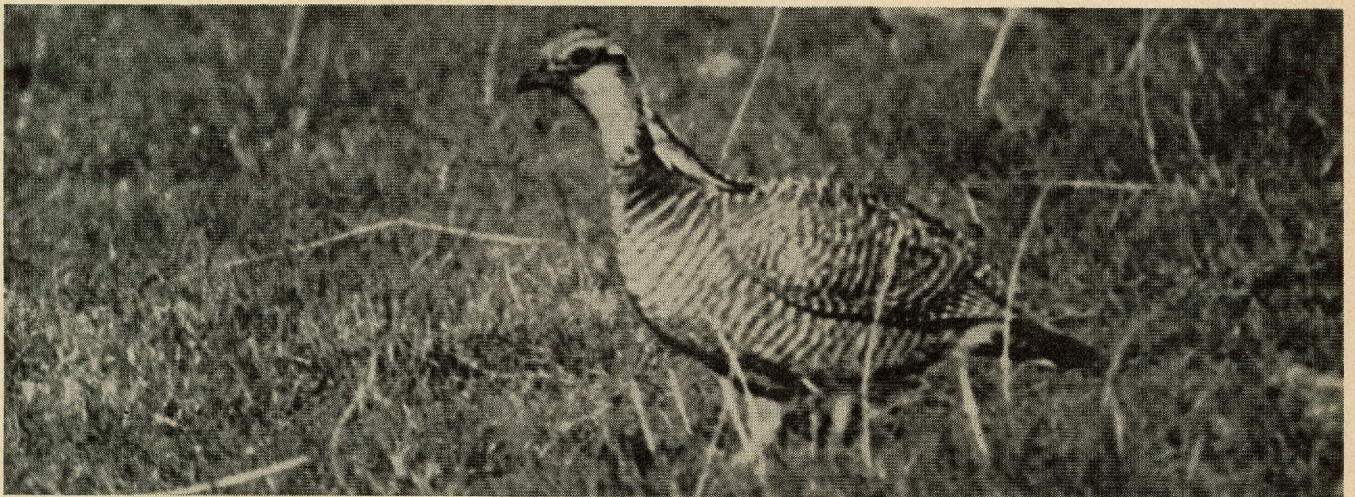
sive in some localities.

This region of High and Rolling Plains was the last stronghold of the great herds of buffalo in Texas. Their trails are still evident in many places at the Cap Rock where their hoofs wore grooves into the rocks as the great herds moved back and forth across the Plains on their accustomed migrations.

Antelope once ranged in the region by the thousands. Deer and turkeys were common along the wooded watercourses. The tragic story of big game that inhabited this region is well known. The lesser prairie chicken has dwindled to a remnant of its former numbers. Various factors make it difficult to restore and manage scaled quail and bobwhite quail on much

of their former range. Bobwhites reach the westernmost limit of their range on the Plains and appear to be subject to periodic high and low population levels.

About 20 per cent of the land is in cultivation, and 80 per cent is in ranch or pasture lands. It is significant that in spite of the appearance of intensive cultivation, which many of the counties present along the principal highways, only one, Jones County, has as much as 50 per cent cultivated land. Andrews County has only one-tenth of one per cent of its area in cultivation. A large proportion of the region is made up of ranches more than ten sections in size. These ranches comprise much of the best game range in the region.



Buffalo trails are still evident in many places at the Cap Rock where their hoofs wore grooves into the rocks. The lesser prairie chicken (lower photo) has dwindled to a remnant of its former numbers in the adjacent Lower Plains.

Rocks to Riches

By JAY VESSELS

Assistant Director, Departmental Publications

PEACHES grew amazingly in the orchard.

Grass was so high the calves were almost lost.

Smoked bacon hung appetizingly in the spring house.

It was a dry area, yet water was running all over the place. But up the

South Fork of the Llano River, 15 miles from Junction, rancher H. G. Whitaker was fretting. He was fretting almost to the point of exasperation; because, well, the fish weren't biting.

A primary inspiration behind the original Whitaker soil and moisture

project was the expectation that there always would be fish in the ranch tanks, as well as a comfortable place for fishing and above all fish for the camp frying pans. Whitaker saw the fish placed in the tanks. He knows they are there, fat and crafty because he sees them. But—

Rancher Whitaker stopped his brush-scarred Oldsmobile 88 on the edge of the key pond of his own unique water system. "Just look at that!" he exclaimed. "Lookit those rascals!"

Sharp ruffles stirred the calm surface, as assorted fish scurried out of the shallows into the depths.

"But they won't bite," pressed Whitaker.

"They shore don't bite," agreed Foreman John Blakeney. "I've tried everything. Just don't bite."

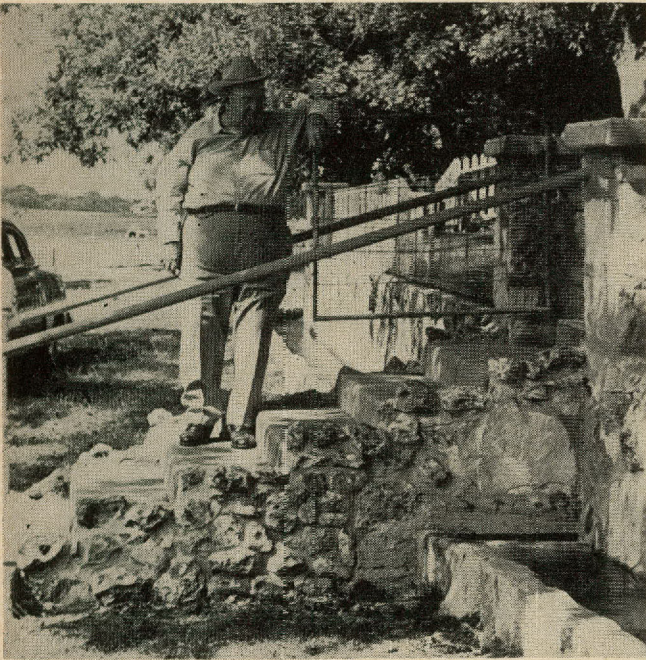
Both men turned on Game Warden Joe Matlock, because a game warden, under modern public relations emphasis, is supposed to have the answers—do fish balk at biting? Does Junior have the croup? Matlock and his comrades are supposed to know.

Down in the pond, everything seemed to be even better than the book called for. At least it was a model from the laymen's viewpoint—huge tree stumps with great boulders at the damned end, providing bottom recesses; reeds, lily pads and other aquatic growth decorating the surface at the shallower end.

Warden Matlock shook his head and asked how the wild turkey corral was working out. In the ensuing 90-minute cruise about the showplace estate, the game warden had to think fast at times.

At the last tank, the pressure was greatest. This was the end of the chain of ponds, yet probably the prettiest and most accessible. The ponderous Olds 88 again sent the fishes racing away under crest marked lanes.

Now, farmer Whitaker became eloquent. He circled the earthen



Rancher Whitaker (left) enjoys the sight of the precious spring water which glides musically past his very front door. Below, the special fenced-in deer pasture nestles at the left.



edge of the bluewater, and, stopping at one end, he pointed toward the other end:

"Just look at the shade of that tree."

The graceful elm cast a soft mid-day shadow upon one side of the tank and on out into the water.

"Who would want a better place to fish from?"

Obviously, this was another perfect setting.

"But they won't bite," said the rancher, dismally.

Warden Matlock eluded responsibility. His head was bobbing up and down along the side of the pond. He was demonstrating to Foreman John. "A popping bug . . . yes, that will do it . . . a popping plug." Warden Joe was working out from behind the bank, suggesting that the bait be lobbed over, hand grenade fashion. And above all to stress the surprise element—to keep out of sight.

Whitaker was silent and glum for the moment. Foreman John slapped his leather gloves across his thigh and suggested there was time before dinner to inspect the river front.

Foreman John is known for his timely action. Early in the tour, Whitaker had said:

"He even thinks water will run up hill; look at that pipe. It isn't level and it isn't pointing down. It mustn't be running at all."

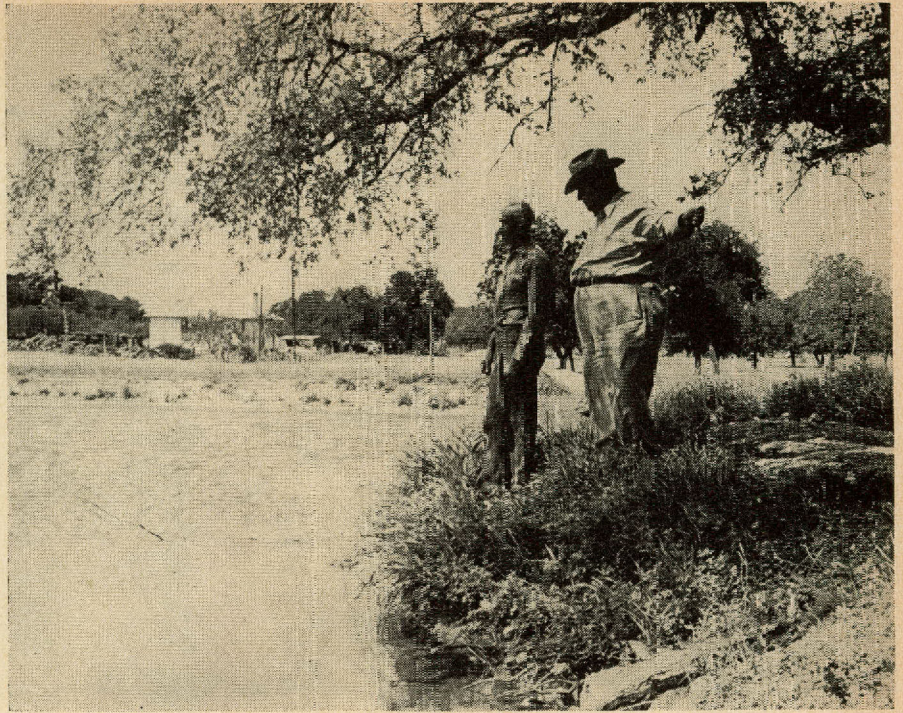
Later on when Whitaker piloted the big car around the business end of the pipe, where water gushed forth, Foreman John bragged:

"Is that water or not?"

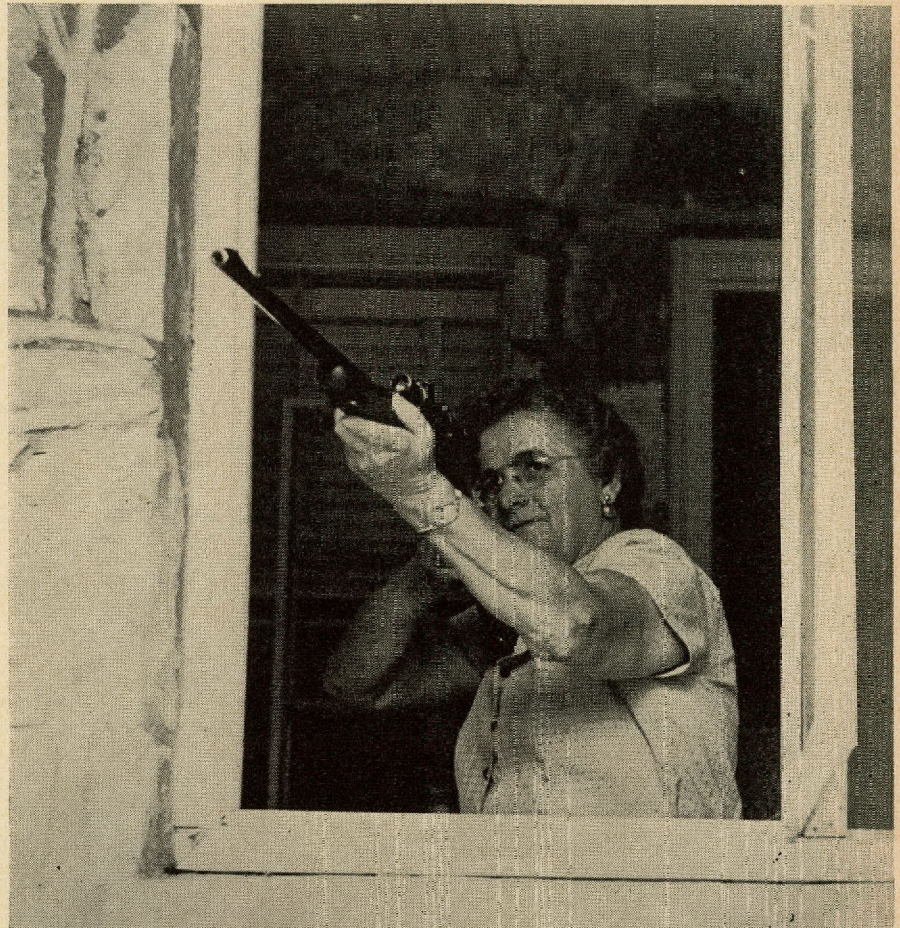
"Still think that pipe points up hill," insisted the boss.

Foreman John has that water happy look. The bronzed man seems to reflect a healthy rust from the water which he so expertly and so fondly utilizes.

