

DOCUMENTS DEPARTMENT

JUN 11 1963

DALLAS PUBLIC LIBRARY

Texas Game and Fish

JUNE

1963

20 CENTS





Indications of small mammal populations can be obtained from barn owl pellets. These pellets, which contain the hair and bones of mammals swallowed whole by the night creatures, are regurgitated. See related story on page 16 of this issue.
Photo by Al Flury



BREAD UPON THE WATERS: Excise tax collections for the period July 1 through Dec. 1, 1962, on sporting arms and ammunition amounted to \$10,619,000--an increase of about 6.8 per cent over the same period the previous year. The receipts on sport fishing tackle, as reported for the same period, amounted to \$2,521,000--an increase of about 1.9 per cent over the previous year. These increases in taxes collected will be reflected in higher total amounts of Federal aid funds available for distribution back to the states for fish and wildlife restoration work.

BIRD BOOK BACK: It is again possible to obtain a copy of Roger Tory Peterson's guide book on the birds of Texas. Originally published for and sold through the Game and Fish Commission, under the title A FIELD GUIDE TO THE BIRDS OF TEXAS, it now has been revised and slightly expanded, and given the title A FIELD GUIDE TO THE BIRDS OF TEXAS AND ADJACENT STATES. The new version will NOT be sold by the Commission but may be obtained from book stores or from the publisher, Houghton Mifflin Company, 2 Parks Street, Boston, Mass.

WING INDICATIONS: Fewer ducks were taken last season than during 1961-62, according to the rate at which duck wings were submitted to the U.S. Fish and Wildlife Service. The comparison between the 1961-62 and 1962-63 duck wing submission rates indicated that, while the kill in the Atlantic Flyway was about the same as the previous season's, the duck kill in the northern states of the Mississippi and Central Flyways was off slightly and the kill in the southern half of these flyways was off sharply. The Pacific Flyway kill seemed to have suffered a moderate decline.

CAMERA HELPS CAMPAIGN: Walt Disney's latest Technicolor short, "The Litterbug," is now available in 16mm size for use by schools, industrial companies and community groups of all types. Donald Duck stars as this uninhibited Public Nuisance Number One. The film has a running time of seven minutes and is available under long term lease through the 16mm Division of Walt Disney Productions, Burbank, Calif.

KINDLY KILLER: A non-toxic pesticide was recently discovered accidentally. Diatomaceous earth is an inert material composed of the fossil remains of microscopic organisms. Dusted in grain storage bins, it has the two-fold effect of repelling insects and killing those that eat it. The lethal aspect is based on the mechanical action of sharp edges of the minute skeletons. The repellent property is in the tiny dust particles that rise from the dusting. No danger to the grain can occur, as the substance can be easily washed off, and it has been found that warmblooded animals are not harmed by the infinitely small sharp edges. The diatomaceous earth has been used in cattle feed, with interesting results. Flies were repelled from the animals themselves, and a marked lessening of flies around the barns was noted.

ENTENTE CORDIALE: The secretaries of defense and agriculture signed an agreement recently whereby the two departments will work together for conservation of forest, soil and water resources on lands administered by the Dept. of Defense. Officials in charge of Dept. of Defense facilities can obtain from the Dept. of Agriculture technical assistance, advice and special research needed in applying conservation measures to their lands. The Dept. of Defense will reciprocate by giving assistance and advice where needed by the Agriculture agencies. This agreement will provide better conservation of natural resources as well as a saving to the taxpayers.

GULLS IN THE DUMPS: Man's own unsanitary habits have been responsible for an increase in herring gulls, creating hazards at some airports and nuisances at other places. A study has now shown that the gulls are mostly local birds, whose numbers have vastly increased because they find abundant food in outfalls of raw sewage and in open garbage dumps in and near harbors. In 1961, 1,945 gulls were color-marked and banded in seven nesting locations, and 2,855 at four locations in 1962. Bird watchers were alerted and their sightings of colored gulls provided data to measure how far and in what numbers the birds move. Results showed that gulls concentrate at food sources: dumps, fish piers, beaches, sewer outlets and pig farms--in that order of importance.

Texas Game and Fish

OFFICIAL MAGAZINE OF THE GAME AND FISH COMMISSION DEDICATED TO PROTECTION AND CONSERVATION OF NATURAL RESOURCES; AND TO IMPROVEMENT OF HUNTING AND FISHING IN TEXAS.

JUNE, 1963

Vol. XXI, No. 6

CURTIS CARPENTER Editor
ANN STREETMAN Assoc. Editor
NANCY MCGOWAN Art Editor
JOAN PEARSALL Edit'l Asst.
ETHEL SPECK Circulation

TEXAS GAME AND FISH is published monthly by the Texas Game and Fish Commission. Subscription price \$2 per year, \$3 for 2 years, and \$5 for 5 years. Single copies of current issue 20 cents each. Add 2 per cent Texas Sales Tax.

Subscriptions to TEXAS GAME AND FISH are available from the Austin offices, and branch offices. Checks and money orders should be made payable to STATE GAME AND FISH COMMISSION, Editorial and Advertising Offices, Walton Building, Austin, Texas. Second class postage paid at Austin, Texas.

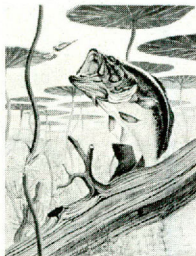
Postmaster: If undeliverable, please notify TEXAS GAME AND FISH on form 3579 at the Walton Bldg., Austin, Texas.

TEXAS GAME AND FISH invites republication of material provided proper credit is given, since the articles and other data comprise factual reports on wildlife and other phases of conservation.

Produced by

INFORMATION AND EDUCATION BRANCH
T. D. CARROLL Coordinator
TOM DILTZ Audio-Visual Chief
C. W. SHAW Illustrator
ARVID LARSON Photographer
RON PERRYMAN Photographer
ADELINE JOHNSON Darkroom Tech
LOUISE KREIDEL Business Assistant

The Cover



A trophy hunted with preparations as serious as those for big game pursuits, the largemouth black bass is a gamester worthy of the skill of ardent anglers. With summer's long hours for outdoor activities, the bass fisherman heads for likely waters to match his wits with the freshwater fighter and his competition. See bass tourney story.

Cover painting by Walton Cude

★ In This Issue ★

Don't Challenge Danger	3
by HOWARD D. DODGEN	
Moss to Meal	4
by JOHN N. DORCHESTER	
They are trying to turn a bane into bounty (aquatic vegetation).	
Just Men Against Fish	6
by CURTIS CARPENTER	
Bass tournaments are great equalizers of men.	
Return of a Seafarer	8
by CASH ASHER	
Biologists are hoping to re-establish the green turtle in Texas.	
Shipwrecked	11
by RICHARD STURDIVANT	
Togetherness takes a twist.	
Hunting with a Twang	12
by DONALD MITCHELL	
A deer hunt holds porker surprises.	
Barn Owls in a Barrel	16
by AL FLURY	
Collecting owl pellets makes a good science project.	
Procrastination—Thief of Fishing	18
by ANN STREETMAN	
Fishing is fun any time, any place.	
Echoes of a Swan Song	20
by JUDGE JOHN FUCHS	
One last indignity was too much for the aging timber wolf.	
Squirrel Nut	21
by HARDY R. FIELDS	
Why does the other fellow always get the squirrels!	
The Shell Story	22
by BETTY ALLEN	
Commercial shell decorating and collecting is a fascinating game.	
Texas' Sylvan Pathways	24
by R. L. SMELSER JR.	
Forest roads facilitate multiple use in Texas.	
Skeletons from Pellets	Inside Front Cover
Long Shots	1 Tackle Talk
Guns	26 Correction
Regional Roundup	27 Books
What Others Are Doing	28 Letters
Junior Sportsmen	Inside Back Cover
Toad Toxin	Back Cover

JOHN CONNALLY, GOVERNOR OF TEXAS
TEXAS GAME AND FISH COMMISSION
Ben F. Vaughan, Jr., Chairman
Howard D. Dodgen, Executive Secretary
W. J. Cutbirth, Jr., Assistant Executive Secretary

COMMISSION MEMBERS

Howard Carney, Atlanta	Frank Wood, Wichita Falls
Morris Higley, Childress	H. A. Walsh, El Paso
Carl L. DuPuy, Lufkin	J. F. Corley, Houston
	W. O. Reed, Dallas

DIVISION DIRECTORS

Howard T. Lee, Field Operations	W. J. Cutbirth, Jr.,
Eugene A. Walker, Program Planning	Administrative Service

COORDINATORS

T. D. Carroll, Info-Ed.	Terrance Leary, Coastal Fisheries
A. J. Springs, Wildlife	Marion Toole, Inland Fisheries
J. B. Phillips, Law Enforcement	C. L. Friou, Fiscal
Joe Marks, Engineering	James Archer, Personnel

REGIONAL DIRECTORS

Henry Burkett, Region 1;	John M. Carlisle, Region 3;
San Angelo Area	Tyler Area
A. W. Lewis, Region 2;	J. R. Singleton, Region 4;
Waco Area	Houston Area

R. G. Mauermann, Region 5; Rockport Area

Don't Challenge Danger

ACCIDENTAL drownings and shootings are two subjects that a person just doesn't care to discuss. He would rather not think about them, and besides, it couldn't happen to him or his family. Nevertheless, newspaper clippings crossing the desk of this office tell stories of death on the water and in the field—unexpected tragedies involving many who thought it would never happen to their loved ones.

It's a matter of fact that when responsible persons fail to abide by the rules of safety or fail to prepare for emergencies, they are gambling with life. Sometimes this life is that of a child entrusted to an adult. When children are allowed to enter a boat without life jackets and youngsters are permitted to hunt on their own without having good training and some maturity, adults are gambling; some will lose.

During this vacation period when students can escape for a while the trials of education, they just naturally spend more time near or on the water. Don't be a person in charge who feels, "It can't happen to us." Insist on the boating party's using life jackets; never take your eye off the youngster who can't swim; stay off the water when weather threatens; be prepared for the worst.

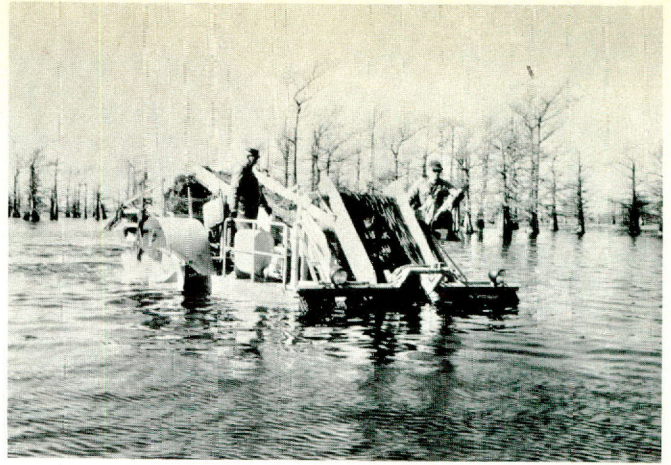
During summer leisure, think about the hunting season to come. If you intend to take the boy or girl into the field, prepare now for the future. Teach safe hunting rules and adequate shooting techniques. Be patient and convincing, pointing out that most accidents happen when the safety guard is down.

Start now to practice safety rules that will serve to give peace of mind and greater outdoor enjoyment in the future. **

HOWARD D. DODGEN
Executive Secretary
Game and Fish Commission

Moss to Meal

by JOHN N. DORCHESTER
Biologist III



The harvester persistently slashes away vegetation on Caddo Lake.

STRANGE but fascinating events are taking place on historic Caddo Lake in East Texas. A unique piece of machinery is harvesting a crop that has never before been utilized. This new crop, which is simply submerged aquatic vegetation, more commonly known as "moss," is being harvested and converted to a livestock and poultry feed additive or supplement.