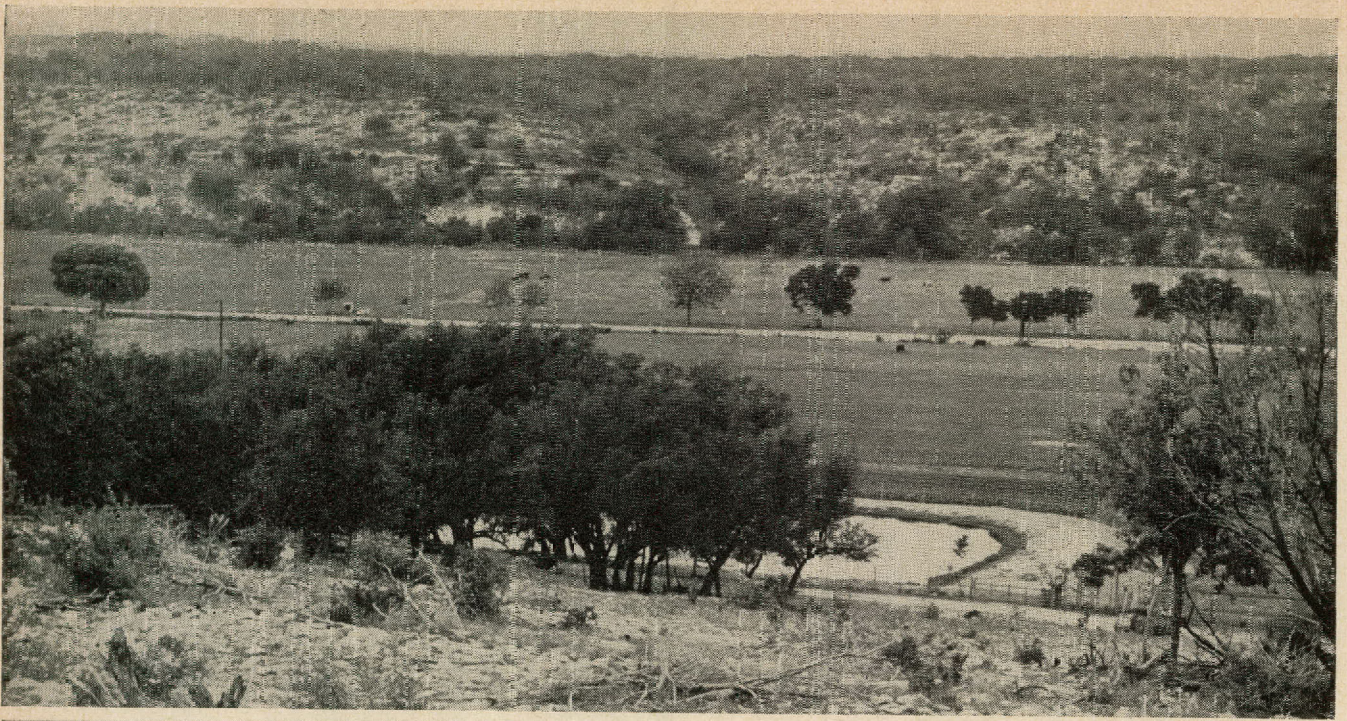
And Foreman John has seen it all unfold. He came to the Junction area with his employer after having served him for a long time in West Texas. Their many conquests include designation of the exclusive deer pasture in a shaded pocket with a natural log fence; the picnic range for the assorted varmints where the raccoons, opossums, rabbits, squirrels feast on peaches, grapes and pears; the waist high grass for cattle and a Hog



In the shade of a spacious elm on the bank of Tank Number Four, Rancher Whitaker and Foreman John Blakeney sadly contemplate the perfect site containing only non-cooperative fish.



Mrs. Whitaker points the business end of her .222 varmint rifle through a front porch panel. She shot her limit in turkey gobblers from this place last fall.



That's Tank Number Three in the center (above). Beyond are lush pastures on both sides of the road. The tree line in the background marks the south fork of the Llano River.

Whitaker, left, asks Game Warden Joe Matock: "Now, did you ever see a better looking fishing hole in your life?"

Heaven where the fat pigs cool off in the concrete sluiceway without even getting muddy

This water utilization project was described by County Agent Vernon Jones of Kimble County:

"Mr. Whitaker took a rock pile and turned it into a living garden for livestock and wildlife."

H. L. Secfield, work-unit conservationist of the Soil Conservation Service, said:

"H. G. Whitaker, in cooperation with the Upper Llano Soil Conservation District, has developed and carried out a well planned, coordinated program on his 820-acre ranch which has resulted in greatly increased production by intensified methods whereby water is conserved and beneficially used, old fields seeded to grass, previously unproductive soil seeded to irrigated pasture, and forage production increased on over-grazed land by proper stocking and range reseeding."

Now, rancher Whitaker, after motoring up and down hill, sat down in his modern home to tell how he fulfilled his dream. Outside, the huge pecan and elm trees rustled musically, keeping time with the gurgle of water rushing through narrow sluiceways that bracket the shaded grounds. From the background came the rhythmic click of a hydraulic ram

utilizing flow from the springs for the home water system.

Rancher Whitaker said he spent most of his life in West Texas in the livestock business. He had a farm implement and seed business in San Angelo for 25 years. Thus, he saw West Texas at its worst and at its best.

"I wanted to put in the rest of my life in the Hill Country," said Whitaker who doesn't look his 73 years. "I wanted to be near some water for a change. Spent a year driving around and looking. Finally, I came here on this place to visit an old friend. Found him on crutches and his wife confined to the area because she couldn't drive a car. He was going to sell out. Made him an offer and nine years ago we moved in."

Whitaker's eye had caught the possibilities of springs, surging out of the thin soil and splashing down over the rocky ridges toward the river, a quarter of a mile below the ranch house. Shaping the area to utilize the moisture for the barren ground required so much bulldozer treatment that he bought his own.

He attacked the lifeless soil, gouged out impeding boulders and shoved great stumps. Some of the rocks and stumps helped create the first pond, a winding 300-foot long area. When the first pond was inadequate to impound and properly distribute the water, he built another one; then a third and finally a fourth, all fashioned into a pattern to provide maximum benefits.

On the side hills, came terracing and the contour plowing. Treated regularly to a drink, soil that could scarcely be seen because of rocks began producing amazingly. An early triumph followed planting a small tract in King Ranch blue stem. "Sold \$300 worth of seed the first year," smiled Whitaker.

They got the water into the side hills and into the flat land. And they revealed some leaf mold soil which "will grow anything."

Every drop of water in this arid area has a job to do; sometimes two or three because it is used over and over again.

The spring water may have a new assignment. Whitaker is having it tested for possible sale for public con-

★
The answer is water from springs. Rancher Whitaker insists that Blakeney even has it running uphill in bridging this gully.



★
Porkers in shaded Hog Heaven with its sanitary concrete wallows.



★
sumption in dry West Texas areas, or in cities where spring water oftentimes replaces chemically treated municipal supplies.

"Purest water there is," said Whitaker. "First tests show it 99 per cent pure."

Rancher Whitaker always compliments others. On the way into the house, he had escorted his guests up graceful stonesteps and inside a long screened porch. By the door he suddenly stopped, and called to Warden Matlock:

"Here, Joe, look through this window." He swung open a panel screen and pointed across the valley. "See that clearing over there . . . that pecan tree . . . that's a good 400 yards, isn't it? Well, that was where Mrs. Whitaker shot her first gobbler last fall—right here from this porch. Shot him with her .222 calibre.

That was shooting, indeed

"Here, put the glasses on it," offered Whitaker.

Then he swung the screen full back and told Warden Matlock:

"New look up on that ridge . . . No, the one to the right. See that rock with a small 'v' in the middle? Now look closely. See those white chalk marks? Well, that's where Mrs. Whitaker aims for her target practice."

Eulwarking the verbal bouquets for Mrs. Whitaker is a permanent reminder of her share in the ranch attainments. Over the front drive, arching conspicuously against the foliaged background, is the entrance insignia:

"H. D. & Letha Whitaker."

Doesn't it seem that the perch and bass and blue cats should be nice and bite good so that the fragrant aroma of frying fish can add the proper touch for these worthy people?

Texas Tracks

By JAY VESSELS

MAIN STREET MASSACRE

It finally happened—a game bird was shot smack off its nest.

Game Warden Adolph Heep discovered the tragedy on the principal street of Fredericksburg, in a cedar tree where he had observed a mourning dove nesting. Heep kept a close watch for he wanted to band the young birds.

About two days before the eggs were due to hatch, Heep saw the bird limp on the nest. He climbed the tree and found her dead. A BB shot had penetrated the bird's body and lay inside her top feathers.

An urchin apparently had fired the fatal shot from the ground.

But the ensuing hubbub in the local newspaper and over the radio stirred the city so that Heep is confident that there will not be a repetition.

Heep has been a leader in bird banding and also is credited by his chief, Game Warden Supervisor Herbert Ward of Catarina, as having distinguished himself in rescuing trapped fish in tanks and streams in the Fredericksburg area.

RARE FISH FOUND

Otto Peters in THE SEGUIN ENTERPRISE—

A rare type of fish for this part of the country was found in a branch of the Santa Clara Creek by Willie Boelter of McQueeney. Your reporter, Game Warden F. E. Hollamon and other local fishermen were stumped . . .

The creature has a head like a lizard, four legs like a frog, a tail like an eel and gills with four streamers attached like a fish.

Harry Bischoff, biology prof out at Texas Lutheran College, came to the rescue. He looked at the creatures for about 15 seconds and reported them to be *Necturus*. That's a scientific name for mudpuppies.

SHOCKERS SHOCKED!

John Clift in THE DENISON HERALD:

Four men paid one of the highest penalties ever assessed in Grayson County for violating fishing laws when Justice S. R. Stiles of Whitesboro charged them \$444 in fines and costs Friday afternoon.

A charge of using an electrical shocking device for taking fish from the Texas side of Lake Texoma was filed in the Justice Court by Texoma Game Warden Hill Lawrence which resulted in the fine . . .

Lawrence explained that the four anglers—identified as two from Gainesville and one each from Thackerville, Okla., and Abilene—had gone out in two boats and were using the old style crank telephone in their shocking efforts. They had “five or six fish.”

SHRIMP SOCIAL NOTE

The mystery of shrimp life is not going to be as mysterious as it has been, at least in the Gulf waters off Rockport.

Marine biologists at the Game & Fish Commission's Marine Laboratory have begun tagging shrimp brought up by trawlers. The tags are small pins, with disc heads about the size of a dime. These are attached to the shrimp in the first abdominal segment.

Persons finding the tagged shrimp and reporting their luck to the Marine Laboratory at Rockport will receive free subscriptions to TEXAS GAME AND FISH magazine.

Through the tagging operations, the scientists expect to obtain valuable data about this important Texas marine industry.

Marine Biologist Ernest D. McRae is chief tagger.

BRADSHAW'S AID VICTIM

John Bradshaw, Houston attorney who is active in Conservation Of Texas Fish & Game (COTFAG) affairs, worked with his 12-year-old son, David, to help a snake bite victim.

They used the tourniquet, incision and suction cup technique after a 14-year-old neighbor boy was bitten by a rattlesnake. The youngster recovered quickly.

Field Data

WHITETAILS RALLY

Over in East Central Texas where they have the forest and the natural woods beauty and the rainfall, the white-tailed deer are coming back, according to Game Warden Supervisor E. M. Sprott whose headquarters are at Lufkin.

Sprott says the increase in deer population dates back to transplanting of deer from Mason and Llano counties in the Hill Country. Sprott was feeling so encouraged about the herd growth that he even cast an informal challenge to the folks about the superior size of the newly stocked animals.

The Supervisor says it is a matter of better diet and the improved environment in the big pine woods. He says he has seen these “perfectly nourished transplants” scale up to 175 pounds.

Sprott says the new hope for deer in his area comes from local cooperation, restocking and law enforcement.

DOG EAT DOG

Game Warden Supervisor A. R. Williams at Alpine, has seen nature at its worst over the years in patrolling the far West Texas wilds. He has seen the weak pick on the strong and he has been sickened by some of it but he still does not favor mass extermination of predators.

He described one scene involving two cantankerous members of the reptile family. On his desert beat, in a Jeep, he came upon a strange sight. It looked like a two-headed snake, at first. He saw two heads close together, for sure.

Closer inspection showed that a big blue racer, as it is wont to do, was trying to swallow a coach whip. The smaller snake, being engulfed tail first, barely had its head sticking out of the other snake's mouth. It was hanging on to life only because it desperately extended its mouth, turning it almost inside out to extend its head to maximum size.

Trying to get closer, Williams inadvertently ran his Jeep wheel over the tip end of the blue racer's tail. The blue racer promptly writhed violently and disgorged the smaller reptile. Both quickly disappeared from the scene.

Game Notes

PANHANDLE ENDORSEMENT

Paul Timmons in the Amarillo SUNDAY NEWS:

The possibility of a doe deer season is being considered by the Texas Game & Fish Commission.

Howard Dodgen, executive secretary, told the Commission he recommended such a law, under agreement with landowners, where biologists find does too numerous.

It's a move in the right direction—even though many sportsmen consider it a sacrilege. The buck law hasn't kept populations within the carrying capacity of the range in many parts of South Texas—although drought cut the population greatly in the last year or so—but it has resulted in down breeding the deer.

WHOPPEROO!

Al Parker in the WICHITA FALLS DAILY TIMES:

Story of the week is E. P. Bowen's unusual experience at Lake Kemp a few weeks ago. Just for the heck of it, he minnow-baited a couple of hooks, tied an old line wrapped around a broken cane that had been reposing for no telling how many weeks on his dock, and chunked the thing into the brink. Before he could anchor the pole to the dock and be on his way, the float disappeared. He grabbed the pole and put on the

power. It felt like the bottom of the lake, he recalls, but he finally managed to strong arm two big bass to the surface. One broke the gut stinging and kept going. The other was landed and weighed six and a half pounds. "The other one looked just about the same size," Bo declares.

FRESH WATER RODEO

Ed Grimmer, whose country estate is on Lake Austin, has been seeing things around his place. Beavers have been working on his shade trees. A mysterious sea monster cavorts around the Grimmer dock, according to Ed.

And now this—the other day he was motoring up the lake when a large Brahman steer jumped in and began swimming. A cowboy pursued the beast to water's edge, parked his

Fish Reports

horse and waved down a large cruiser. The skipper grabbed an extra coil of rope and expertly lassooed the animal and then began towing it toward land.

Ed said when the steer's feet hit bottom it began doing some towing of its own. The skipper looked for a knife to cut the rope. The cowboy looked for his own lariat but his horse had run away.

The cow poke finally grabbed the nautical lariat and took command just as the steer began yanking the craft up on the bank.

Grimmer says it promises to be a quiet summer around his place now with only a strange sea monster to worry about.

LAREDO'S NEW LAKE

Game Warden C. E. Whitenton of Laredo, proudly shows off Casablanca Lake which he describes as the border city's "pride and joy."

Warden Whitenton is eager to have the lake developed because already, without formal stocking, the waters have been producing some good bass fishing.

The lake, when filled, will be eight

miles long, one and one-half miles wide, and about 50 feet deep.

LION MAN ON SNAKES

The snake experts were not asked to comment on this report straight from the lion-taming department.

The report is by Predator Control Chief John E. Hearn of Cotulla. He said he saw a big rattlesnake crawl up to the edge of a ranch tank and drink water; even saw the water flowing down its throat—that is, making ripples in the rattler's skin.

Hearn was observing some proposed trapping country and was using powerful binoculars.

ROYALTY BIRD RATING

Game Warden Supervisor Charles G. Jones of Weslaco, called it "an outstanding picture of adaptation of feathered creatures toward man."

He referred to a three-column photo in the All Valley edition of the San Antonio Express showing Mrs. Jack Andres peering into a half

Press Views

opened mail box containing four newly hatched birds.

Postal carrier Jesse Cummins cooperated by delivering the Andres' mail at the front door.

Jones added:

"The bird is spoken of as a Mexican oriole which means a hooded oriole, the most common of all orioles here in the Valley. In fact, the habitat of this beautiful and friendly little bundle of beauty is confined to the (Rio Grande) Valley, a gift from Mexico.

CONSERVATION SLANT

Game Warden Supervisor Herbert Ward at Catarina, contends that clearing South Texas land of brush and then terracing the land for cultivation is an aid to wildlife.

Ward says the change provides better growth for game feed, detains moisture better, and that if proper management is applied, wildlife generally benefits.

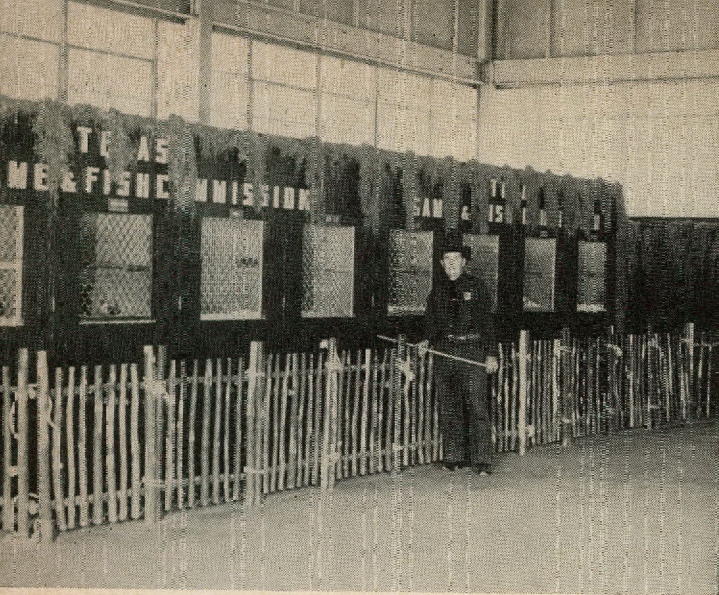


Figure 1



Figure 2—Above

Figure 3—Below

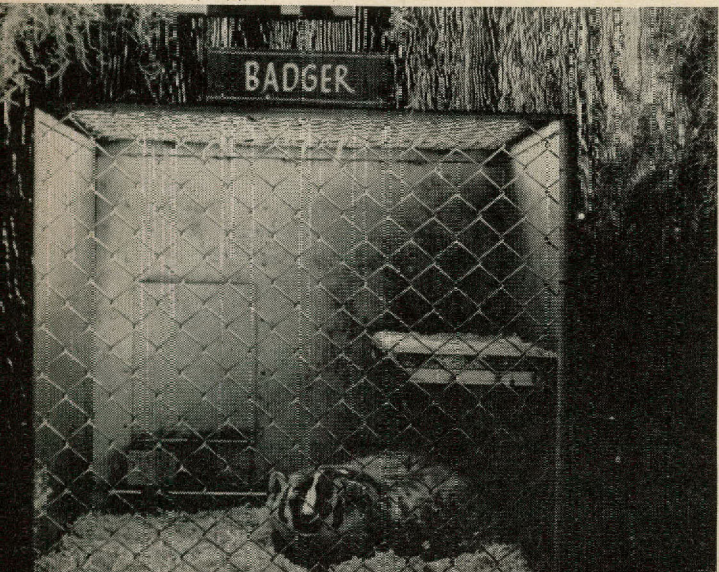


Figure 10

Portable Game

NATURE in the raw is brought home to thousands of Texans each year through the portable game and fish exhibit sponsored by the Game & Fish Commission.

Varieties of fish ranging from the indispensable pan fish to fighting largemouth black bass are placed on display at sports shows, county fairs and other expositions.

The animal show is not the least of the traveling zoo. Among the largest is the bobcat or wildcat.

There are raccoons, ocelot, badgers, mink, opossums, beaver, and most of the furbearing species common to Texas.

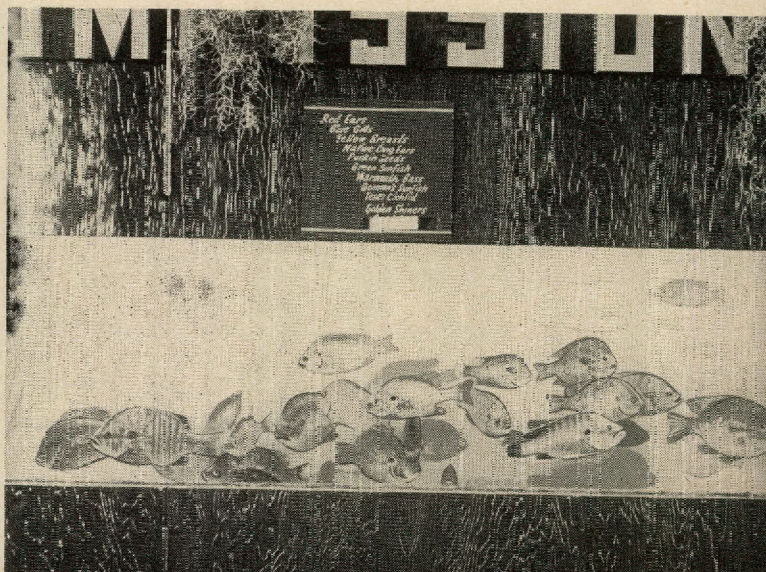
Game wardens accompany the show to tell the visitors about the birds, animals and fish.

They agree that the waterfowl cage is one of the more popular. It contains six kinds of geese and a dozen species of wild ducks.

The shows are capitalized on as a medium for distributing literature about wildlife generally and to make TEXAS GAME AND FISH, Commission publication, available to the crowds.

Figure 1. Game Warden C. H. Johnson of Meridian stands alerted to point out exhibit angles to the next surge of people.

Figure 4



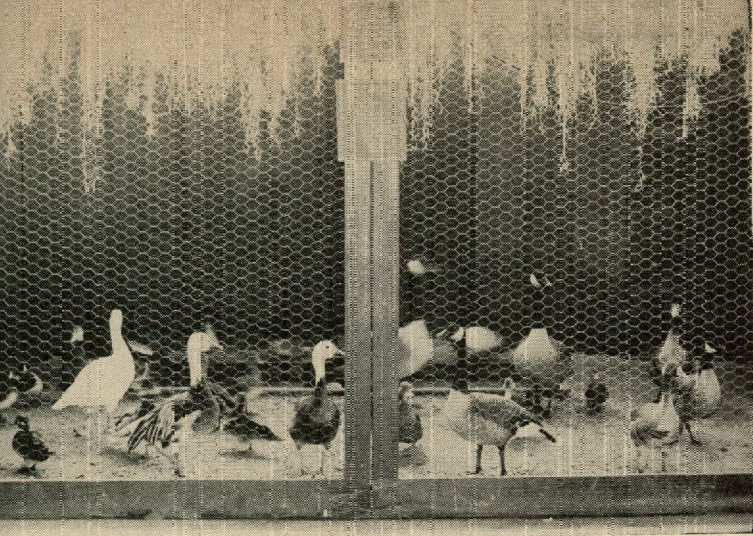


Figure 5



Figure 8

and Fish Exhibit

Figure 2. Warrens Johnson and Harold Bierman of Fort Worth, man the literature tables.

Figure 3. His majesty, the badger, rests between crowd jams.

Figure 4. This tank is one of the major places of interest. It contains red ears, blue gills, yellow breasts, native long ears, punkin seeds, warmouth bass, gorman's sunfish, Texas cichlid, and golden shiners.

Figure 5. Strong locks which are tightened each night guard the animal pens.

Figure 6. The nutria, a fur bearing animal about equidistant in size between the muskrat and beaver, is of general show interest because it has been introduced into several Texas areas.

Figure 7. Crowds gather around the animal pens. Here they are interested in the mink (left) and in order—bobcat, ocelot, ringtail cats and raccoons.

Figure 8. The fighting babies swirl around this tank. They're the largemouth bass, spotted bass, white bass and yellow bass.

Figure 9. Waterfowl never fail to attract interest. Six kinds of geese and a dozen species of ducks comprise this unit.

Figure 10. The fresh water fishes lure the throngs.

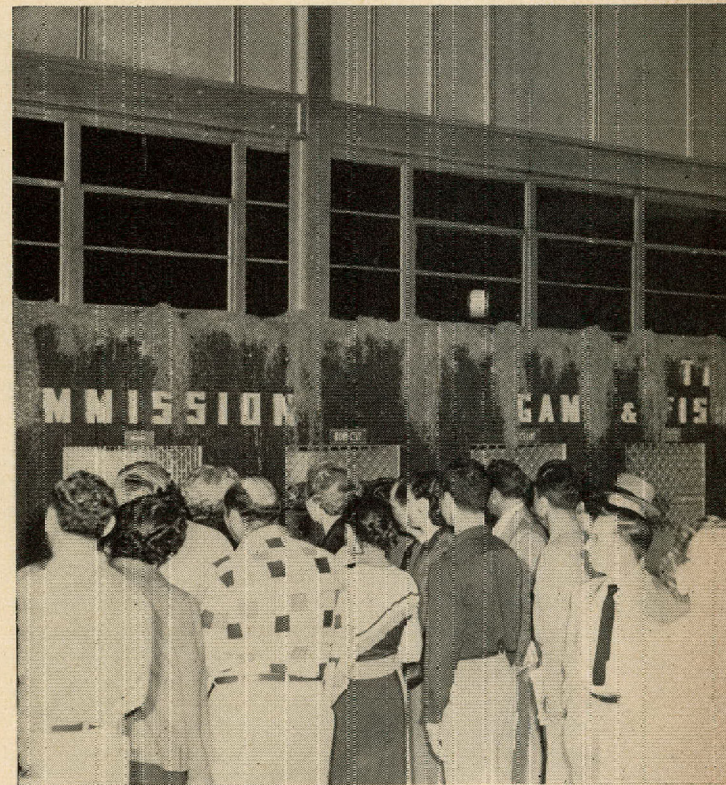


Figure 6—Below

Figure 7—Above

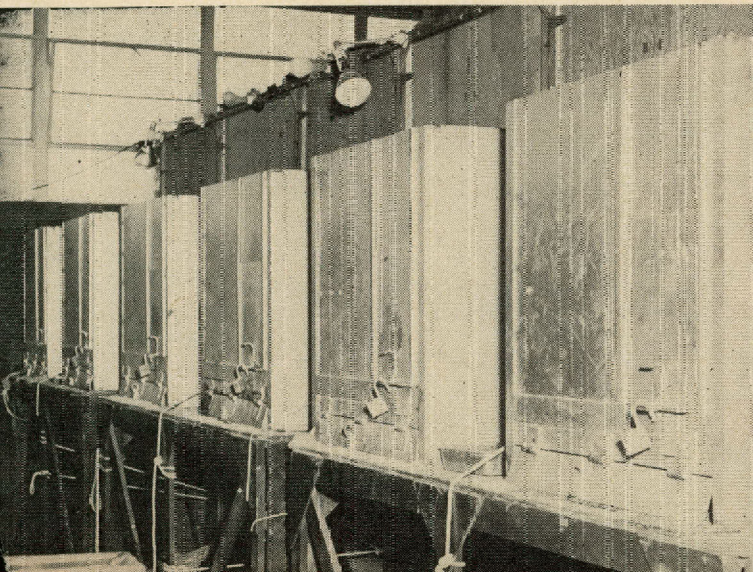
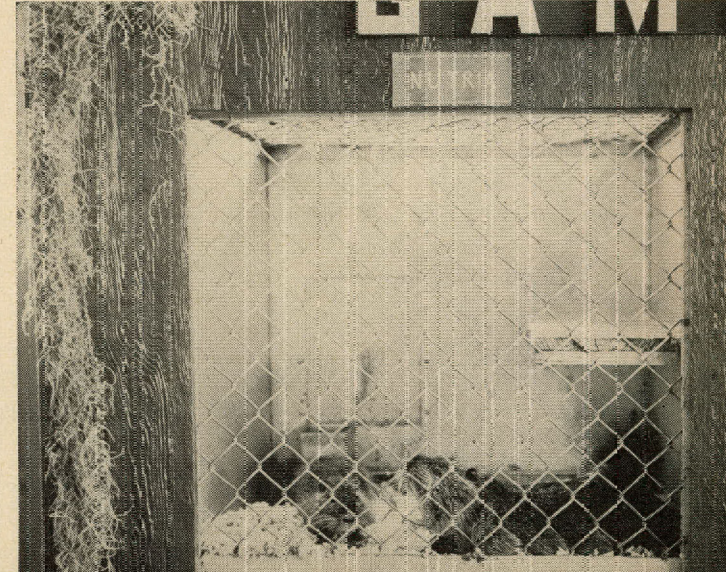


Figure 5



Some Boats, Tubs and Sieves

OR "BAILING, BAILING OVER

"FISHING," often remarks my Uncle Josh, "is a wonderful sport. It's only when you rent a boat to dangle a line, that you have misgivings. Them rented boats will be the death of me yet."