This entirely new concept of moss utilization evolved through a series of events and much work, coordination and patience of a number of persons, firms and agencies. Caddo Lake, whose origin is legendary, during the summer of 1962 became so choked with moss that many of the camp operators were forced to shut down because of lack of business. Many areas of the lake became completely cut off because the moss was too thick to get through. Complaints were heard from Marshall to Washington, D. C. It was in Washington that the right words were said to the right people. Representatives of Aquatic Controls Corporation of Hartland, Wisconsin were contacted. This firm was in the business of cutting aquatic weeds in northern lakes on a service basis. Also it was known that seaweed has been utilized for many years by various processes of dehydrating and pelletizing. In addition scientists knew that aquatic plants are high in nutritional value.

All these ideas and concepts are now being put together into a completely new industry, the initial phases of which began in late February.

In coordination with the moss harvest, Game and Fish Commission fisheries biologists are conducting a study to determine what effects these cleared areas will have on the fish population. Fish samples are being taken from harvested areas and compared to unharvested areas. At this time no significant changes can be determined; however, the study has just begun.

Richard L. Phillipson, assistant to the president of Aquatic Controls, visited the lake for the first time in August 1962. What he saw was nearly unbelievable. He said, "All my life I've dreamed of lakes like this . . . an inexhaustible supply of raw material." Needless to say, he was very enthusiastic over the prospects and estimated there would be 30 to 60 tons of material per acre, which far exceeds that of northern lakes. Also

a year around operation would be possible.

Officials of the Small Business Administration and the Area Redevelopment Administration were contacted to assist in setting up a moss harvesting installation. A feasibility study, financed by the Federal government through the A.R.A., is required. This study entails harvesting moss, using Aquatic Controls Corporation's equipment, dehydrating and grinding the moss and using it in feed trials for livestock, swine and poultry, the feed trials being conducted by Texas A & M College. In addition, a study of a market is required. Coordination of various aspects of the project is being conducted by Sylvain Lange, industrial director, Greater Marshall Industries, a division of the Marshall Chamber of Commerce.

Aquatic Controls Corporation has some of the "top brains" of the country, in their respective fields, assisting in the project. Dr. E. T. Oborn, formerly with the U. S. Geological Survey, heads the bio-chemical research phase of the project. Dr. Oborn has more than 20 years of experience in the field of aquatic plants and has on file the bio-chemistry of more than 200 aquatic plants.

John Arnold of the Arnold Dryer Company, is supervising the processing of the harvested material. Another expert in his field and assisting on the project is Mathias E. Grinwald whose inventive genius produced the Aquatic Harvester some 20 years ago and has developed it into the nearly flawless machine that it is today.

The Aquatic Harvester is an ingenious piece of equipment in itself. Built on a steel barge, the harvester is self-propelled by a hydraulically driven paddle wheel on each side. Because these paddle wheels are reversible, the barge can turn within its own length. All hydraulic power is obtained from a 30-horsepower, air-cooled Wisconsin engine. The hydraulically driven cutter bar is a combination of the chain saw and sickle bar principles in that the movement is like the chain saw but the cutting blades, or teeth, are like the sickle. The direction of rotation on the cutting bar is reversible.

As the weeds are leveled by the cutting bar, down

to a depth of 4½ feet, they fall onto a pair of steel mesh conveyor belts which move the cut weeds into the center where they fall onto another steel mesh conveyor belt which moves up and out of the water. The weeds are carried into a hopper at the rear of the cutting barge by still another conveyor which also allows some of the excess water to drain. All the rotating movement of the conveyors as well as their vertical and lateral movements are achieved by hydraulic power. As the hopper is filled, the cutting barge then backs up to a pair of flat barges, which are hooked in tandem, and dumps the load of cut moss in a manner similar to that of a dump truck.

In the event the slowly moving harvesters hit a submerged stump, the operator simply raises the cutter bar and passes over the obstacle.

These shallow-draft, flat barges are self-propelled by a 30-horsepower Wisconsin engine on a 200-horsepower outboard drive. The heavy duty outboard drive is necessary to withstand the punishment of stumps, sandbars etc. The barge in front is, of course, without an engine. Each barge will carry from eight to ten tons of moss.

After a load of moss is obtained, it is then carried to the unloading point where a hydraulic crane with "clamshell forks" unloads it, a ton at a time, into an open-topped grain trailer which then proceeds to the dehydrating plant. For the duration of the feasibility study, the dehydrating is being done by the Grayson Alfalfa Dehydrator plant at Sherman. The Sherman plant was selected for the dehydration because it is the only plant set up in the area which preserves vitamin A in the processing as well as having a dust collector which also retains a good portion of the moss ordinarily lost.

In the dehydrating process the three to four-foot long strands of moss are fed into a chopper from which they enter a heat exchanger at a 2,000-degree temperature and exit at 280 degrees, although the moss itself gets no hotter than 140 degrees. The finished product is a green meal, similar in appearance to alfalfa meal, but it has the familiar "mossy" odor. Each particular

species of moss is being processed and stored separately, then blended into a meal of the desired mineral content. This aquatic meal will be added to regular livestock, swine and poultry feeds and fed to the respective animals at Texas A&M's experiment stations. There are three species of plants abundant in the lake the year around, which have been identified as water weed (*Elodea densa*), water milfoil (*Myriophyllum exalbescens*) and coontail (*Ceratophyllum demersum*). Many other species are available but in lesser numbers.

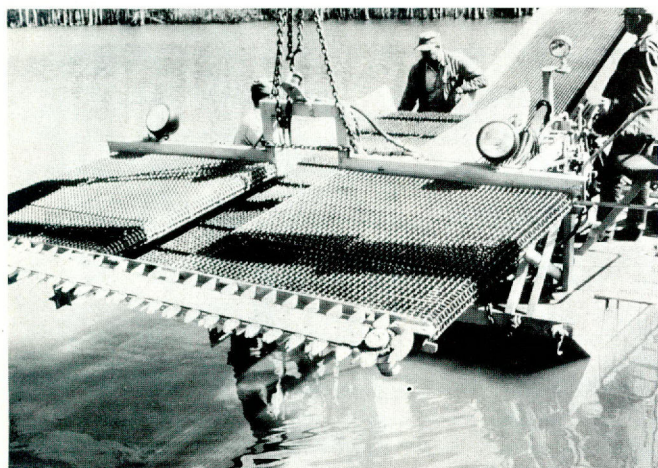
From a nutrition angle, the moss has a 50 per cent higher mineral content than comparable land plants; 20 to 25 per cent more protein and 50 per cent less fiber content. Dr. Oborn points out that the by-products, minerals and vitamins available from freshwater moss are practically unlimited. For example, the final product is high in carotene which is a possible source of vitamin A for farm animals. In addition, the high content of xanthophyll would be useful in poultry feed to obtain desired pigmentation in chickens. This is only the beginning of utilization of one of the world's oldest natural resources.

While the feasibility study is being conducted, company officials are proceeding with plans to build a dehydrator on Caddo Lake, as this is the only way the entire process can be operated on a profit-making basis and still have competitive prices on the product. Also, the final product will probably be made into a pellet or cube in addition to the meal as it is now.

It has been pointed out by Greater Marshall Industries officials that inquiries have come in from many drug and feed companies in several states as well as 14 foreign countries, concerning the moss harvest and its products.

It is the goal of Aquatic Controls to build a fleet of 18 harvesters, larger than those being used at the present. With the establishment of a dehydrator and a market, up to 300 people are expected to be employed in all phases of the industry.

If all is successful, the concepts of lake management may be revolutionized. **



The cutter bar levels weeds to a depth of 4½ feet and a series of steel mesh conveyor belts transports the cut vegetation to a hopper.



The load of vegetation is dumped onto a pair of waiting flat barges.

JUST MEN AGAINST FISH

by

CURTIS

CARPENTER

BASSY BELTON had some potent participants churning its waters during the State Bass Tournament April 18-21. Contestants swarmed to Lake Belton in Central Texas from all parts of the state and from all walks of life, like particles of steel drawn to a magnet.

Fishing tournaments have a way of placing people on an equal level. Some may drive fine cars and live in split-level homes complete with swimming pool, but when they enter the tournament, they're just sports fishermen after the big ones. The fish on the bottom pay little attention to the social or economic status of the fishermen tempting from above. Skill, patience, determination and endurance are factors that count, and they obviously prevailed at the record-breaking contest on Lake Belton.

The Waco Tribune, sponsor of the tilt, awarded beautiful trophies this



A picture-plastered window shows State Bass Tourney's history as it's made on Lake Belton.

year. They seem to get bigger and more attractive annually. Many of this year's winners have numerous trophies, from past events. Yet some of the finest fishermen, including a few consistent winners of top Belton prizes, failed to catch enough fish to qualify this time. Wind blew away the chances for a few.

Certainly, contestants in the State Tournament harbor trophy-winning desires, but tournament fishing, like other contests, has more than mantel decorations to offer. It entices with a competitive element, a fight against time, fellowship with others who have a common interest and recognition.

Although fishermen didn't catch as many as they hoped to, the tournament was called the best of them all by Earl Golding, outdoor editor of the *Tribune* and fishermen who have vied in every State Tournament since 1956. This year's battle attracted more contestants than any in the past, with 464 anglers taking part, and more fish were caught than ever before.

It was also evident this year that what once was a tournament of individuals has grown into a contest of bass clubs. Clubs from all over the state sent representatives, and emblems on their shirts made a colorful pattern as they milled during closing ceremonies.

George Raven, Austin, weighed in a 7-pound, ½-ounce bass the first day of qualification and that fish reigned highest through the remaining days and won for Raven the big bass trophy. In total poundage Floyd Mabry, Temple, was second to Raven after the first day of qualification. However, he had landed 18 pounds, 15¾ ounces by the time the tournament ended, to take the individual honors and the trophy that goes with it. Jessie Roe and Don Kyleberg, Austin, won the team title with 21 pounds and 12½ ounces of bass.

Here's the list of winners.

INDIVIDUAL DIVISION

1. Floyd Mabry, Temple, 18-15¾.
2. Ed Winfrey, Troy, 10-9½.
3. Harold Cobb, Waco, 9-9.
4. Ben Henry Mauldin, Dallas, 9-5.
5. George Raven, Austin, 9-5.

6. Jack Starling, San Angelo, 8-11.
7. Jerry Bernard, Austin, 8-5.
8. Jack Connally, Lorena, 8-0.
9. Bob Jung, Waco, 7-10½.
10. Dave Mead, San Antonio, 7-7.

TEAM DIVISION

1. Don Kyleberg and Jesse Roe, Austin, 21-12½.
2. Ed Altum and J. L. Locklin, Belton, 20-7½.
3. Pat Caudle and Buddy Frier-son, Waco, 16-13.
4. Leo Wadley and Harold Hall, Fort Worth, 15-15.
5. Bernard Stracener and Luke Pence, Sweetwater, 14-10.
6. Frank Doherty, Waco, and Dr. Bennie Naylor, Carrollton, 13-6½.
7. D. T. Thrasher and Bob Thrasher, Gatesville, 13-2.
8. John Gerath and Marvin Nixon, Waco, 13-0.
9. Dr. Jack Weinblatt and Jerry Bartek, Temple, 12-13.
10. Walt Jones and Nate Atherton, San Antonio, 12-6.
11. Jack Chandler, Ocee, and Jimmy Earls, Waco, 12-6.
12. Charley Pack and Don Parsons, Waco, 11-5.

BIG-BASS DIVISION

1. George Raven, Austin, 7-0½.
2. Jimmy Findley, Waco, 6-6.
3. Jerry Holmes, San Antonio, 5-6½.
4. Floyd Mabry, Temple, 5-4½.
5. Lauren Johnson, Austin, 4-15½.
6. Everett Bryant, Austin, 4-14.
7. John Gerath, Waco, 4-14.
8. Ed Altum, Belton, 4-13.
9. Jesse Roe, Austin, 4-12½.
10. Charley Pack, Waco, 4-12.

HUSBAND-WIFE DIVISION

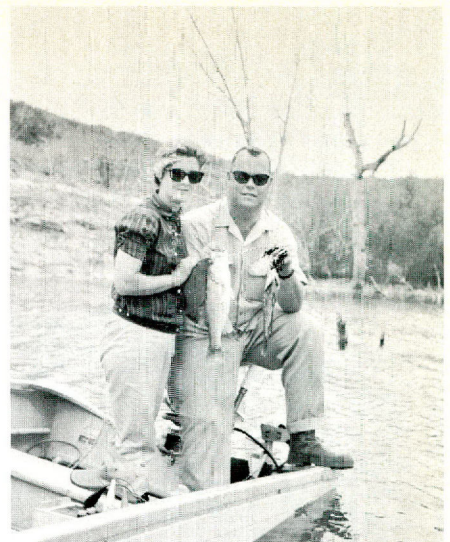
1. Mr. and Mrs. Clarence Lumpkin, Waco, 11-6½.
2. Mr. and Mrs. Douthit Baxley, Waco, 5-13.
3. Mr. and Mrs. Walter Freels, Waco, 5-1.
4. Mr. and Mrs. Buddy Mangold Jr., San Antonio, 4-11½.
5. Mr. and Mrs. Carl Story, San Antonio, 4-5½.

LADIES CHAMPION

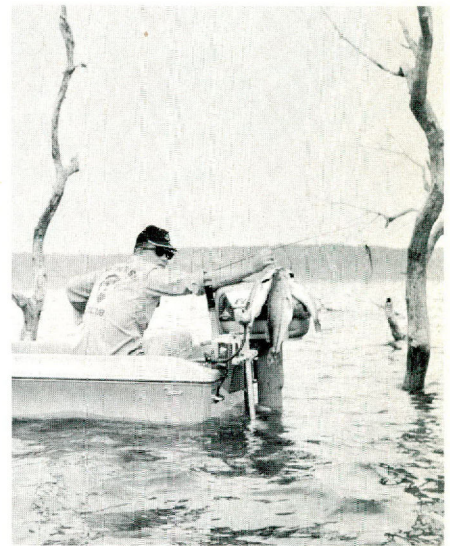
Mrs. Douthit Baxley, Waco.

LADIES BIG-BASS CHAMPION

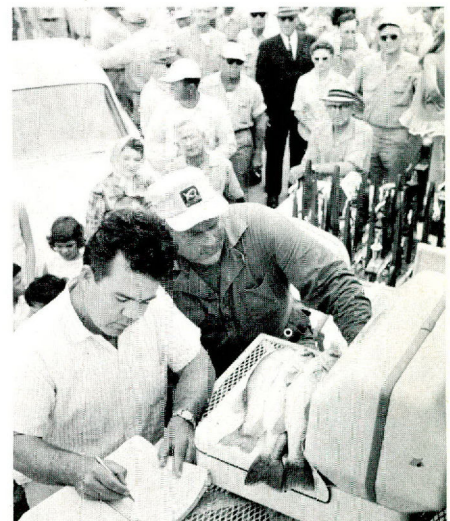
Mrs. Clarence Lumpkin, Waco.**



Mr. and Mrs. Jerry Roberts, Austin, enjoy husband-wife division competition at tourney.

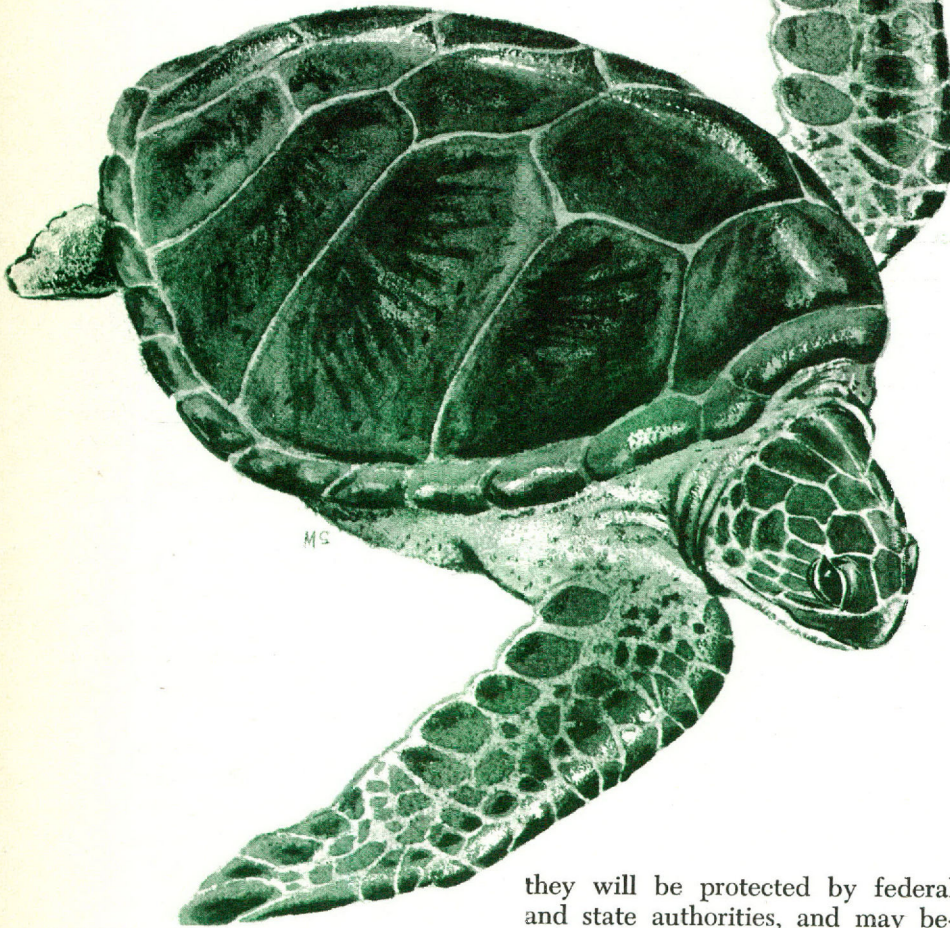


Jesse Roe, Austin, won first team honors with Don Kyleberg and placed in big bass group



Earl Golding, Waco Tribune, records a good catch hauled in by Lem Surghnor of Belton.

WHETHER 330 baby turtles that were released on the Gulf Coast of Padre Island last August, will return there to lay their eggs or find their way back to the black sand beach of Tortuguero, Costa Rica, from whence they came,



will not be known for three years when the young transports reach maturity.

The "green giants of the sea," as they are commonly known were brought to Padre Island by airplane and released by Dr. Henry Hildebrand, marine biologist of The University of Corpus Christi, as an experiment in migration. Hildebrand believes the turtles will return to Padre, but, on the other hand, he says they may find their way back to the place where they were hatched. They were turned loose half-way down Padre—or in the center of the 88-mile-strip that has been set aside for a National Park. If the turtles return there to lay their eggs, where they first entered the sea,

they will be protected by federal and state authorities, and may become as populous as they were several decades ago.

One of the oldest commercial fishing enterprises in the State of Texas was that of capturing the giant green sea turtles. Great herds of thousands swam in Aransas Bay and along the coast of Padre in the 19th Century.

Records show that the canning of turtles was a flourishing industry in Indianola in 1860.

When the cattle drives to Kansas began in the 1870's, packing houses and canneries in the Rockport area were deprived of cheap beef. The canning industry there turned to delicacies from the sea, especially the green turtle. Some turtles were placed on the decks of sailing schooners and carried alive to New York City fish markets.

*Texas hopes
for the*

Return

As in the case of the buffalo, no conservation controls were placed on the commercial organizations which preyed on wildlife for their profits, and the usual inevitable results occurred. The giant turtles were wiped out in this area, and organized fishing for turtles ended here at the turn of the century.

In parts of the Caribbean, the giant green turtle was facing the same fate. The greatest hazard it encountered was the delicacy of its own flesh. The huge, ungainly creature was well enough equipped by nature to survive dangers of the sea since prehistoric times. But it was unable to flee from hungry people and predatory beasts on shore.

A bowl of green-turtle soup is considered the *pièce de resistance* in many formal dinners. The epicure delights in the savory liquid flecked with green fat slicks and thickened with a gelatinous calipee scooped from the turtle's shell.

Many turtle fisheries extract the 10 pounds or so of valuable calipee that a 300-pound turtle yields, and throw

the remainder of the reptile away.

Hungry natives on the Caribbean coasts, however, eat all turtle, even a strip of the shell around the rim. In Panama it is the custom to use the shell as a pot in which to cook the entire creature.

The eggs as well as the flesh are considered a delicacy by protein-hungry inhabitants of the Caribbean coasts. In Central America, the turtle eggs symbolize virility because of the turtle's reputation as an indefatigable lover during his mating season. Believing the eggs to be aphrodisiac, hopeful people in this region will gulp as many as a dozen raw turtle eggs at a meal.

Another danger the turtle faces is the hunger of wild dogs in Costa

The book caught the interest of conservationists. An organization to preserve the endangered giants of the sea was formed and named the Brotherhood of the Green Turtles. In 1959, Dr. Carr's plan for helping the turtle was completed. John Phipps, a philanthropist from Tallahassee, Florida, provided the necessary financial foundation by forming the Caribbean Conservation Corporation which was to underwrite the cost of the project.

Dr. Carr's thinking and planning, briefly, were as follows. First, he recognized the odds against turtles' even hatching, much less surviving to reach the sea. Because of the hazards and depredations created by both hungry men and animals, it

A five-mile strip of beach, the hatching ground of the turtles was given to Dr. Carr by the Costa Rican government for his exclusive use. Conservation measures were put into effect. The government sent groups of riflemen to slaughter hundreds of wild dogs. Rabies among the dogs had broken out and the government, in a drive against the disease, poisoned thousands of the animals over the country.

This not only saved many of the eggs, but also relieved the anxiety of some of Dr. Carr's scientists who were often in danger of attack by wild dog packs on the beach.

Another conservation measure limited the catch of a turtle broker to 1000 turtles per season.

Once the immediate danger of extinction at Tortuguero was overcome, Dr. Carr went to work on the more ambitious phase of his project, that of finding new hatching beaches.

Through years of virtually living with the green turtle, he had discovered that, immediately after hatching, the young turtle makes for the sea, where it will spend most of its life. But when the time comes for it to lay eggs, it unerringly returns to the exact spot at which it first entered the sea.

Dr. Carr, therefore believes that if hatchlings can be released on other beaches when it is time for them to trundle off to the sea for the first time, they will adopt these new beaches as their home bases and return there to lay eggs. If this is true,

of a Seafarer

by CASH ASHER

Rica. Packs of these slaving, voracious beasts seem to know by instinct when a mother turtle has laid her eggs in the warm sand, and they move from jungle towns as much as 50 miles away, to dig the turtle eggs out of the sand.

Such inroads have been made on the turtle population in the Caribbean that in the last few years it has almost vanished except for a last herd which nests in Costa Rica.

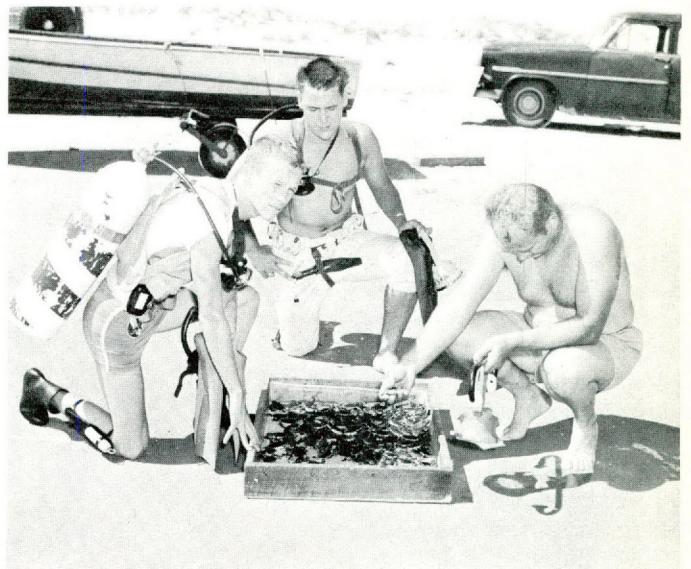
It was at this point of no return that Dr. Archie Carr, herpetologist, became interested in the green turtle's plight and embarked on a plan to rescue the species.