And what's more my Uncle is correct. Ever since I was knee high to a hip boot I've been fishing with the old angler and the trouble we've been having with boats would try the patience of Izaak Walton himself.

During the score or so years Josh and I have rowed, paddled and motorboated the azure lakes of our great state we have encountered boats that were pips. Honestly, how some of them ever remained afloat is still a mystery to us. Sure, we've rented some nice boats; the odds can't always be against you, but these are quickly forgotten in the time of strife. It's the lemons that stand out and leave a bad taste on the palate.

When it comes to down-right cussedness there is nothing gets our nanny more than to pick up a boat that makes you row on the bias. Such lopsided work gets you all in a dither and fit to be tied in halfhitches. Can you visualize being all set to pull against the current to your favorite spot and zowie—the oars want to overlap and bark the knuckles?

If you're like us you'll spew forth a few split infinitives trying to maneuver the craft anyway. Sure it'll be tough, but you'll be darned if you give up that easy. A small thing like cockeyed oars won't stand between you and those elusive beauties, no siree.

Maybe like some of us you've rented a prize style boat where the oars are forever falling through the rings at the wrong moment. Try as hard as you will the things refuse to function. In sheer desperation you rack your brains to solve the knotty problem.

Should you use the oars as a punting pole or as paddles? A furtive glance in the direction of the boat-house and off you go awkwardly propelling the small vessel toward the fishing grounds. Maybe your method isn't graceful but it gets results.

Sooner or later all intrepid fishermen will encounter a boat which has Indian ancestry. The oar locks screech like an Iroquois brave on the warpath. All who hear the approach of this squeaky instrument of the watery regions will look at you in

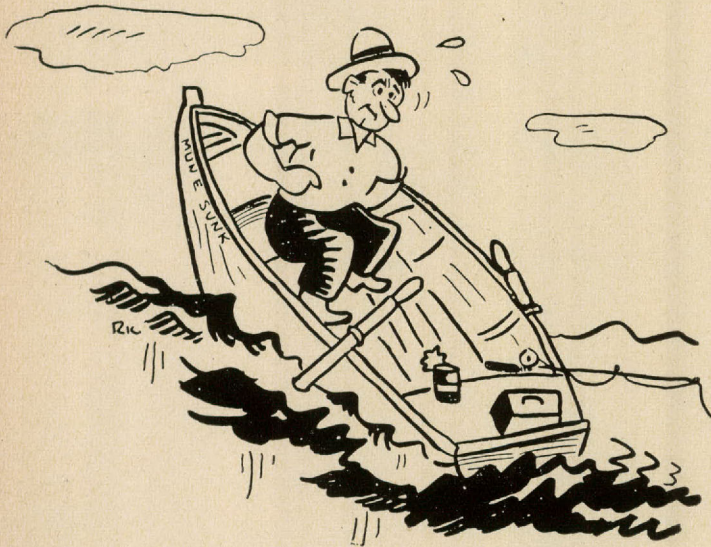
askance. Pay no attention to them but grit your dentures and carry on, stout fellow!

One solution to this noise is to borrow some 3-in-1 from a passing motorboat. If this doesn't quiet the racket he might give you a tow just to eliminate the commotion. Usually

By RICHARD

this squeak and squawk like a strangled goose is more pronounced at five in the morning when all is peaceful and quiet on the lake. Then the screeches hit high C, maddening to you and down-right mayhem to the sleeper in a nearby cottage.

Of course the boat which doubles as a floating sieve is always with us. This punctured remnant of better days will often have a small can for bailing out the bilge. Like as not this method is a waste of energy and about as effective as trying to empty the Sacramento with a teaspoon. In no time you'll be sloshing around in water up to your knees as the liquid pours in with all the power of a gusher. The wise angler seeing this,



Misplaced seats, mismatched oars add to the joys (?) of fishing.

Oarlocks screech like an



I Have Rented

THE BOUNDING MAIN"

will pull for the shore—and fast! That is if he wishes to cast his line another day.

Another irritating problem we often find with boat rentals is the seating arrangement. It sometimes seems the boat was designed either for an orangutan or a gent with tele-

REDMOND

scope arms. No matter how you try, you positively cannot wield the oars successfully. You measure the things and find the seats are a good three feet away from a good rowing position.

It's either move the seat or row with the feet. Since most fishermen are not acrobats with size 14 feet it is advisable to move the seat. Once this is accomplished calm and serenity will prevail and life again will have that rosy glow. By then it's time to go home.

Occasionally my uncle and I will rent a boat which is as heavy and unmaneuverable as a garbage scow in heavy water. These are fine if you like to work like a horse. "Neigh" to

this, brother! Making headway with this monstrosity requires a husky crew of piano movers well versed in the art of rowing.

If you are an ordinary fellow like myself such a scow will have you muscle-bound and aged before your time. These tugs should be obstacle training boats for college crews.

Ofttimes your tired fisherman will be reluctant about rowing to that shady pool where the lily pads placidly nestle, and hire a boat with a kicker. Outwardly the job is not bad at all. It glistens of fresh paint and varnish, and shines like a silver spoon in the sunlight. You don't know it, but that kicker has been aptly named.

Once the unwary angler gets the item into motion it's something else again. The darn thing isn't a boat, it's a bucking bronco—and a speedy one at that. The way it tears across the water, jumping and hopping like a supercharged water bug is something to behold.

To hang on to this demon of the waterways requires the tenacity of a bulldog. If you had as many arms as

an octopus you could use them. Trying to troll from such a water rocket is unthinkable even if it's throttled down. So after a few turns around the area you head dockward, a sadder but wiser man.

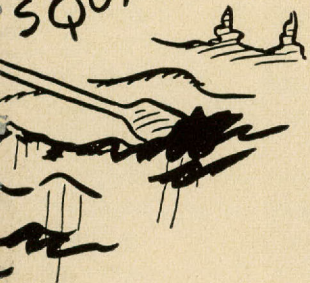
Naturally there are numerous other craft made exclusively (so it seems) to harass the lover of the rod and reel but this tirade will suffice. To go into the sordid details of discussing the other types will only increase the dissension among the ranks of our buddies. Laying all kidding aside, believe me, renting some boats (?) is not a joke. It can be a nasty business, full of terror, danger and even an unhappy ending. We fishermen will all breathe a sigh of relief when some sort of inspection law for all boat rentals is rigidly enforced.

The old scheme, "rent a boat at your own risk" places too much responsibility in the wrong direction. The majority of anglers have a keen sense of water safety, refuse to rent "booby traps." But there are always those, eager to get fishing, who go out in any tub or sieve, often to their sorrow.—*Pennsylvania Angler.*

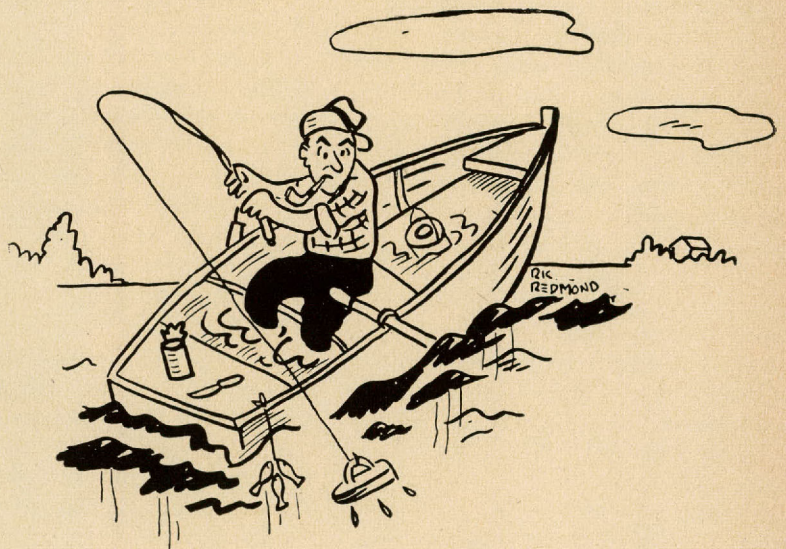


ive on the warpath.

QUEAK
SQUAWK



When the lunch and thermos jugs start to float, and you're in water up to your knees, it was time long ago to head for shore.



Diet of Deer Influenced by Range

By F. E. BLACKSTOCK

A COMPARATIVE study of white-tailed deer made by R. B. Davis possibly suggests the influence of the range in determining the type of vegetation that will be eaten by deer.

Using the King Ranch as his place of study, Davis carried out a detailed research of the contents of 120 deer rumens taken in a period of one year. The stomach may seem an odd place to obtain information, but it was vital in this case. The contents of each rumen were dried, identified, and weighed.

On the Santa Gertrudis division of the ranch, a mesquite brush range in southwest Jim Wells county, Davis collected 60 deer and recorded the food found in their rumens. Browse made up 50 percent of the food of the deer in this area. It consisted of desert hackberry, mesquite, colima, prickly pear, and Mexican persimmon.

Herb species accounted for 25 percent of the food in the deer, along with 12 percent grasses and two percent of fiber that was unidentifiable.

The peak consumption of browse species was reached during August and October, while the consumption of herb species reached its maximum from February through April. Grasses found in the animals remained on a more steady level, but there was a slight increase from February through July. The browse foods fell off in late October, but remained a constant diet component until June. This shows a definite cycle in feeding habits of the deer.

As the browse type plants reached their peak of abundance on the range

and began to fall off, the herbs and grasses began to increase on the range. Thus the variation of feeding habits of the deer coincides well with the cycle of plant growth. When drouth conditions developed during this study, it was found that the deer in this area turned to prickly pear as an emergency ration.

Using the Norias division of the ranch, Davis collected another 60 deer from the very different forest type range located in the southern portion of Kenedy County.

Browse of this area was found to be furnishing 45 percent of the deer's diet, which contained live oak, mesquite, mustang grapes, and prickly pear. Herbs totaled up to 33 percent of the diet, grasses seven percent, and an unidentified fiber substance, 14 percent.

Deer depended very much upon browse here during the summer. Herbs were important in the diet from the latter part of August through December.

Grasses hit their peak in the diet in July and gradually became less important during the fall and winter.

The forest provided acorns, leaves, twigs of the oaks, mustang grapes, and perennial weeds. During the winter, the oak leaves were used as an emergency ration, although large amounts were needed to supply the deer.

Grazing activity on the forested Norias division was higher the year around and was probably as important as the browsing. With this situation the deer do not have to go through so great a change as those on the desert type range.

"The live oak forest area was the best range for deer as it contained more of the perennial herb plants which help carry deer through bad seasons," says Davis.

On the two ranges studied, the most sought after food was the mesquite bean, followed in order of preference by prickly pear fruit, grapes, acorns, and Mexican persimmon fruit.

It appeared to Davis that both areas were overstocked and probably over their carrying capacity. This indicates that the range value and deer prosperity will decline in a few years.

The season in which the deer appeared to be in their prime condition was at the peak of the browse cycle from August to the latter part of October.

Thus, the deer rely on browse rather than grasses and herbs. Unless severe weather conditions come about, such as drouths or heavy freezes, browse will be the primary food for which the deer are in direct competition.

The xeric or desert type range is restricted to certain plants which can stand long, dry and hot seasons. This in turn limits the deer's choice to certain plants. Mesic, or the more humid range associated with the forest area, has an abundant number of species of browse flora present. Therefore, the deer have a large variety of plants to feed upon and their activity is greater.

No matter what type range deer are inhabiting, they will be influenced greatly by it and will more or less adapt themselves to the vegetation it produces.

Br'er Fox in Texas

By EUGENE A. WALKER

*Wildlife Biologist**

and

TOWNSEND MILLER

Assistant Director, Departmental Publications

MENTION of the fox in Texas may cause varying reactions.

To the houn' dog man, the fox is highly respected and honored.

To the youngster, the fox is a fascinating creature, who, even in tales and legends written for the young, is a symbol of cunning; sometimes cruel, but always entrancing.

To the ladies, foxes mean furs. The rancher at present is somewhat concerned, perhaps to some extent unduly, that the fox may spread rabies to his domestic animals.

Those who hunt game birds regard the fox as an enemy of their favorite sport, although those who have studied the fox more closely are not

inclined to consider him a serious predator on game birds except in rare instances.