A graduate of the University of Florida and Harvard, Carr has been deeply interested in turtles for many years. On grants from the National Science Foundation, he spent six years hiking over Caribbean beaches, making detailed studies of turtle migrations.

He published the result of his findings in a book, *The Windward Road*, which related his dream of finding new homes for the vanishing turtle.

was estimated by Dr. Carr that out of 500 eggs buried in the sand of Costa Rica by the mother turtle, only one could be expected to survive and grow to maturity and reproduce.

At the frightening rate they were being depleted, the last large green-turtle colony at Tortuguero Beach would soon disappear.



Dr. Hildebrand and helpers find baby turtles in good condition after air trip from Costa Rica.



Infant turtles trundle out to sea as soon as they are freed. Project workers and well wishers will have to wait three years to see if the

transplanted reptiles will return to Padre Island, their adopted home or to their native Tortuguero Beach, Costa Rica, to lay their eggs.

new nesting grounds may be found all around the Caribbean and the Gulf shores.

The turtles that Dr. Henry Hildebrand released on Padre Island are taking part in this experiment. They were flown there directly from Tortuguero. When they arrived, in crates, they had not yet been in the sea.

Dr. Hildebrand with his assistants introduced the young turtles to the warm, white sand of Padre Island. They hope instincts will guide the turtle back there when nesting time comes.

Immediately upon their release, the young turtles moved directly to the surf and quickly swam away, heading out to deep water.

This section of the beach, Dr. Hildebrand believes, will be relatively safe from predators if the turtles return to lay their eggs.

The green turtle would interfere with no resource which is now harvested in the region, and in bays it could feed on turtle grass, which is not at present being cropped by other marine organisms.

Now the turtles are growing in

the sea, but the success of the experiment depends on their choice of nesting grounds—three years hence.

The turtle is one of the most important sources of food that can

be found in the sea. If its former large numbers can be restored and maintained, it will serve as a food source to many thousands of hungry people. **

Student workers want to follow tiny turtles to sea, but they disappear too swiftly.



Shipwrecked

by RICHARD STURDIVANT

TOGETHERNESS" may be the cry of the day, but mine hit an irreparable snag 13 years ago in February. Ever since this snag, my wife has been an armchair sports-woman.

Jerry Willhoit and I had been having a ball for the last few months gigging carp and buffalo. For some reason they had been thick, and it was no trick at all to go out and get 100 pounds in one night. The only trouble was that we were having so much fun that we let our mouths overload us. For some strange reason this ailment has plagued me all my life, but this time it was to set a record.

We had been having it entirely too good for too long, with the women staying at home and keeping the coffee pot boiling for our return. And, usually there was a cake or a batch of cookies fresh out of the oven to go with the coffee for the returning Great White Hunters. Can you just imagine a cold February night, a boat load of fish, a warm house with two beautiful women, a hot pot of coffee and fresh homemade cookies? Well, believe it or not, that had been the pattern for a solid month. But as we enjoyed the coffee and cookies we let too much information drift out between bites. We didn't stop to realize what we were doing, until one night the bomb was dropped—"We are going with you tomorrow night."

Jerry blew coffee all over the table and I choked on a whole oatmeal cookie that I suddenly swallowed.

"But it is so cold out on the river."

"We'll wrap up good. You two sound too enthusiastic."

"But who'll make the coffee?"

"We'll make a pot when we get back."

"The boat is too little for four."



"If it will hold a carload of fish, it will hold us."

"We don't have four life preservers."

"I'll borrow two from Jim."

And so it went for a long, long hour. And as you can guess, the women won.

Jerry and I both knew that if we took them along and they had only half the fun that we did, there would be no more all-male trips. There was only one way out; they must not enjoy it. But how to keep them from it seemed to be a big problem until we remembered that they were both deathly afraid of snakes. This still was no solution, because in the many years that I have spent on the river, I have noted that snakes are actually few and far between, regardless of the tales you hear daily. But we could try anyway. We didn't intend any permanent harm. If they would just let our gigging alone, we would take them camping on the weekends or fishing on Saturdays, but the night was ours.

Dark the following night found us loading the gig and lantern into the 10-foot john boat, and in turn, the john boat into the back of the pickup. It sure did look little and the women sure did look big all wrapped up in their heaviest coats. But, Jerry and I were certain that this was only a temporary thing and we would be back in form the next week. Little did we guess the events of the following hours.

We had gotten together for lunch and outlined our battle plan for the

night. Simply stated, it was to scare the sin out of them about snakes and make them so nervous that they wouldn't want to join us again. So, as we loaded the gear and piled into the pickup, we intentionally forgot the flashlight and occasionally mentioned snakes that we had seen on previous trips. The women told us to hush up about snakes and get on to the river, so we did hush for the time being but drove to a launching spot overgrown with tall weeds.

"Watch for snakes in the weeds when you get out," I said as we bounced to a stop a good 50 feet from the edge of the river.

"Where is the flashlight, you idiot?" my loving wife returned.

"Must have left it at home. Give me a hand with the paddles while Jerry and I unload the boat. We can't light the lantern here because we might set the weeds on fire. Jerry and I will carry the boat and you two can follow in our tracks."

All went halfway smooth for the first couple of yards until Jerry remarked, "I have heard that sometimes snakes let the first people go by and bite the last ones."

When we got the boat to the clear river bank, the women were waiting for us, nervous but game. Betty had the lantern pumped tight and Ruth was going through gopher matches with more determination than she uses on my pockets. By the time that we could slide the little john boat in the water, the women were in and had the lantern on high.

• Continued on Page 30



Author Donald Mitchell enjoys archery because it's "primitive man against savage beast."

IF ANYBODY ever tries to tell you that javelina aren't dangerous, don't listen to him. Let me tell you, instead, about what happened to me on my last deer hunt.

For almost 20 years, we six Dallasites—Jimmie Carroll, Lester Sowell, Perry Moon, Jimmy Susong, George Cullum Jr. and myself—have hunted deer and turkey together in the hill

HUNTING

with a

country of southwest Texas. My five hunting pals are all expert, hand-loading, custom-stocking, scope-shooting gun addicts. When the game's there, they get their limit. I'm the only maverick in the crowd. Hardly know one end of a gun from the other. But I'm just as much of a nut about bows and arrows as the other fellows are about guns. I try to make up in patience and stubbornness what I lack in accuracy.

Seven of us were sitting around a roaring campfire the night before opening day on a 4,000-acre ranch in the Edwards Plateau area near Sonora. Bud Williamson, the ranch manager, had the floor, as the rest of us listened in deferential silence to the veteran of the hill country.

"Wal, now that you ask," drawled Bud, spitting expertly into the middle of the campfire, "there *is* one critter around heah that'll fight you back. Javelina. If you leave them alone, they'll leave you alone. But if you wound one or corner it, he's sure to charge you. And if you hurt one of 'em an' he squeals, you're apt to have the whole dadburned herd comin' at you."

Since I had never seen a wild javelina in my life, I never figured that within 12 hours, I was to prove Bud right on all four counts, with only a 60-pound hunting bow and

some broadhead arrows on my side of the argument.

Sometimes it's dangerous to wish for things. Just that morning, as our loaded station wagon ate up the 300 empty miles between Dallas and Sonora, Jimmie Carroll and I were discussing the hunt.

"Wouldn't it be fun," one of us remarked, "if our lease had some game on it that involved a little danger and excitement? To sort of add zest to the hunt."

That's what triggered the question that evening to Bud Williamson. After our usual first night hunting supper of charcoal-broiled rib-eye steaks, we'd heaped mesquite logs on the outdoor fire and were sitting around it, drinking coffee and mixing fragrant mesquite smoke with the stronger fumes of favorite briar pipes. It was one of those times of good fellowship, contentment and anticipation that don't come very often.

"Yuh see," said Bud, "the wild pigs are not only fast on their feet. They've got tusks an inch long, sharp as a razor, two upper and two lower. They cross over like scissors, an' fit together like a jig-saw puzzle. I've seen 'em rip a hound's stomach out before he knew what hit him. They're mean, vicious, unpredictable and have a strong herd loyalty.

TWANG

by DONALD MITCHELL

"Several years ago," Bud continued, as he relished the respectful attention from city fellers, "when I was ranchin' out near Van Horn, I crawled into a cave one day to get out of a storm. Before I got used to the darkness, I heard this vicious choppin' sound of tusks comin' together, and I realized I had accidentally cornered a herd of javelina in the back end of that cave and they were about to charge me. I tell ya, I came out'n the mouth of that cave like I'd been shot out of the mouth of a cannon.

"Yes sir," Bud concluded, as the fire died down and sleeping bags began to unroll, "a javelina is one animal folks that know better just leave alone, less'n there's a tree handy. Don't think you're apt to see any, though. I haven't seen one around these parts for weeks."

Just before turning in, we consulted the official regulation handbook of the Texas Game and Fish Commission.

"Collared Peccary," it said, "commonly called javelina. Edwards Plateau district: no closed season, bag or possession limit."

Daybreak November 16 is the start of open season in Texas for wild turkey and white-tailed deer. Although some counties have early seasons for bow hunters, I take my

chances during the regular season along with riflemen. I never shoot a doe even when we have permits and have only two bucks to my credit. An archer is not a meat hunter and rarely bags a trophy. To me, a close miss with an arrow at 50 yards is a bigger thrill than a perfect kill with a high-powered telescopic rifle at six times that distance.

The problem of where to go on opening morning is always the subject of a lot of palaver with our bunch. Everyone always has his own theories as to where game is most

apt to be found. Since this was only our second year on the Jones lease, some of our 4,000 acres of hills and valleys, plateau and river beds were still unexplored, adding to the general confusion and indecision.

From alarm clock time at 4:30 a.m. until everyone had finished breakfast, the discussion continued. Just as the brilliant West Texas stars were beginning to surrender to the first gray suggestion of dawn over the low eastern mountains, all hands had made final decisions, announced their plans and rolled off from the



Mitchell has a trophy to prove his unexpected encounter on an Edwards Plateau deer lease.

hunting shack by pairs in two station wagons and an open jeep.

Individual hunting styles in Texas hill country vary as much as personalities. Those with patience or poor feet like to stand or sit motionless in cedar clumps, in Spanish oak thickets, on huge boulders, up tree blinds or atop some rancher's creaking windmill, scanning the woods eagerly for an animal that can travel almost as fast as an arrow and move through dense underbrush as silently as a ghost. Those with more nervous energy, better feet or greater wanderlust to see what's on the other side of the hill usually try to "walk up" their game to get within gun range (about 150 yards) or bow range (about 50 yards) by stalking their quarry.

After dropping off Perry Moon, my hunting partner for the morning, and parking the station wagon, I struck off on foot with just enough light to see the path. The bed of Dry Devil River appealed to me for several reasons. In the first place, a wild turkey roost had been in a clump of large live oaks along its bank the year before, and I wanted to search for any fresh sign there. The meandering course of the river, as it snaked for over three miles across our lease, is also the best bow hunting territory. Its outer banks drop sharply about 12 feet to a rocky bed, which here and there splits in two, leaving islands of flat ground in the middle. Bits of driftwood lodged head-high in the mesquite prove the violence of flash floods from some earlier spring. The whole area is so densely covered with underbrush and so completely overhung with live oak that the effect is quite eerie compared to the open, wind-swept slopes, cedar covered mesas and rocky canyons that compose most of our lease.

It was good to be in the woods again. The light was strong enough that I could shoot now, and I double checked my equipment.

Archers have a check list all their own. Armguard snug; shooting tips tight on the fingers; brush quiver on back; quiver cover off; broadhead hunting arrow properly nocked; four more clipped into the rubber bow quiver for fast shooting; distance be-

tween string and bow handle at least the width of a fist with thumb extended.

That live oak grove ahead looks like the place where those turkeys—"WOOF! Woof. Woof. Woof. Woof. Woof."

A heavy, low black shape crashed into the underbrush. A javelina! The first I'd ever seen outside a zoo. He'd surprised me as much as I had him. It was like the electric shock every hunter knows when his thoughts are on the far away hills and a jack rabbit suddenly explodes, almost from between his legs, looking as big as a fawn.

So Bud was right. Leave them alone and they'll leave you alone. In fact, he had let me alone with a vengeance. He'd panicked and had gone snorting off through the brush with such speed and fright that he made as much noise as a whiteface heifer who's just made the startling discovery that the stump she's been staring at for five minutes is actually an archer in a camouflaged hunting suit.

But aren't javelina supposed to travel in herds? Where were the others? I froze in bow-ready position. My ears strained to pick up every familiar woods sound of my experience. Gradually, I became aware of a strange musty odor. Faintly at first, then more clearly, from all points of the compass, came a rustle of leaves, the snap of a twig, a clatter of rocks. Too clumsy for deer. No sheep or goats were in this area.

Then here and there, through the small openings in the foliage which a bow hunter must train himself to watch, more low black shapes appeared and disappeared. They were all around me and now behind me as well. I'd walked right into the middle of a herd of javelina.

And now came the big decision—one of those choices which all hunters face sooner or later. To shoot or not to shoot? But now, for the first time, something new had been added—the possibility of personal danger.

Up to now, my hunting decisions had all been simple—did I want to try for the game or didn't I? Now suddenly, with an icy feeling in the pit of my stomach, I realized that

there was another decision to be made. The javelina also had a choice. If my arrow scored but didn't kill, did *he* want to try for *me*? Besides the bow, my only other weapon was a hunting knife strapped to my quiver, and no trees or brush within 50 yards were sturdy enough to hold anything more than a couple of squirrels or a ringtail cat.

"Wouldn't it be fun if our lease had some game on it that involved a little danger and excitement?"

Well, here it was, right in my lap. We'd asked for it. What was I going to do about it? Was Bud right in his second statement? *Would* a wounded javelina really charge his tormentor? There was one sure way to find out. Why not? Which is worse—to be foolhardy or to be cowardly?

Perhaps I wouldn't have to decide. Judging from the sounds, most of the herd had now worked by me without spotting me. Maybe I wouldn't get a chance to shoot. I felt relieved.

But suddenly, there he was, one of the rear guard, dead ahead. Sixty-five pounds of wild boar coming out of the brush 30 yards away is quite a sight over the feathers of a hunting arrow. It was an easy shot, but I hadn't counted on the unpredictable way a javelina can wheel and take off.

Even as the back edge of the broadhead touched my left forefinger and I released the string, the javelina took off to the right. The arrow caught him in the right rear hip. To my relief, he continued straight ahead without a sound.

But even as I watched, too slow-witted to think of nocking another arrow, he began a wide 50-foot circle, building up speed for his charge. Here he came, straight at me.

The human mind sometimes works in crazy ways. Even as I stood facing an angry boar that could run twice as fast as I could, I remember wondering why I was no longer as scared as I'd been just before the shot.

How do you side-step a wounded javelina that bounces around as crazily as a bucket of minnows? I decided not to try. With just barely enough time to do it, I jammed the lower limb of the bow into the ground in front of a low outcropping of rock, string toward me, and had just grasped the upper end with both

hands, at arm's length, when the pig struck.

He bounced off to the left and I jumped to the right, spinning around for his next pass. But one had satisfied him. He tore through the woods, grunting with every step, until he plunged into a tunnel through some low thorn bushes. They broke the arrow off. The pig squealed in pain and the whole woods came alive with pigs coming to the rescue.

By then I had jumped into the middle of a waist-high clump of live oak and was standing as still as a statue. The javelina never found me. Gradually, the excitement died down, the squealing stopped and the herd worked off through the brush.

So Bud was right. A wounded javelina will charge. The pigs will also come to the rescue if one of the herd hollers for help. What about his final point—will one also charge if it's cornered? I was soon to find out.

Working back toward the parked station wagon I purposely avoided the river bottom; I'd had enough pig. At this point in its course, the river runs north and south, bordered by mesquite flats. On the west, the flat gives way to a steep, cedar-covered slope that rises abruptly to the Sonora-Del Rio highway. East of the river, the low mesquite is about 100 yards wide, extending to the edge of a long, fallow oat field. Between field and mesquite is a wire, hog-proof stock fence, running north and south to corner with the east-west fence that marks the southern boundary of our lease.

The station wagon was parked just beyond this fence corner, and the corner gate was open. I was just about to remove my leather finger guards when I detected motion through the mesquite leaves. A javelina, separated from the herd, was trotting south on my side of the fence. Just before he got to the open gate, he cut the corner. The south fence stopped him abruptly. He wheeled and spotted me for the first time.

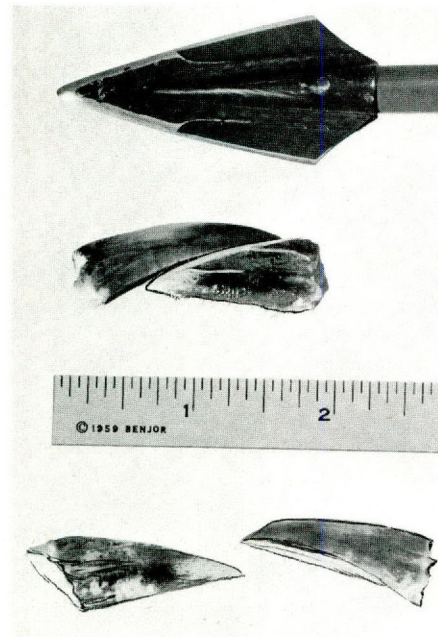
He was cornered, so he thought. Deciding that valor was the better part of discretion, here he came. Once again, no trees were handy, and he was as close to the south

fence as I was and between me and the east fence.

As he came at me in the same peculiar circling rush which the first pig had used, just enough right front shoulder was exposed to make a good target. That's where the arrow took him. His charge went temporarily out of control and this time I had learned my lesson. A second arrow got him through the ribs from the left.

He was dead but too dumb to know it. Here he came again, with both arrows. I'd had enough and arrived at the south fence just two steps in front of him.

Bless those Sutton County ranchers that hog proof their fences and use smooth wire instead of barbed wire on top. My barrel roll was un- gainly but effective. My bow went flying, and I hit the ground on all



A ruler tells the story of tusks and points. The two-inch tusks are hacksawed from jaw.

fours on the far side of the fence just as the javelina lunged into the near side. His tusks chattered viciously against the wire about three feet from my face, and one arrow caught in the fence and broke off. Then he fell back on the other arrow and didn't get up. In 30 seconds, he was dead.

Bud was right again. In fact, I'm convinced that most of the stories about javelina are right, no matter how much they vary. On one hand,

you hear of cowboys so accustomed to javelina herds that they go out on horseback, rope them, throw them into a truck and take them home to fatten them up for eating purposes.

On the other hand, a friend of mine, sitting at the edge of a lake fishing, was once the subject of an unprovoked javelina charge and had to dive into the water to get away. And, a man hunting on a neighboring lease near Sonora was telling us about his recent experience with the animal, also while deer hunting. He wounded a boar, which squealed for help, and he was promptly treed by a herd of about 25. They kept him in the tree as long as the squealing continued, but not until nightfall, as some stories have it.

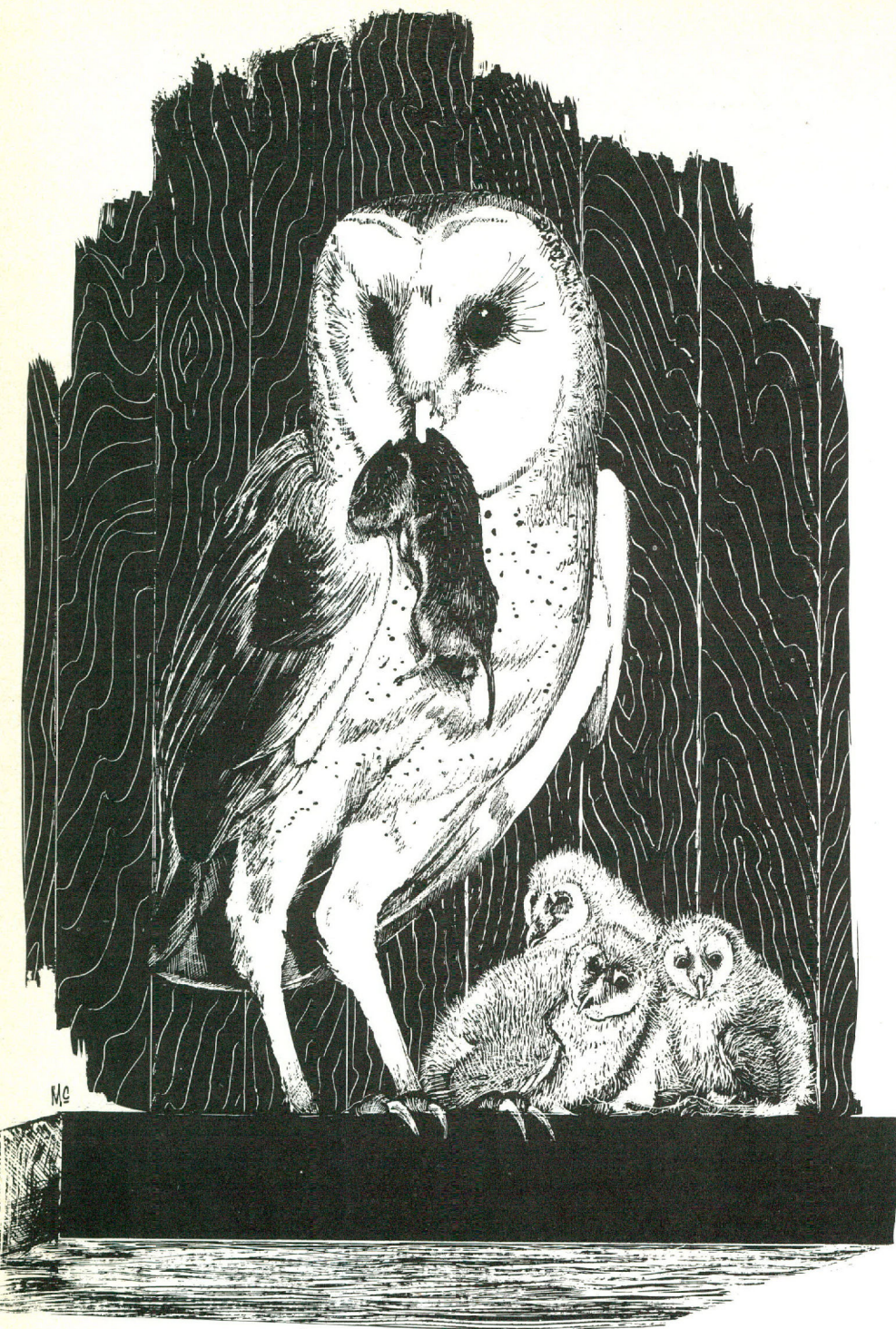
One thing for sure—javelina tusks are murderous weapons. The ones in the boar that chased me over the fence were so strong that large pliers wouldn't budge them. They had to be hacksawed out of the jawbone.