But however each individual Texan looks on the fox, one thing is certain—the fox is one of the most familiar animals of Texas. Perhaps this is because he ranges over almost the entire state, being most plentiful in Central, East and North Texas, and found in much lesser numbers in the area south of San Antonio. In that region the

coyote apparently keeps fox numbers to a minimum.

It is not strange that the fox is regarded as a friend by some and an enemy by others. In many ways he is a contradictory creature. Even the lawmakers of Texas find it difficult to place him. Legally, he is classed as a fur bearer, although the thousands who hunt him for sport attest to his unofficial place as a game animal.

Four species of foxes are found in Texas.

By far the most numerous is the Gray Fox which ranges widely over the state and belongs to the genus, *Urocyon*.

The remaining three species belong

* Leader, P-R Project 44-R.



to the genus, *Vulpes*. One of these, the Kit Fox, is a Plains area fox found in the region around Midland, Washburn, Stanton, and Tascosa. Another is the Big-Eared Desert Fox of the Trans-Pecos section. Both of these are natives of Texas and belong to the Red Fox family.

The third member of the genus *Vulpes* found in Texas is the true Red Fox, so well known in other states for his cunning and endurance in front of the hounds. Red foxes have been reported from scattered portions of Texas but authorities agree that they are probably the results of importations made by hound owners who like the wide circling tactics of this fox when running ahead of a pack.

The Gray Fox is somewhat larger than the other two native species, the Kit and Big-Eared Desert foxes, and is only a shade smaller than his distant cousin, the imported Red Fox.

By population, the Gray Fox is far more numerous than the other three combined.

There are several closely related sub-species of Gray foxes in Texas. Usually the Gray climbs a tree when closely pursued by hounds but in the heavy cover of East Texas' timbered regions, the locally named "smut-face" can and frequently does run ahead of a good pack of dogs for hours.

At times in such races some proud hound owner may be rendered less proud when "Old Lead" decides that the leaves around the camp fire are more desirable than following Br'er Fox through the palmettos, yaupons, and briars.

The tales of the prowess of the

"smut-face" are many and colorful. So are the stories of how this fox happens to be in East Texas. Many hound men will tell you that the "smut-face" resulted from importations of the Florida Gray Fox from Florida. Actually, the Florida Gray Fox ranges from the state of Florida across the southern tier of states into East Texas. H. E. Anthony, in his Field Book of North American Mammals, states that the range of the Florida Gray Fox extends into the eastern portion of our state.

It appears, then, that Texas can produce a valid claim to the "smut-face" along with Florida, Mississippi, Louisiana and the remainder of the Gulf Coast States.

Since the Gray Fox is the one which is the most widely spread in Texas, and since it is this fox which furnishes sport for the greatest number of hound owners, this discussion will be largely confined to him.

A very easy way to distinguish between Red and Gray foxes is by examining the tail. The grays have a comb of black stiff hairs along the top side of the tail, right down to the tip. Reds do not have this comb. Of course there are other differences which are readily apparent when the observer becomes familiar with the two species, but a rank amateur can distinguish a Red from a Gray by examining the tail for the black comb.

A good sized Gray Fox will measure

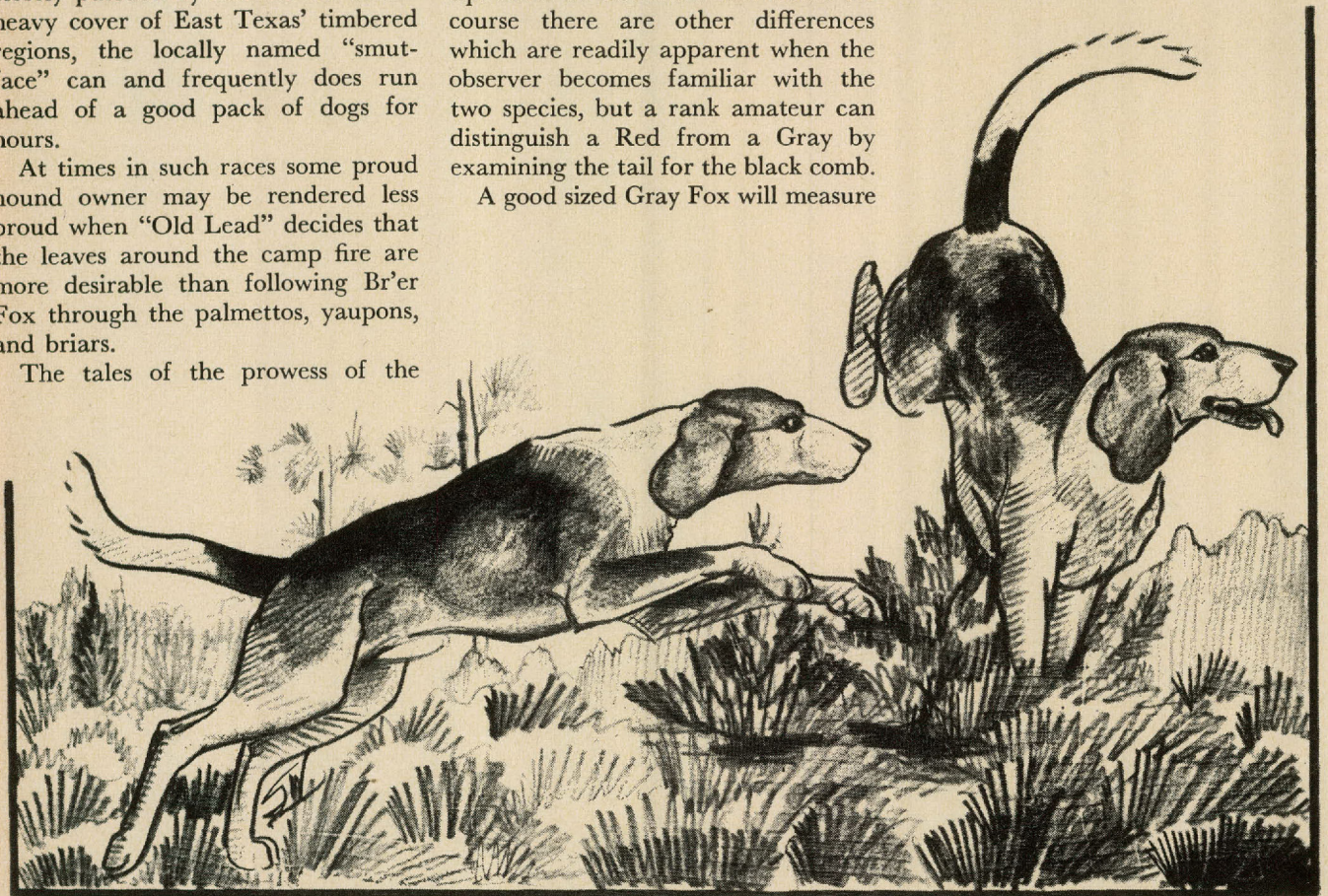
close to 40 inches from the tip of his nose to the end of the tail vertebrae.

Gray foxes usually den in hollow trees, old hollow logs, burrows in the earth, log piles, and in rocky crevasses in those sections where bluffs and much exposed stone occur. The young, usually from one to five or six in number, are born in March or April.

They are blind when born and have the general appearance of a small brown puppy at birth. The ears are short, round and fleshy; folded down against the sides of the head. The face is not sharp pointed but oblong, with a bulging forehead and a stubby nose.

A dark brown indistinct stripe runs from the back of the head to the tip of the tail. The entire body is covered with short brownish hair, but that of the tail becomes much longer than the body hair by the time the fox has reached maturity.

The new-born fox emits a sound similar to that of a very small kitten. When raised as pets they are very affectionate and show pleasure by wagging the tail from side to side and by mewling like a domestic cat.





The fox has been the center of continued discussion and argument in this state for years. Some persons believe they are detrimental to game birds and domestic poultry in certain sections of the state. Others argue that their natural foods include very few of our game species.

Drs. W. P. Taylor and W. B. Davis in their bulletin, *The Mammals of Texas*, state: "In fewer than six instances out of several hundred stomachs analyzed, remains of game birds have been detected."

Where man has upset the balance of nature, as he has all over our state, the fox has of necessity, been forced to change his habits. However, his foods include principally cottontail rabbits, an occasional jack rabbit, many different kinds of rodents, lizards, wild fruits and berries (domestic also), small birds, carrion, and insects.

Low prices of raw furs in recent years, plus protection afforded the fox in some counties, have been instrumental in bringing about tremendous increases in the fox population in certain sections of the state. When large numbers of foxes are present and the supply of natural foods is

exhausted, the animals may become serious predators. However, nature will not allow an over-population of wild animals to exist long. Because of the large number of animals in a given range, the food supply is reduced to the point where each individual fox cannot obtain a sufficient amount of food to insure maximum growth and vigor. These undernourished animals are more susceptible to diseases and parasites which plague the species. The result is drastic die-offs in areas where too many foxes are present.

Diseases which reduce fox populations include canine distemper, rabies, and infestation by internal and external parasites. When one or more of these diseases strike an area where foxes are over-abundant, the diseases quickly reach epidemic proportions because of the close contact of the animals concerned and contamination of the soil. There are usually very few individuals that escape in a locality where such an epidemic occurs.

The proof that there were too many foxes present is supplied by the fact that other localities only a few miles away, but where there is only a moderate number of foxes, frequently escape the epidemic.

Perhaps, then, the fox hunter who never kills a fox is overly enthusiastic and is unknowingly endangering his sport. When a large number of hunters consistently refuse to kill

a fox, they are contributing to an over-abundance of foxes which will ultimately be reduced in numbers through disease. The reduction is so drastic that locally, the sport is almost eliminated for a period of time. Recovery time depends on how long it takes the few remaining individuals to build up an adequate number of foxes once more. The series of events described above have been observed in Northeastern Texas, Central Texas, and in the Edwards Plateau Country in the space of the past few years. Outbreaks of disease in each of these regions were preceded by heavy fox populations.

The Gray Fox is versatile in his habits and is able to live and thrive near towns and in small blocks of woodland in farming communities. He has furnished sport for untold thousands of hunters for hundreds of years and is capable of doing so for many years to come.

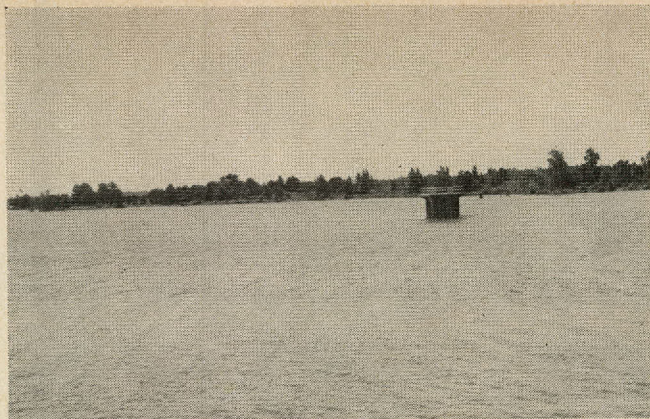
His fur has been instrumental in keeping the human race warm since the dim ages of the past. In 1950, the Gray Fox ranked seventh in this state as a fur bearer.

This fellow, then, certainly deserves consideration because of the economic value of his fur, because of the large number of insects and rodents that he eats, and surely because of the sport he furnishes to thousands of persons who enjoy the breeding and running of fine hounds.

Wings Over Langley Island

By

ALMA WOLDERT SPENCE



View of Langley Island taken from pump station site, looking southward across Gilley Creek Section of Lake Tyler. Intake tower in foreground. (Photograph by J. P. Ferrill.)

IN one short year thousands of birds of around 75 species have found refuge on a tiny man-made island near Tyler, Texas.

In the midst of the blue waters of Lake Tyler, Langley Island drowsed in the warm Texas sun. Swallows dipped in the rippling wavelets. Wild ducks circled. The guttural voice of a grey heron echoed from a distant shore.

A boat filled with bird lovers pushed off from the mainland, headed for the red clay banks of the newly-created bird sanctuary. They were making a field trip to Langley Island on its first birthday.

The little gem of a lake which sparkled about them was also new.

Because water from the old reservoir was inadequate for roses, lawns and homes, the construction of a lake was begun in 1948. Lake Tyler was completed the next year and it met all the requirements.

When the 2600-acre lake was surveyed, engineers decided to leave the long green tree-shaded ridge lying in its midst unmolested. When the waters flowed in, the island was created by a happy accident. On this arm of land 800 feet wide and 4,000 feet long, the city planted 6,000 seedling pines to stop erosion. Other trees, shrubs and flowering plants were also planted. Thus utility bowed to beauty.

The name Langley, however, was not an accident, as the land had belonged to a Negro family whose home once stood on the highest point of the woodland. The 70 acres were discovered to be the natural habitat of many species of birds. It was covered with woodbine and festooned with grape vines. Thickets of wild plum were shaded by pioneer trees.

Among the 40 varieties found growing there were walnut, hickory, pine, cedar, oaks and sweetgum. Elderberry bushes were snowy with white lace blossoms that would turn to purple fruit in the fall. Blackberry and dewberry vines crept through the underbrush. A neat sign at the water's edge stated:

"Langley Island Wild Life and Bird Sanctuary—Visitors Welcome—Please help to prevent fires and damage to trees and shrubs. No hunting, No picnicking."

A small group of nature-lovers had discovered this

place to be a natural haven for wildlife. They became excited over its possibilities. "Nature made this a paradise for birds," they exclaimed.

Inspired, they began to plant additional trees and seed-bearing plants to supply more food for the colorful bird-inhabitants found there. "More birds will be attracted and migrants will winter here," they continued. At no cost to the city and with money contributed by friends, they set out 2,500 American beech trees. To these were added live oaks, hackberry, river birch, tulip trees, ligustrum, mulberry, dogwood, redbud, and catalpa. More evergreens were provided for shelter: holly, yaupon, waxleaf, myrtle and cherry laurel. Also set out were winterberry, chokeberry, southern buckthorn, barberry, and bitter sweet. Multiflora roses, spice bushes, crimson clover and lespedeza were planted for ground nesters.

"But some birds prefer to build nests in houses," it was argued. So the fun of making birdhouses began. Apartments with many rooms for purple martins, small homes for chickadees, wrens and titmice were erected. Bluebirds were supplied with ready-made domiciles. All houses were equipped with hinged tops so they could be cleaned.

Immediately the new owners moved in. In one house a pair of bluebirds raised five families in one season. Plantings and building birdhouses occupied the far-seeing discoverers for over a year.

These workers accomplished much. They now felt that more people should enjoy this beautiful spot, so they appeared before the Tyler City Commission and succeeded in getting the island officially declared a wildlife sanctuary. This led to the organization of the Tyler Audubon Society on March 15, 1951, which is a branch of the National Audubon Society.

Enthusiasm mounted among the members of the newly-created Tyler Audubon Society. They took up a new and fascinating avocation—bird watching. Women deserted canasta tables, businessmen left their offices early; school children brought out their kodaks. The sale of field glasses was increased and bird books were in demand. Telephones carried the exciting news, "I saw an indigo bunting in my backyard." "There is a wood thrush in my magnolia tree."

Binoculars and field books on birds were almost carried to bed at night. Were there not song birds by day and bats and owls by night to be identified? The Audubon Society promptly took "Langley Island" to its heart. It was adopted as their major project.

Crossing the waters the bird enthusiasts saw a blue kingfisher dive from a stump, stately white egrets, cranes and gallinules, wading on the shore. Their boat beached on the island. The sod was star-sprinkled with wild white field daisies. Deep layers of pine needles glistened under low-branched trees. Incense rose from the spicy woods, wet with the recent rains.

The island was alive with the carolling of birds. Fluttering wings and arias of song thrilled the bird seekers. They spoke in whispers. The pearly runs of the cardinal, the flash of his crimson wings was familiar to them. Not so, were the three strange notes that came repeatedly, "Dick-cis-cel, Dick-cis-cel, Dick-cis-cel."

"What bird is that?" someone asked wonderingly.

"He is telling you—'Dickcissel,'" came the reply. This sound came incessantly. It was from small canary-sized birds with yellow vests.

Ahead the faint shadow track of an old road beckoned. The Maryland yellow throat and the orchard oriole were bits of sunshine that flitted from trumpet bush to sassafras. Their golden throats swelled with soft warblings. Where juicy berries hung in rich clusters, song sparrows fluted silver notes. Martins were flying in and out of their many rooms. On a high wire that stretched from house to house, perched the martin acrobats, dressed in their deep-purple coats.

The remnants of an old peach orchard nurtured a romance. A pair of deep blue grosbeaks were circling like a gyroscope. Round and round the gnarled branches they flew with bursts of song. Beneath the tree, honeysuckle wandered in wild abandon. Reflecting the color of the playful birds the florets of the blue verbain pointed upward.

The plaintive notes of a pee-wee came from a tall willow. Nearby the new growth of small pines lifted silver candelabra. A chinaberry tree flowered in full lavender beauty. Those on the trail were reminded that its perfumed flowers changed by fall into golden berries. Robins eat them ravenously until they become intoxicated and go on a merry jag.

On a grapevine trapeze a red-eyed vireo swung back and forth. Warblers trilled from blackgum trees. Footsteps sank deeply into the soft furrows of an abandoned field. The multiplied grandchildren of that quaint old gentleman bird, the quail, kept calling. They solemnly announced their ancestral name: "bobwhite, bobwhite." Suddenly they whirred away across the stubble like jet bombers in scattered flight. Along the sedgy banks of the lake, red-winged blackbirds unwound their wavering black ribbons. Chattering they fell in a noisy cloud among the reeds. At intervals there floated in from the shore the eerie voice of a loon.

On a dark and leafy trail in this Eden was found the trace of Lucifer. Among bull nettles and poison ivy a snake had shed his skin. It was a sinister reminder that even here danger lurked.

● Continued on Page 30



In this bluebird house one pair of Bluebirds reared five families in a season. (Photograph by B. B. Watson.)



Grandmother, an enthusiastic bird watcher, points out a Baltimore Oriole to her children and grandchildren at Langley Island. (Photograph by the author.)

The "Popper"

AND THE FLY ROD

By ROBERT ABB

IN the late 1930's, cork floating lures were reported "now in general use" throughout the United States. Their development was a gradual process from the dry fly angler who wanted something larger than the usual hackle type flies but wished to retain the high floating qualities.

Early fly fishing was primarily for trout, since the development of the first "American Style" fly fishing equipment on a factory production basis was in the heart of Wisconsin. Here, trout fishing in streams was the major interest of the anglers.

The effectiveness of the dry fly and the positive tell-tale strike carried over to the pond and lake fishermen. To meet the demands for flies tied with enough buoyancy to support the larger hooks necessary to hook and hold bass, crappies, and other fresh water species, new flies of the heavy hackle style and decorative upright wings were developed.

These, too, were effective and added impetus to the fast growing sport of angling with the fly rod and the artificial lure.

Due to the nature of hackle feathers, the larger sizes lacked the crispness and buoyancy of the neck hackles used in trout flies. The larger flies would only float briefly, and after sinking, a large part of the fun was gone. The submerged fly continued to catch fish but the angler seldom sensed the hard and vicious strike.

Bringing the fly to the surface for successive casts was difficult and meant retrieving much of the line.

A few early bass fishermen sought to solve this by creating small lures

of spruce or cedar, brilliantly painted and dressed with a few feathers in the manner of flowing tails or wings. These floating lures could be picked up from the water's surface with considerable ease and required no dressing to float.

Early wooden bodies presented some obstacles, however. Lacquers and paints chipped upon impact with the boat, rocks, pier or any solid objects. Teeth from the striking fish chipped them badly, and rotting often would begin as a result. With water absorption, the bodies became spongy and the hook hardware was lost.

Both spruce and cedar floated somewhat low in the water when compared to cork, and the weight factor limited the casting distance. An early improvement was balsa wood which floated very high and had practically no weight. Lacquer held to the surface much better and undercoats of waterproofing lacquers and shellacs made them smooth and attractive. Balsa wood would water soak, however, and, when spongy, the hooks were easily twisted or broken loose from the bodies.

The next stage in the development was the application of machine ground cork bodies. The cork proved most popular of all previous body materials, and to this day the greatest majority of floating fly rod lures are constructed of cork.

Cork floats very high in the water, has little weight, possesses some "flex," will not water soak, and holds the humped-shank type hooks securely.

Cork lures until the late 1930's were primarily known as "floating lures" and the "poppers" came later.

The big difference between them was the indented large heads on poppers. When twitched or jerked forward, these "cups" would dig into the water and "pop" loudly. This "pop" and "gurgle" effect made a tremendous difference and the new lures "brought home the bacon" even better than the early models.

Early lures were quite large, usually over an inch long and fitted with 1/0 or 2 hooks. These were designed to take large bass; they did—and still do.

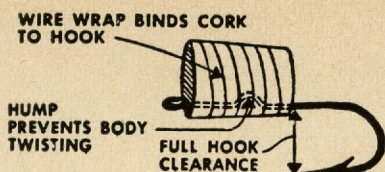
In the last ten years, the trend has been toward small copies of these early "poppers." The smaller lures are easier to cast and produce astonishing results even on the larger fish but without the elimination of strikes from the smaller fish. They are ideal for the very popular bluegill, crappie and sunfish as well as the bass and under some conditions, for taking trout.

The development of farm ponds, ranch "tanks," and man-made lakes of small acreage and the increased popularity of the panfish as a scrapper on the fly rod has brought the little popper into its own.

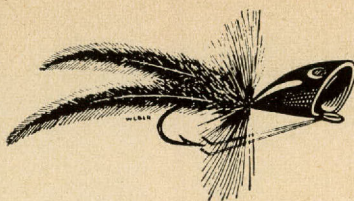
When panfish are feeding near or at the surface, the little popper is deadly and sporty. Colors are vivid and their high float makes them easy to observe by the angler even during the late and very early hours.

In popularity, the colors rank as follows:

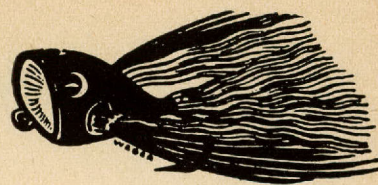
- a—Black and white
- b—Black and yellow
- c—All yellow
- d—All black
- e—Red head on white
- f—Red and yellow



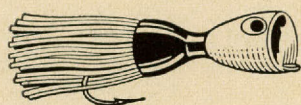
Wire wrapped around the cork body, plus the use of a "hump-shanked" hook, prevents twisting of the body on the hook in this improved bug.



A typical bass streamer bug with "popping" head and wire weed guard.

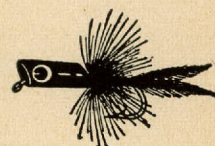


Popping hair bug.



Another topwater bug, this one with "skirt." (All illustrations courtesy Weber Lifelike Fly Co.)

There are small bugs on the market, too, for panfish. Hooks range all the way down to tiny size 14 for trout.



g—All white
h—Frog finish

Poppers are now available in sizes all the way from the tiny size 14's to the large size 2/0, popular even in salt water angling. Probably the most popular single size would be the eight, which is adequate to hook and hold most bass but does not eliminate the smaller panfish from striking.

The action of poppers can be regulated to simulate frogs, crippled min-

nnows, crayfish, small birds, beetles or other foods common to the fish.

Some poppers are now being constructed of hollow plastic, but this is in the development stage for most manufacturers, who are watching with interest the many new plastics which may have sufficient strength and remain light enough for this application.

The Weber Lifelike Fly Co. came up with an improvement this past

year. This is the wire-wrapped cork body which prevents body twisting and the hook breaking loose.

New ideas and improvements have brought the topwater fly rod lure a long way since E. H. Peckinbaugh originated the cork-bodied bug many years ago. There are bugs for every sized fish, and the fly rod enthusiast who hasn't given this type of lure a thorough try has missed a lot of fun—and a lot of fish.

Alaskan Eagle Bounty Nullified by Federal Regulation

THE claws of America's national emblem, the bald eagle, will no longer bring two dollars a pair to Alaska bounty seekers.

The National Audubon Society stated that a long campaign by Audubon groups and other conservation organizations has culminated in a federal regulation forbidding the killing of Alaskan bald eagles, unless they are found "committing damage" to wildlife or domestic stock.

The eagle bounty law in Alaska, which has caused bounties to be paid on more than 100,000 eagles since its enactment in 1917, will be nullified

by the federal regulation just issued by Secretary of the Interior Oscar L. Chapman, the National Audubon Society believes. Provision that no part of the carcass of a bald eagle may be "possessed or transported for any purpose" will make it illegal to collect bounties on birds that may be destroyed under the terms of the regulation.

In advocating that bald eagles be protected in Alaska, as they have been since 1940 in the United States, the National Audubon Society has pointed out that the bird whose likeness appears on every dollar bill, half dollar, and quarter may make its

"last stand" in Alaska.

Research studies in Alaska have been cited by the Society as indicating that the bald eagle does not do any significant damage to the salmon or fur-farming industries, and that it is an important tourist attraction. The case is stated this way: "A bald eagle soaring majestically against a blue sky has economic value that is seldom appreciated; a shot-torn carcass of an eagle has none."

The National Audubon Society commended Secretary Chapman for his "wise and much-needed action," and expressed the belief that the majority of Alaskans will also approve.

How Are Your Fishing Manners?

FISHING seasons and fishermen being what they are—wonderful things and mostly fine people—much deep thought is being given to this year's onslaught against those knucklebusters that got away last season.

All such thoughts come quite naturally to most anglers but one thought comes too infrequently to many—streamside and lakeside courtesy, according to letters received by Heddon's research department.

Take the cane pole and bobber fisherman, for instance. He complains that the guy throwing plugs around tries to hog half the lake. Says the plugger throws his missiles in a 25-yard circle around his boat and gets riled if anyone approaches him; acts like he owns the place!

The plugger writes to gripe about the cane pole fisherman who rows right along the shoreline where he (the plugger) is casting. Declares the cane pole man could have rowed behind him and not loused up his fishing, the thoughtless so-and-so.

And the fly fisherman blows a gasket over the guy who comes plodding down stream behind him, waddles up to where he (the fly fisherman) is wooing a nice one, and barks, "Say, got any spare night-crawlers?" Then, when informed the fly fisherman is using flies, looks down his nose at him and he (the worm fisherman) proceeds to waddle right on through the hole, like a moose on water skis!

Others have kindred gripes, such as the aquatic "Hot Rod Harry" who roars around the lake in his

speedster, seeing how close he can come to folks fishing in boats, likes to make them bob like big corks.

And there's the big-hearted fellow who insists on doing the honors at the oars, then proceeds to cast ahead of the boat, fouling up the fishing for his companion in the bow.

Also singled out is the fancy fly fisherman who drops the anchor amidst a quiet gathering of still-fishermen, stands up so all can see his majestic figure and displays his prowess at laying a long line—while everybody around ducks his sagging back cast.

One little thought, suggests Heddon's, would eliminate all this confusion and complaint. It's old and golden—"Treat other fishermen as you would have them treat you" . . .