The remainder of our hunt went as usual but a little dull compared to opening morning. The rest of the boys all bagged their deer, as usual. I didn't, as usual. We blanked out on wild turkey, although I still contend my family would have had one for Thanksgiving if my arrow hadn't been deflected by a twig just before it got to a big gobbler that had cost me an hour and a half of patient immobility.

On a final visit to the old turkey roost on Dry Devil River, at Jim's suggestion, his .22 Magnum revolver, which packs enough punch for any pig, nestled comfortably in its scabbard at my side for extra protection. I even shot another javelina, burying an arrow in his side up to the feathers. I don't think he ever saw where it came from. At least he ran away from me this time and collapsed about 100 yards away.

"But it wasn't the same," I reported as I handed Jim back his gun at camp. "Civilization had caught up with me. It was no longer primitive man against savage beast. It was civilized man and his human lightning against a poor dumb creature. The odds weren't even any more."

"Oh yes they were," said Jim as he took his weapon. "You forgot to load it." **



BECAUSE of an ill-mannered digestive habit, by human standards, the barn owl (*Tyto alba*) is a research aid to mammalogy.

Meat of small mammals eaten by the owl is digested in the stomach, but the hair and bones are formed into balls or pellets and regurgitated. Scientists studying small mammals collect these pellets to extract the bones. Sometimes a locality record for rare shrews or mice can be determined from pellets when men cannot trap these mammals. When pellet collections from an area can be made annually, researchers can get an indication of fluctuations in population levels and species abundance of small mammals.

Collecting and processing barn owl pellets is a good science fair or Texas Junior Academy of Science project.

These pellets can be found on the ground below isolated trees, posts, farm machinery or even mounds of soil on the prairie where rats are found. Larger pellet accumulations can be found in owl nests or just outside the nest entrances. These nests are found in large hollow trees, cliff caves, dark corners of church steeples and, most commonly on the rafters and small platforms in old-fashioned barns. Modern barns, or attics of farm houses are seldom used because they are "tight," having no broken boards or holes into which the owl can fly.

An owl nest can be constructed to add interest to the project as well as to make collection easier. A wooden

by AL FLURY
I & E Officer, Region IV

Barn Owls in a

55-gallon barrel can be installed near the ridge pole of a barn and an entrance hole cut into it through the barn wall. A broomstick perch should be strongly braced just below the hole. A partial-light baffle board just inside the entrance hole, allowing room for the owl to pass to one side, would darken the barrel and make it more attractive to the bird. Also, a removable door in the back of the barrel will provide access for observing the young owls and for cleaning their quarters.

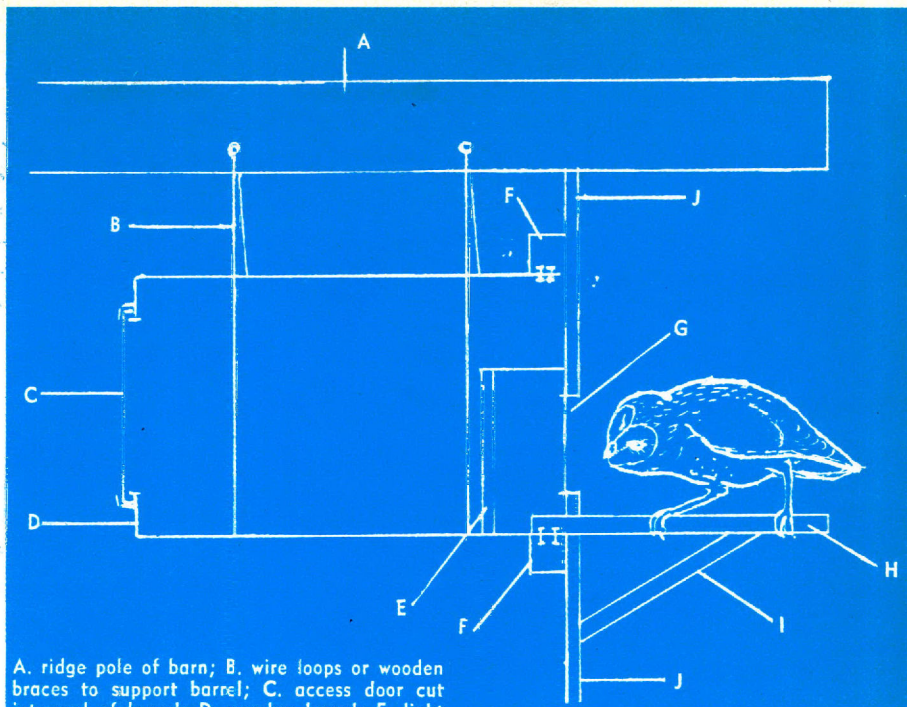
Collections of pellets, bones and remains made from one or more such nests can be developed into a good project. The pellets should be soaked in water, and the hair and dirt should be rinsed away. The remaining bones must be soaked in water and laundry bleach and dried.

Most of the bones, especially skulls and lower jaws, can then be identified by comparison with museum materials and descriptive literature available at larger universities such as The University of Texas and Texas A & M College. This project cannot be done in a few weeks, of course. A year is needed to collect and identify the bones.

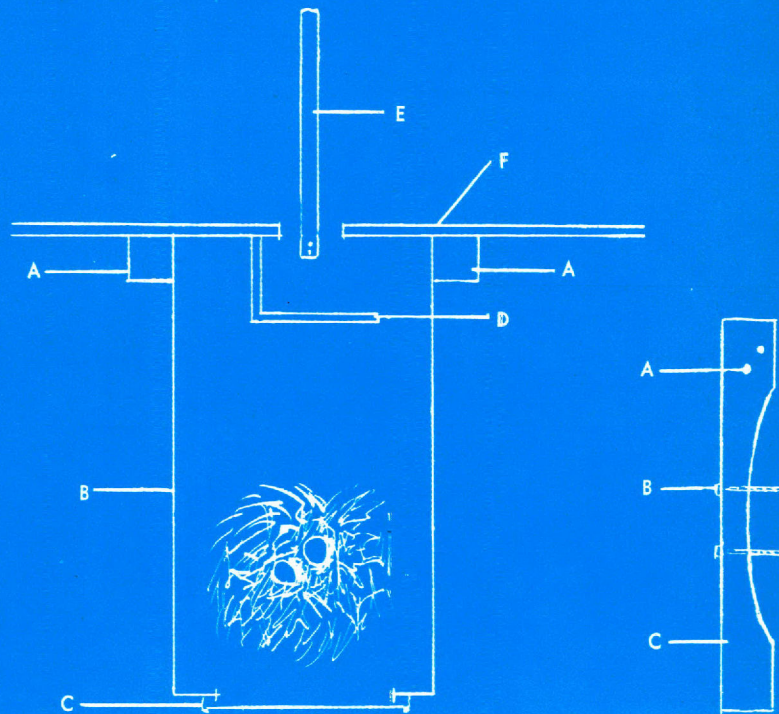
Because of its nocturnal habits, the barn owl is difficult to observe unless its nest is in a conveniently placed structure such as the one just described. It spends nights hunting mice, shrews, gophers and other small animals and daylight hours in the nest.

Besides its aid to research, the barn owl plays an important part in the balance of nature. Without the owl's help in controlling small rodents, the millions of dollars lost annually from rat damage to seeds of important range grasses and cultivated grain crops could easily double. **

Barrel



A. ridge pole of barn; B. wire loops or wooden braces to support barrel; C. access door cut into end of barrel; D. wooden barrel; E. light shield; F. 2"x6" cleats to nail the barrel against inside of barn wall (see lower right drawing); G. entrance hole about 6"x8"; H. perch made of broom stick or a 1"x2" about 2 feet long; I. 45°-1"x2" support brace; J. barn wall.



Left drawing: A. 2"x6" cleats; B. barrel; C. access door; D. light baffle of wood or tin with top 12" to 15" above floor (baffle enclosure should be 8" to 10"); E. perch; F. barn wall.

Right drawing: A. nails to barn; B. bolts to barrel; C. cleat (structure carved for barrel).

FISHIN' is like doing a good deed; if a fellow waits until all circumstances are right, he'll never do it.

Fancy equipment, a day off, perfect weather—if a guy continues to wait for all these since he abandoned the barefoot creek fishing of childhood, he'll never again feel a fish break the surface at his tug. Not in the 20th Century with its endless deadlines and rising living costs.

No, he just has to go whenever and however he can.

The people of Corpus Christi have a good idea. Business men and workers run down to Three Rivers, just outside the city, for an hour or so of fishing—sort of coffee-break style. Such activity demands liberal-

minded employers, who are sometimes hard to muster. But, the principle of drowning worms and tossing lures on a shoestring schedule in any nearby body of water can fit the habits of many busy people.

With summer's long daylight hours, fishing after work, before dark, is not ideal but certainly is possible and enjoyable. Afternoon and twilight minutes can sometimes gross more fish than a greater number of hot mid-day hours. Besides, gazing at a wispy willow reflected in the water makes a working man forget the blunders of secretary and superior, the trauma of leaking radiator and squealing fan belts, or the inconsistencies of the whimsical consumer.

This quickie, non-production type



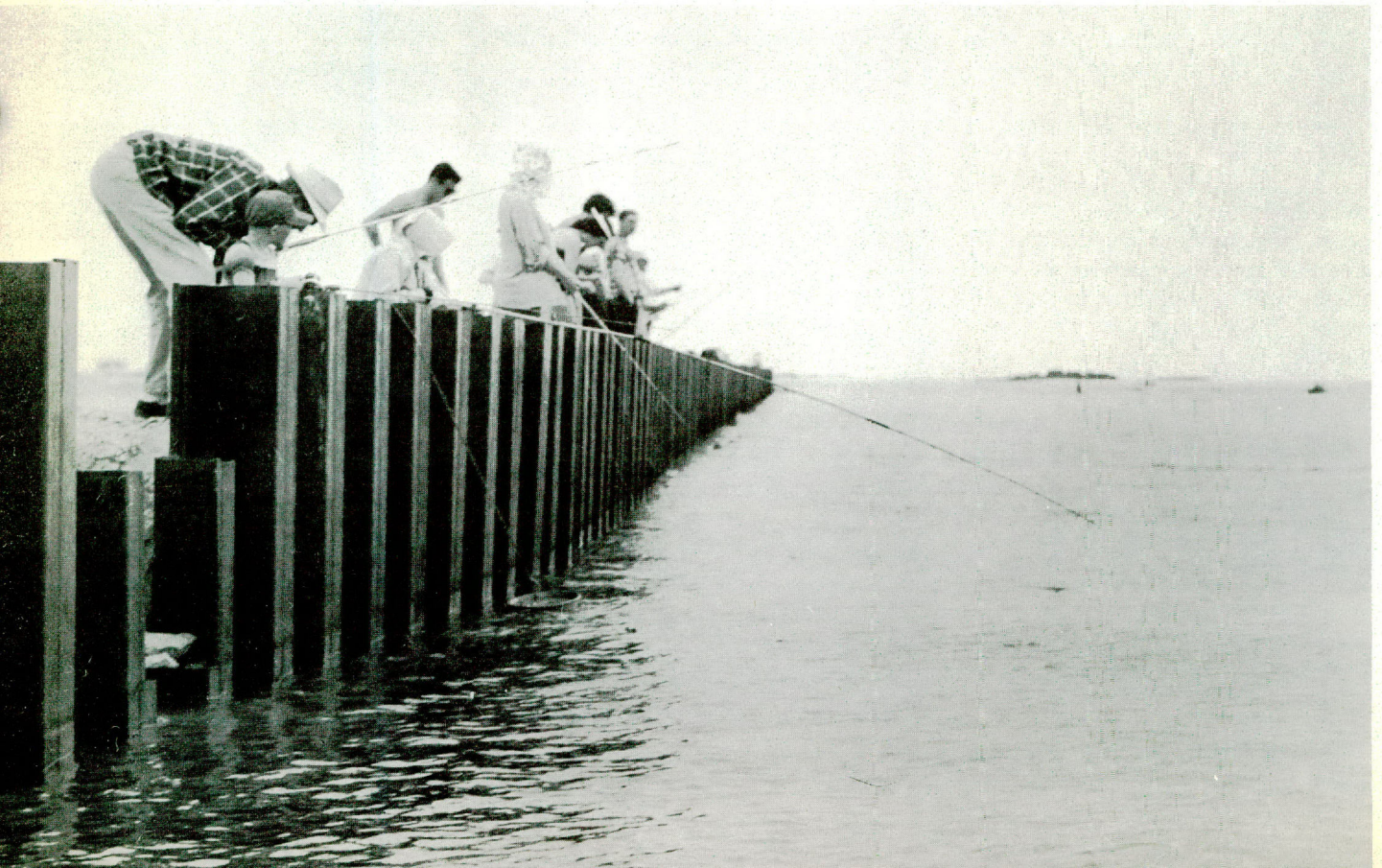
PHOTOS BY STAFF

Away from shorthand pads and typewriters, an 8-to-5 girl can relax in old fishing clothes.

All ages (below) can enjoy quickie fishing.

Procrastination — Thief of Fishing

by ANN STREETMAN



of fishing is good for women, too. A housewife can swing in a few perch and soak up the outdoor freshness between doing the family laundry and baking cookies for a P.-T.A. sale. The cares of soap operas and personal problems ripple away like pieces of moss on the water's surface. A short, unsophisticated retreat to the river banks gives an angling-inclined 8-to-5-gal a chance to wriggle her toes in old sneakers, a comforting rest from pointed-toed spikes.

Once a person has leapt the time barrier, the equipment dilemma can still obstruct fishing fun. But it shouldn't. If a man had to use the spinning reel money for the 13-year-old daughter's dental work, the wife's redecorate-the-kitchen project, or boosted insurance coverage, he can substitute a cane pole (about a dollar) for the long-planned for, but unpurchased rig. A cane pole is certainly not as exciting as a rod and reel, and it won't let an angler dip into those greener patches of water 100 feet from the bank, but it brings in perches swimming by. Occasionally, a pole and minnow combination even attracts a black bass.

This kind of fishing has a hidden

psychological advantage. Sitting on the bank, leisurely tempting piscatorial passers with cane pole and worms is relaxing. It's not like fishing from a boat with intricate and profuse equipment. In a well-equipped situation, a man feels compelled to conscientiously work the water—this cove and that inlet with this spoon and that jig. But, with bank, cane pole fishing, he has the perfect rationalization for being lazy—no means of getting into every crook and corner of the water. He just needs to keep a lively worm on the hook and plop it here and there within a 20-foot radius, occasionally moving down the bank and spotting a good stump or a promising hole near the water's edge.

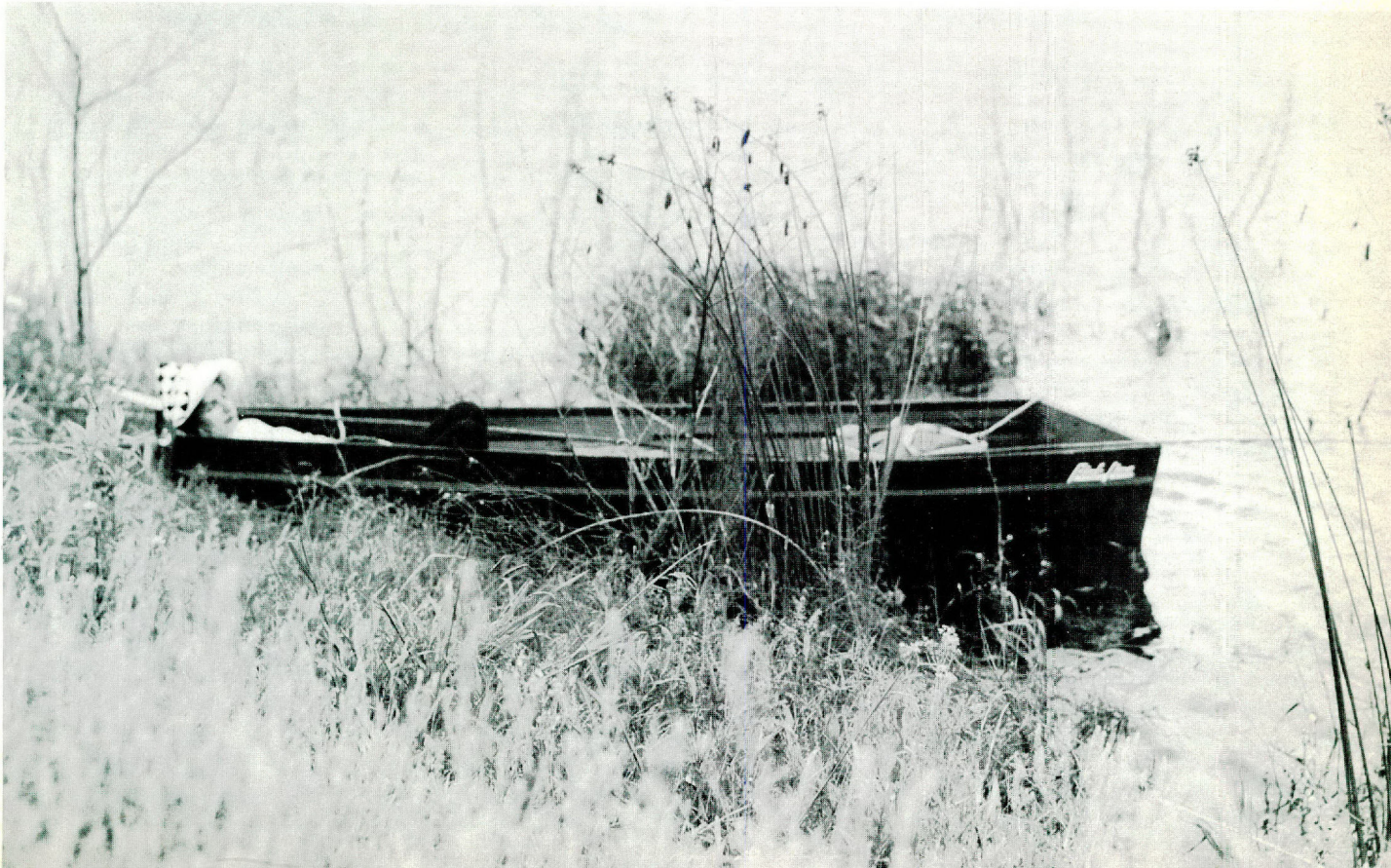
Fishing on short notice along the bank of some nearby pond or stream, however, is not restricted to polers. With a spinning rig, an angler can enjoy some of the rationalization for laziness and make his fellow bank roamers envious of a good bass caught in the middle.

But the secret of the fun is not equipment or lack of it. The secret of this kind of fishing is giving oneself a quick treat with little preparation or paraphernalia instead of saying, "Next week I'll. . . ." **



She can get away from the kitchen but not the kiddo. Both girls, however, enjoy the outing.

This is lazy fishing minus rationalization.



THE TIMBER WOLF in Texas is just about extinct, or completely so, if I am correctly informed. I contributed my share to the crusade against this marauder of our herds. We were after him with our hounds and our steel traps.

By the turn of the preceding century, I was in my late teens, living with my pioneer parents on what even then was a large ranch in Texas. The woods and hills of Blanco County abounded with large wolves, which should not be confused with the coyote, prevalent in South Texas. Incidentally, in recent years coyotes, too, have moved further north. The timber wolf is easily about twice the size of a coyote and compares more accurately with the size of the German police dog, which in fact, it resembles very much.

Every year many of our goats and sheep fell prey to these hungry, bloodthirsty four-legged creatures. No wonder, then, that we declared everlasting war against this foe of the bearers of our wool and mohair. Our traps were set almost the year around. I learned the art—for such it was—of trapping from my older brothers who were widely known as the best wolf trappers in the coun-

try, real experts. I was reasonably successful in outwitting the cunning of our wild enemy.

jump and keeps it up for some time, and if the chain of the trap is tied to something that does not give, as a stick would, the foot is likely to slip out of the trap. In other words, he is liable to jerk loose. However, with a loose stick about three or four inches in diameter and four or five feet in length, chances that the foot will be torn out of the trap are greatly diminished. By the time the wolf gets entangled in the nearest thicket, for which inevitably he heads, he will not give the vehement jerks he did in the beginning; moreover, by this time the trap jaws have cut into the skin or flesh. He then rarely gets loose, as the trap secures a tight grip.

In the summer of 1906, I was home from The University of Texas on vacation. We had heard of wolves having been seen in our neighborhood. Their weird howls also had been heard during the recent nights. Cowboys who rode the range reported having seen many wolf tracks and other signs indicating that the wolves were about, and particularly spoke of one very large track which was about twice the size as that of the ordinary wolf. I got together with my late nephew Hugo Fuchs, who lived in Blanco County where he

the question flashed through our minds—did some cow step into it and drag it off? But our anxiety was shortlived. Not far away, entangled in some underbrush was our wolf—a large one, much larger than he appeared at first glance.

It seemed as though he was hanging in a tree. Apparently, he had tried to rub the trap off his foot and thereby caused the hooks, which were tied on the end of the chain, to get caught on a limb off the ground. The dogs who had been barking lustily, all at once stopped. It seemed as if they sensed some impending calamity. To our amazement, the old wolf raised on his hind legs, gave a loud guttural howl, which was not like the regular wolf howl, but more like a drawn out yowl, similar to a dog baying the moon. His whole body quivered; then he fell on his back, dead as the proverbial “door-nail.” We literally frightened him to death! I can see the whole thing as if it had happened yesterday. Although it occurred more than 50 years ago, it left an indelible impression.

Upon examination, we found the old victim to be little more than bones, hide and hair. His head was

Echoes of a Swan Song

by JUDGE JOHN FUCHS

try, real experts. I was reasonably successful in outwitting the cunning of our wild enemy.

During the days when I still attended the one-room, country school “on the hill,” I set my traps near a trail which led through the woods from home to school. On my way home I would uncover and reset my traps, if needed, and in the morning I would look after them on my way to school. When one of my traps was gone because the wire or stick had broken, I sometimes would not get to school all day. I would get the dogs and follow the wolf.

I want to explain, here, that an experienced trapper never ties his traps to a solid object, such as a tree. When the wild animal first steps into the trap and the jaws of the trap clutch his foot, he gives a terrific

kept a pack of wolf hounds. We saddled our horses and, with our traps, rode off to hunt. We had part of a goat carcass. This we dragged for about a mile. Then we hung it high in a tree—high enough so no animal could reach it, but the scent carried for miles. Along the trail we had made, we set our traps at intervals.

Our motive in this undertaking was not entirely altruistic. We had a very selfish interest. The State and County paid a bounty of five dollars for each wolf scalp; we were after their scalps. That was a heap of money for us boys.

The next morning we were up early, on our way to our traps, our dogs following closely. With stealthy anticipation, we approached the first trap. Our hearts beat faster when we saw it was gone. Momentarily,

gray and his teeth were worn to mere stumps. We were very proud that we finally caught the old leader of the pack for whom trappers and hunters for miles around had unsuccessfully laid so long.

Many times during the past years I have discussed this incident with ranchers, hunters and trappers, but I am yet to hear of a like occurrence. This lack of similar incidents fortifies my conclusion that this old wolf, which had turned gray from the passage of years, simply could not ‘take it’ and a heart attack saved him from further humiliation.