The fishing triangle—the cane pole, plug, and fly fishermen. The fancy fly fisherman displays his prowess at laying a long line (right) while everybody tries to duck his sagging back cast.

Big Cats Bagged

MOUNTAIN lions, crossing the Rio Grande River from Mexico into Texas, have given Game & Fish Commission staff men busy days lately.

Seven were trapped within a short period on the San Pedro Ranch, south of Eagle Pass, after they had raided deer herds.

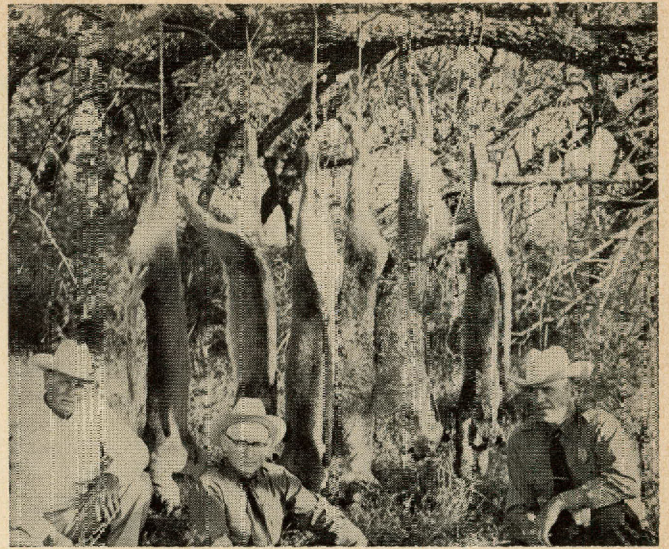
Three were shot on the Ortiz Ranch, about ten miles northeast of Laredo, in one evening.

The big roundup occurred after Foreman Jim Tate on the San Pedro ranch appealed to Johnny Hearn, chief of the Commission's predator control, for help in halting a fresh lion outbreak.

Hearn assigned Warden Jim Pond of Carrizo Springs, and State Trapper Ruf Bishop. They camped out in the deer range and within four days had caught four lions, the largest of which stretched more than six feet.

The coup near Laredo was staged by State Trapper Agapito Flores of Laredo while cruising on the Ortiz Ranch. He saw what he thought was a coyote at about 40 paces. Flores caught the animal in his headlights and shot it. When it dropped, another came out of the grass. Flores killed it. Then he realized he had bagged two good sized cats.

Flores decided to await arrival of the old female. Sure enough she showed up two hours later, and Flores shot her.



Here are six of the seven lions trapped on the San Pedro Ranch after they raided deer herds. The roundup was staged by State Trapper Ruf Bishop (left), Predator Control Chief Johnny Hearn (center) and Game Warden Jim Pond of Carrizo Springs. State Trapper Agapito Flores (below) of Laredo shot these three lions one evening while cruising on the Ortiz ranch, ten miles northeast of Laredo.



Marine Reptiles of Texas

By J. L. BAUGHMAN

Chief Marine Biologist

THE great leatherback turtle is the largest of living turtles, frequently reaching eight or more feet in length, and a weight of 1,200 to 1,500

pounds. The average adult probably weighs over one-half ton.

Leatherbacks are widely distributed. They have been reported from Nova Scotia in Canada, and Nootka Sound, in northern British Columbia, which seems to be their farthest limit north. However, they apparently inhabit the tropical and subtropical seas of the world.

Leatherbacks seem to prefer water of 150 feet or more in depth, leaving this only to lay its eggs on shore. Here, like the other marine turtles, it scoops out a hole in the sand, some 60 or 70 feet from the water's edge.

The eggs, some 90 to 150, are laid in this depression at a depth sometimes as great as 30 inches below the surface, and hatch out in about two months.

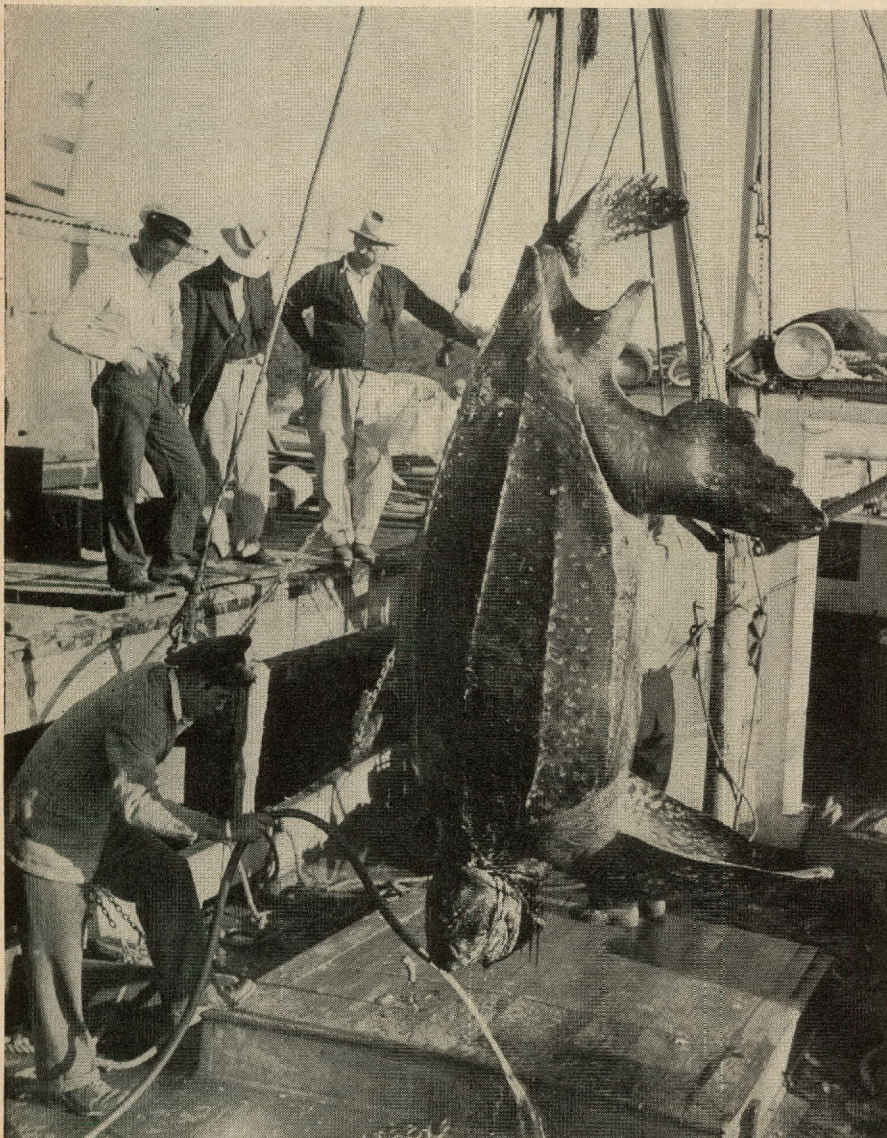
Young turtles, as soon as they are hatched, head for the open sea, swimming strongly and rapidly. Unlike most other sea turtles they dive easily during their first days of existence.

These youngsters perform the astonishing feat of increasing their weight some 15,000 times before they become adults.

If a man could do this, he would reach a weight of 50 tons by the time he was grown up.

To grow so large, they eat enormously of jellyfish and mollusks.

Leatherbacks have no economic value, although in many parts of the world a useful oil is extracted from their skin. In Ceylon the flesh is curried, and the oil is used as a canoe varnish.



A 1,200 pound sea turtle caught in a shrimp trawl at Port Aransas, Texas. (Photo by Jack Blackwell.)

Letters to the Editor

Editor:

I am sending a photo of fish taken from the Riverside Ranch farm pond. This pond, now four years old, is about one and three-fourths acres in surface area. I followed your recommendations on fertilizing and stocking.

Otto Stoeffler, on the right, and I are holding the fish. The bass weighed four to six pounds, and the catfish, three to seven pounds. If you stock your pond right,



feed your water, you will be able to fish and catch 'em. And you'll enjoy an acre of pond more than any other acre on the farm, plus producing more meat per acre.

I appreciate all you have done for me and for other farmers and ranchers with your game and fish service.

Joe E. Huser
Route 4
Taylor, Texas

Editor:

Your article, "Fishes of Texas," by Marion Toole in your April issue of TEXAS GAME AND FISH is quoted as follows:

"The freshwater drum, *Aplodinotus grunniens*, Rafinesque, has many common names. The most commonly used is that of gaspergou. Other common names for this fish are sheephead, croaker and white perch."

I have never before known that the gaspergou and the white perch are one and the same fish. Would you please set me straight on this matter?

Jamiel Lee
512 Herring Avenue,
Waco, Texas

(It will be noted that the various species of fishes carry a tongue-twisting name composed of Latin or Greek. These are the scientific names that are recognized by fishery workers throughout the world. *Aplodinotus grunniens*, which is the name given to the freshwater drum by Rafinesque, is made up of both Latin and Greek. *Aplodinotus* is from the Greek—meaning simple

back, since the dorsal fins are somewhat connected and grunniens is from the Latin word meaning grunting.)

Unfortunately common names of fishes are as numerous as the various states of the United States. The term white perch is the name used for freshwater drum in Missouri and other nearby states. In Texas, the term white perch is applied to the white or black crappie. Along the eastern coast, another fish occurs, *Morone americana*, that belongs to the white and yellow bass family, that has the recognized name of white perch. Several years ago the American Fisheries Society published a List of Common Names of Fishes in an attempt to standardize common names. All common names used in this series of FISHES OF TEXAS are the common names from that publication. Marion Toole, Chief Aquatic Biologist, Game and Fish Commission.)

Editor:

On the inside of the front cover of your May issue of TEXAS GAME AND FISH, there is a picture captioned "River Rats Rally." The water craft "The Pup" pictured is exactly the type of boat I would like to build.

Could you please refer me to someone who could give me information as to where I might secure building plans and/or specifications for this type of boat?

Mike Baxter
Electra, Texas

(The owner of "The Pup" is Marion Fowler, whose office is in Austin. His home is at "Shore Acres" on Lake Austin where "The Pup" is berthed along with "The Commodore.")

Editor:

On the 25th of April, while I was attending the Southwest Sports and Vacation Show at Fair Park here in Dallas, I saw your interesting exhibit, and also came across the booth advertising your magazine. I looked through a copy, liked what I saw, and subscribed to it. I received a copy of the April edition, took it home and read it; I found it to be an interesting magazine from cover to cover.

Since then, I have looked forward to the next issue, but doggone it, to date it has failed to show up. I thought maybe somehow things got a little fouled up somewhere and my subscription was missed or perhaps stuck to the bottom of your paste pot or something. Anyway I would like to have the May copy and those following.

J. G. Mars
3006 Bombay
Dallas, Texas

(The volume of subscriptions sold at the Dallas Sports Show the latter part of April prevented our getting all the address plates made and in the files before May 1 when the mailing list was printed. Therefore, the first copy of your subscription was the June magazine. Sorry, we just couldn't blame the paste pot this time.)

Editor:

Enclosed is a picture (below) of Charles Cervenka (left) George Cervenka, and Guy Barnett with the yellow and blue cats they caught in the Guadalupe River. They weighed 146 pounds.

Carlwin Werner
Hallettsville, Texas



LITTLE, BUT *So Important*

Familiarity does not necessarily breed contempt, despite the old adage. But every day, or even frequent, usage of a complicated item often causes us to take it for granted. Few of us are concerned with what makes it perform. The fact that it does the job satisfactorily is quite enough for us.

This is particularly true with the sportsman and his shooting gear. Most gunners are rather fussy about gun and ammunition performance, and a considerable segment of the shooting population is extremely exacting in its requirements. Yet comparatively few give more than a passing thought to the many preparations that go into the making of a gun or its ammunition. The gun is loaded, aimed, the trigger pulled, the bullet or shot charge strikes the target . . . and that is that. Yet before each step in the shooting cycle the manufacturer and his staff of experts have performed what amounts to near miracles in manufacturing processes, for each gun and piece of ammunition is a precision instrument of the highest order in itself.

Sporting ammunition **must** be correctly made in the first place. When the firing pin of a gun falls on the primer of a shell or a cartridge, the effect is instantaneous. There is no turning back, no chance for adjustments. It "works" or it doesn't. And the amazing part of it all is that this mass-produced item seldom fails.

Wings Over Langley Island

Stepping gingerly the bird followers reached a bluebird house. The mother perched on the top unafraid. She dangled a worm in her bill. A punster remarked, "This is one place where bills are welcome."

In a chickadee's home five tiny black velvet balls with wide yellow-slashed mouths lay sleeping. Amazement and delight were expressed at what feats nature-followers had accomplished before the Auduboners had become interested.

A mockingbird danced up and down on the topmost bough of a tall oak tree. In ecstasy he repeated sweet notes of many of the birds that had been heard. Suddenly he gave the raucous scream of a hawk. Did he have a merry twinkle in his roving eye as he watched the small birds scurry to cover?

As he resumed his roundelay, someone remarked, "Have you heard that there is a mystic attachment between birds and flowers? The Persians claim that whenever a rose is plucked, the nightingale utters a plaintive cry."

The bird group paused to rest and make ambitious plans for the future: to organize Junior Audubon Societies in the public schools; to give lectures on birds and wildlife to school children; to arouse the interest of women's and garden clubs; to awaken in civic groups a new appreciation of birds; to open trails on the island and mark trees by name for students; to plant wildflower seed, such as Indian paint brush, bluebonnets, iceland poppies, Indian blanket and verbena; to establish a dogwood trail; to help identify birds and bird calls in the

One of the outstanding products of the modern machine age is the .22 caliber cartridge, produced by the millions, familiar to every male, and the pride and joy of every outdoor boy, to say nothing of the large number of members of the feminine gender who find much pleasure in its use. The smallest of the sporting cartridges, the .22 is exceedingly accurate, capable of making 10-shot groups at a range of 100 yards that can be covered with a twenty-five cent coin.

Some casually say, "There can't be much to the manufacture of .22's. They're quite inexpensive and all one consists of is a slug of lead, a metal case, a pinch of priming mixture, and a bit of powder." But there is far more to it than that.

For instance, a Remington .22 cartridge is subject to all of 64 different manufacturing and inspection operations before it reaches the shooter's hands. Only the latest scientific manufacturing techniques have made this possible. The "slug of lead" that finally emerges into a highly accurate bullet of finest design undergoes nine different operations before it is carefully seated in the cartridge case. The "pinch of priming mixture" has undergone 13 different manufacturing operations before it becomes a component part of the cartridge. The empty primed cartridge case requires 22 operations in its manufacture, and the loading and packing processes (20) bring the total up to 64.

• Continued from Page 23

city and at the preserve, and to encourage field trips to the island. Since it is a community, as well as an Audubon project, they plan to make Tyler and the surrounding country bird-minded.

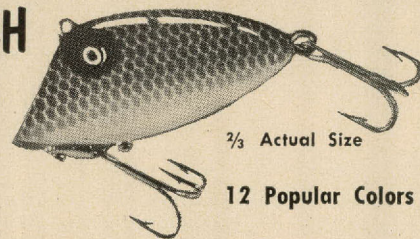
During the three hours spent on the island there was awakened new delight and reverence. The graceful movements, patience, persistence and affection of birds, inspired the watchers. The exquisite melodies of the birds as they went cheerfully about their daily routine of living sank deep into the hearts of this group of nature lovers.

Shadows were lengthening when the boat slipped away toward the mainland. As the ripples died, the waters of Lake Tyler spread a deep blue sheet of protective cellophane around Langley Island.

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Engineers Ignore Wildlife Resources in White River Plans

THE Army Engineers, in spite of obligations under Federal law, seem bent upon pressing plans for flood control and power development in the White River Basin of Arkansas and Missouri without the least regard for important basinwide wildlife values, according to the Wildlife Management Institute. Some of the best deer, turkey, and squirrel habitat in these states; popular and economically important float fishing waters; commercial fisheries; and one of the most important winter waterfowl concentration areas in North America would be destroyed.

The White River National Wildlife Refuge, embracing 116,354 acres of natural flood plain, where the Government has spent \$1,254,579 in acquisition and development, would be seriously affected. The value of the refuge and some of the most productive hunting lands in North America, which adjoin it, lies in the fact that alternate natural flooding and dewatering of land in the lower White River Basin has led to a lush growth of important waterfowl food plants—oaks, chufa, smartweed, and millet. Material changes in the annual water cycle will prevent the production and utilization of this food and cause the invasion of worthless brush. What now is a wildlife paradise would be turned into a relative wildlife desert.

Congress authorized the construction of six general-purpose dams in the White River Basin in 1938; two additional reservoirs were authorized in 1941. By 1945, the Corps had tentatively selected a total of 14 reservoir sites, now has completed two dams and will shortly finish a third. Since 1945, it has modified its plans considerably. It proposes that three flood control projects be altered to include hydroelectric power, that would necessitate a greater storage capacity and corresponding changes in the downstream flows. Although the U. S.

Fish and Wildlife Service has studied its plans for six years, the Corps does not propose to consider the over-all effect of its comprehensive plan on wildlife, preferring to give this consideration only after individual projects are authorized and as detailed plans for each are developed.

The most serious danger to wildlife lies not in any one dam, however, but in the cumulative effects of the entire plan; not only at the reservoir sites, but downstream on the flood plain.

The Service contends that wildlife

THINGS YOU MAY NOT KNOW

The bald eagle is an exceedingly loyal and affectionate parent. It will not desert its young even if the tree on which they are nesting is in flames.

The cheerful songs of tree frogs are heard most often during damp weather and before a storm. Thus they have been given an undeserved reputation as weather prophets, but really it is only because they are stirred to life by unusual moisture in the air.

Opossums are rather slow-moving, stupid animals which seek safety by their retiring nocturnal habits and non-resistance to enemies. It is because of this last trait that the familiar "playing possum" originated.

values should be considered in the basin-wide plan of operation, as the losses of habitat in the lower valley can be prevented only through modification of proposed river flows to meet wildlife needs.

Failure to follow these recommendations may well result in a catastrophe to the waterfowl resource which the Corps, as a branch of the Government, is obligated to preserve under the Migratory Bird Treaties with Canada and Mexico. White River is one of the most important waterfowl wintering areas in North America, and during the height of the season, as many as two million ducks may use the refuge at one time. The habitat is irreplaceable and its loss would be disastrous.

Under Public Law 732, (79th Congress) the Corps is obliged to consider the recommendations of the Fish and Wildlife Service in making its plans for river developments. In this case it appears that it is brusquely sidestepping the word and letter of the law and will continue on its way unless stopped by public opinion. It is high time someone in authority reminded the Army Engineers that they are the servants of the law rather than a law unto themselves.

Whooping Cranes Head North

The whooping cranes, America's most publicized birds, have left the Aransas National Wildlife Refuge in Texas to make the long flight to their unknown breeding grounds in the far north. Last fall 25 whooping cranes arrived at the Aransas Refuge, but two of them subsequently died of gunshot wounds received en route. This indicates that the giant birds run their major risks while en route from the breeding to the wintering grounds.

An encouraging note on the whooping crane front is that five young birds were added to the ranks during the summer of 1951. The continental population of "whoopers," which includes the two birds at the Audubon Park Zoo in New Orleans, now stands at 25.

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BOOKS



UNION BAY: THE LIFE OF A CITY MARSH by Harry W. Higman and Earl J. Larrison. 315 viii pages. Illustrated with numerous line drawings. Published by the University of Washington Press, Seattle 5, Washington; 1951. Price \$4.00.

Union Bay is a relatively small marsh area off the campus of the University of Washington in Seattle. By investigating and recording the natural drama which goes on in this patch of water, cattails, and loosestrife, the authors have presented an interesting picture of wildlife's struggle for existence in modern America. Here, within sight and sound of industrial and economic human activity, is an oasis where bitterns, waterfowl, beavers, mink, muskrats, and a host of other birds and mammals can be found. Here their young are born and raised to self-sufficiency, and here they are preyed upon by natural predators and by man.

In telling of the life in this marsh, the book tells the story of thousands of similar water areas across the nation. To the casual observer, they have a certain beauty but little practical value; to the engineer, they are places that might best be filled and devoted to "practical" human use; but to the naturalist they are essential bits of wildlife habitat which must be preserved if certain species of plants and animals are to be perpetuated. Each of these places, large or small, has its peculiar charm; each teems with life which may be observed by those who have the patience to move quietly and attune themselves to their surroundings.

The book tells of the life in Union Bay through one year from the time of the tule wrens start nesting until the ice starts melting late in the following winter. Each chapter is built around some particular denizen or group of denizens of the area. The entire book is factual, thought-provoking and delightfully written.

WILD ANIMALS IN CAPTIVITY by H. Hediger (translated by G. Sircom). 207 ix pages. Illustrated with 33 line drawings and half-tones. Published by Academic Press, Incorporated, 125 East 23rd Street, New York, New York; 1950. Price \$6.00.

Written primarily for use by officials of zoological gardens, menageries, and similar establishments, this book has a surprisingly wide application in the study of wildlife management. Since it deals with the behavior and psychology of mammals and birds in enforced proximity to man, its conclusions are applicable to the wild counterparts of zoo animals. The writing is somewhat technical but not too much couched in scientific terms for the layman to understand without beating a path to the dictionary. The translator has helped immeasurably in this respect by employing common synonyms and definitions in parentheses after scientific terms.

There are many interesting and unusual facts in this volume, which is written by a noted Swiss zoologist. Despite popular misconception, he says, wild animals confined in well-managed zoos suffer no discomfort

from confinement. The normal wild animal lives in a restricted area which is used largely in its search for food or in escaping from enemies. Food in zoos is supplied by keepers and, once the fear of man is overcome, the desire to escape dies. Thus the animal's need for space is reduced to the confines of its pen or cage. Under scientifically managed conditions, animals in captivity live many times longer than those of the same species in the wild. Training is often regarded by sympathetic humans as an imposition upon helpless creatures. Actually, according to the author, training offers a release for natural energy and is welcomed by most animals. The common practice of human beings to judge the reactions of mammals in human terms is reciprocated by the animals themselves. Once a lion, bear, or other animal has been tamed, it regards its keeper as a member of its own kind.

This book is unique in its subject matter and will prove of interest to all students of animal behavior. It should prove of practical value to refuge managers, park officials, wildlife photographers, and biologists.

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Catch As Catch Can

The fish, by the millions, were NOT biting. But there was nothing the young aquatic biologist could do about it; nothing anybody could do about heat-of-summer angling inactivity.

It was too hot for comfort, yet the YAB teased:

"I know where an old 90 pound catfish hangs around."

He presumably had spotted the hideout from his seining and other research activities.

Inside this magazine, in the article "Rocks to Riches," is reference to another man who knows where they are, too. He knows they are in his tanks because they were stocked there and because, once upon a time, some were caught there.

This sad case of the non-cooperative fishes then strikes home to many Texas fishermen during the torrid months when the fish hide in deep holes and generally evade the anglers' lures. Besides, the new crop of small fish provide convenient and ample food.

There may be several reasons why the water-wizard on the South Fork of the Llano River, was not catching anything even before the extreme temperatures arrived. In his eagerness to provide the perfect habitat, the proprietor may have over fertilized the tanks. Or there may have been an over population of small fish—for the others to feed upon.

Science is straining around-the-calendar to provide better fishing and to find more of the answers, including why fish are indifferent toward bait during certain periods.

Science is straining to remove many of the known drawbacks to more and better fishing; to eliminate the sinister rough fish blight.

The hatchery test, exclusive with Texas, is designed to rear baby fish to avoid cold weather hazards and to give stocked game fish an advantage over predators—all of this presages progress. Other equally effective projects are being readied in Texas.

One fisherman thought the perfect fishing state would be unfortunate: "'Twouldn't be any fun if all the element of chance were to be eliminated from the sport of fishing."

The scientist observed:

"Frankly, we are not catching enough fish in most places. Fishing in those areas suffer from over population: a fish-eat-fish problem."

Somewhere between the fellow who fears we may take all the fun out of fishing, and the fellow who complains we don't harvest enough fish; somewhere between is the poor perspiring fisherman without a single theory but with a lot of pent up feeling to feel something wiggling at the end of his line.

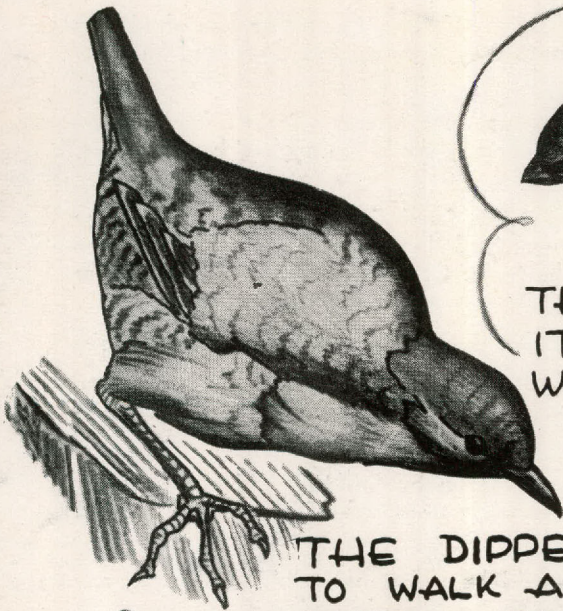
But come September and less blistering sunshine and this deserving citizen will regain the piscatorial pinnacle.

By JAY VESSELS,

Assistant Director, Departmental Publications.

BIRD

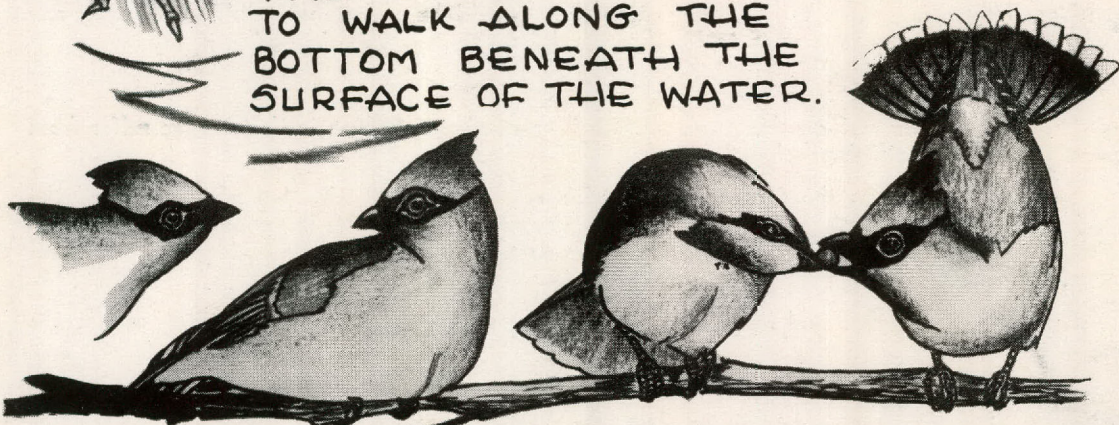
ODDITIES



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