Like all God’s creatures, wolves seem to serve their purpose even though men may not always appreciate them. The wolf, and especially the timber wolf, kept deer from over-

• Continued on Page 29

Squirrel Nut

by HARDY R. FIELDS

I'VE BEGUN to wonder what gives with this squirrel hunting racket. My dear friends sit down in the beanery to imbibe a cup of java and regale me with tales of how they recently sauntered around among the trees and bushes along the banks of Dry Creek or Desolate Gulch and a few hours later returned with a half-dozen fine, fat squirrels.

That of course is a wonderful thing to happen to any man, because it means he can have fried squirrel and gravy or stewed squirrel and dumplings. That's good for just about anybody.

The fact that a man sits down and stuffs himself with squirrel isn't what disturbs me; it's the fact that it is always the other guy who does the stuffing instead of me.

I, too, have gone out and sauntered around in the woods, seeking a mess of squirrels. The big trouble seems to be that they hear my car door close for at least a mile away and then there isn't a squirrel to be seen for the rest of the day.

I've tried sneaking through the woods as quietly as a sheep trying to slip through a pack of wolves. Doesn't do a bit of good. I've tried finding a fine old patriarch of an oak tree and sitting down where I could watch and wait in perfect silence. The only sound I ever hear is other people way off in some other part of the woods dynamiting squirrels right and left. The squirrels in my part of the woods are fast asleep and have no intention of getting up until tomorrow.



A fellow can tolerate disappointment just so long, and then everything turns to wormwood and gall. The time finally arrives when he hates his fellow hunters and has hopes of a catastrophe happening to those who are harvesting all the squirrels. It's not fair that some should go into the woods and merely stand around while the squirrels gang up and try to chase them home, when I and other poor unfortunates of my ilk try diligently to follow every rule in the book and see nothing but crows and jay birds. Is it any wonder that tranquilizers were discovered?

It has always seemed very strange that I can drive through city parks and see squirrels gamboling on the green, chasing each other up and down the trees and acting the dunce in general, but let me get out where I can put a stop to such foolishness and nary a squirrel is to be seen. Does the fact that I am out in the woods get my eyes out of focus?

Only recently I betook myself to the woods and found a glorious area

of oak and pecan trees. In perfect silence I hovered about, but not a sound did I hear. Finally, after long exasperating minutes, I eased out my squirrel call and started barking. The result? A sleepy-looking character crept up. In his left hand he toted an old-time Stevens' scope-mounted single shot, which I immediately wanted to steal from him. He had the temerity to ask me if I had heard a squirrel barking. I replied that I had not. I didn't lie to the man; it was me barking on that miserable fake. You know what that mercenary so-and-so did? He lifted up his right hand and pointed. He exclaimed that he could see the squirrel, whereupon, he raised that Stevens rifle and shot it dead. Boy! That took the rag off the bush. There I was standing around like a pig with his head caught in the gate and calling up squirrels for others to shoot.

That should settle the squirrel hunting business at our house, but no, because nut that I am, I'm going again in the morning.

The Shell Story

by BETTY ALLEN

SHE SELLS sea shells by the seashore" may be to you just a tongue-twister from your childhood, but it's a serious business with me. I have been in the "shell game" for more than six years now, and I'm no longer surprised when people are shocked at my temerity in expecting to making a *living* by selling shells.

Actually, I was an avid shell collector for a number of years before we opened our first shell shop, and it is to my love of shells and my slowly growing knowledge of conchology that I give credit for the success we have enjoyed in our commercial venture.*

Many people think that the bulk of our stock is gleaned from the beaches of South Padre Island. In fact, a number of people have asked me, in all seriousness, if we use a lantern and pick up shells at night to have something to sell the next day! Would that it were so simple (and so inexpensive)! The fact is that we get many of our shells and most of our coral from the Philippine Islands. The constant struggle of trying to get what we want, avoiding what we don't want and having to order everything almost a year in advance would make the ordering for the ordinary type of shop seem like a snap.

Of course the Philippines are not our only source although the greatest variety of shells comes from that area. About once a year we get shells from the Mediterranean Sea via Italy, and generally twice a year we get a shipment from Japan—mostly the "baking dish" and "nut cup" shells plus some of the rarer collector's items. In addition, we buy many of the Gulf of Mexico shells from the shrimping fleet and commercial collectors who use deep water dredges.

The shell selling business has many facets. Many people buy a shell or two as a souvenir of the visit to the coast, and others buy pretty shells

or coral to use as decorations for a room divider or coffee table.

Many others collect shells just for the joy of owning them. There are almost as many kinds of collectors as kinds of shells. One person wants only shells of a certain area; another wants only a certain family of shells. Some collect bivalves, such as clams or oysters; others are interested in the univalves, such as snails and conchs. Then there is the really rabid collector—and I fall into that category—who greedily wants at least one of every kind of shell in the world! And, since there are almost 100,000 species of shells known, we really have a job ahead of us.

Another facet of the shell business is shell craft—"big business" also. Shell craft is the art of decorating with shells or making jewelry or ornaments out of shells; the possibilities are endless.

Shell jewelry is, of course, the biggest and fastest selling line. Necklaces, earrings, pins, bracelets, rings, sweater guards, cuff links, bola ties, tie tacks, etc., etc., are made of natural shells, dyed shells, cut shells, polished shells and all possible combinations of them—sometimes plain and sometimes ornamented with pearls and rhinestones. We also use claws from the little mantis shrimp (called *Squilla* claws), shark teeth and cat's eyes (the "trap doors" of a type of shell from the South Pacific).

Pictures and wall plaques can be made in a wide variety of styles. Some combine natural shells, sea fan and coral, with perhaps a sea horse or sea star to make underwater scenes. Beautiful bouquets of flowers made from dyed or cut shells are the subjects of many widely admired pictures, and others are designed simply as color studies—arrangements utilizing several shades of one color or several blending colors.

But shell flowers don't have to be in pictures to be lovely. Many blos-

soms such as roses, dogwood, carnations, gardenia, lily of the valley and pansies lend themselves beautifully to duplication in shells, and a bouquet of them in a pretty vase is a joy to make and a most attractive room accessory.

Decorating with shells or flowers made of shells is another field of shell craft with almost unlimited possibilities. We joke among ourselves that we decorate anything that will hold still long enough and warn each other that we'd better keep moving or we'll end up with a tasteful spray of shell flowers glued to us before we know what happened! But outside of fellow-workers, there are many things that may easily be decorated with shells—ash trays, pin trays, jewel boxes, vases, lamps, table place mats, hats, purses, bread baskets, magazine baskets and waste baskets to say nothing of picture frames, mirrors and room divider screens.

It seems a simple thing to accumulate the materials for a shell craft project in a shop such as ours, but I often wonder if the woman who is purchasing the articles realizes how many hundreds of people are dependent on her for their living—how many hundreds of man-hours of work have already gone into the objects that she buys so carelessly.

Shell craft is a world-wide business and the products of many countries and the skills of many men are needed to stock the shell craft department. Little black and white zebra shells come from the West Indies; flower cup shells are gathered from the beaches of the Philippine Islands; the iridescent kelp shell travels from Australia; the lovely Venetian pearl, from the Mediterranean. Tiny baby cup shells not much bigger than the head of a kitchen match are picked up by whole families of children in Puerto Rico.

The coloring of shells is another

*The Shop of the Seven Seas, Port Isabel

phase of the production. It is not particularly difficult to dye a shell but to get it dyed evenly and to achieve the exact shade of a color on demand is something else again. The production of some 35 shades and colors in shells and fish scales requires some very particular machinery and so there are several companies in the United States that specialize in the coloring of shells for the craft. So many dyed shells are used in this country that at least five companies—employing a half dozen to a dozen men each—are engaged in the business along with thousands of dollars worth of machinery.

Still another phase of the fascinating "shell game" is the cutting of shells. Using a diamond saw and infinite skill, the shell cutter produces a bewildering array of cuts from a hundred different kinds of shells. There are half cuts, double cuts, basket cuts and lily cuts as well as angle ends, plain ends, slices and lips. As many as 25 different cuts can be made from one type of shell. Many shells that are cut so intricately are only a quarter of an inch long.

It doesn't seem possible, does it, that so many people can be involved in a pair of earrings or a shell picture? But in many countries of the world little children spend most of their time scouring the beaches for the shells that they can sell. Many women supplement the family income with shells that they find in the coral reefs, and many men make their livelihood by diving for or trapping shells. But gathering shells is not the end of the story. Hundreds of people are employed on a year-round basis in packing sheds of shell exporting companies of the world.

Common, inexpensive or very strong shells are shipped in heavy burlap bags, each holding from 50 to 90 kilos—which would be from 100 to almost 200 pounds apiece. More expensive or more fragile shells and coral of all kinds are individually wrapped in newspapers and packed in crates well protected by wood shavings. Specimen shells are also individually wrapped and carefully packed in small cardboard boxes.

A few of the very common shells from Japan are sold by the kilo but

most of them are sold on the basis of "so much for each" even though they come packed in boxes of 500 or 1,000 each individually wrapped and well protected against breakage with excelsior. Shell exporters in Japan, unlike those of the Philippines, tend to be specialists and deal only in one or two kinds of shells. Some companies handle only the "baking dish" shells. Others deal in the mother-of-pearl shells, leaving to still other companies the sale of specimen shells. I know of at least 10 Japanese companies engaged exclusively in the export of shells and there are probably as many more—all with a working force that contributes much to the economy of the country.

Shells from Italy are never carefully wrapped. They are packed in crates or burlap bags and are tumbled in any way. Evidently the higher wage scale in Italy (compared to that of Japan or the Philippines) precludes the luxury of individual packing, or the shells would be priced out of the market just by the labor costs of packing them. So far as I know, only two companies in Italy are exporting shells to the U.S. although there may be others that I haven't heard of.

There are, of course, firms that

deal in the closely allied products such as the red jewelry coral and carved cameo shells, and these add still more workers to our rapidly growing list of people dependent on shells for a living.

The list lengthens as we add the stevedores who load the ships, the crew members of the ships that transport the shells across the Atlantic or the Pacific, the longshoremen who unload the crates and bags in this country, the brokers and importers who warehouse much of the shipment, the railroad and freight truck employees who move the merchandise to manufacturing plants, wholesale dealers and retail shops such as ours in every part of the country.

When, at last, the raw or colored or cut shells reach us, all that remains is the labor that we and *our* employees expend on them as the raw shells are cleaned and processed and the others are packaged, priced and displayed for the ultimate customer. I often wonder if the customer would value that little ten-cent package of shells more highly if she realized that, quite likely, 60 to 70 pairs of hands had been instrumental in moving them from their point of origin to the little bag she holds in her hand. **

With skilled hands, assorted shells become an arrangement.





Developed forest roads allow Texans to see enchanting sylvan scenes.

IN THESE TIMES of fast-moving traffic and the enormous interstate highway construction programs, we seldom read in the papers or hear on the radio about the forest roads that twist their way through the National Forests of East Texas. Only a few people have had the good fortune to see these roads.

To understand the significance of forest roads, one must know something about the "multiple use" programs of the United States Forest Service, administrator of the National Forests. It is for this program that forest roads are constructed.

When this century was still young, Gifford Pinchot and several other far-sighted men recognized the need for a way to conserve our replaceable natural resources. Pinchot's concept was that the forests be administered for the greatest good to the greatest number in the long run. This principle has been used in Texas since the National Forests were created in 1936.

The Multiple Use Law of June 12, 1960 did not change the management procedures of the National Forests, but it merely ensured the continuation of effective procedures which have been used in the past.

The Multiple Use Law specifies that resources of the National Forests can and must provide for the millions of people to whom the National Forests belong. The "multiple use" program of the Texas National Forests gives the framework within which to correlate these resources

with the demands of the public.

In Texas, there are four National Forests including Sabine in Shelby, Sabine and San Augustine counties; Angelina in Nacogdoches, San Augustine, Jasper and Angelina counties; Davy Crockett in Houston and Trinity counties and Sam Houston in Walker, Montgomery and San Jacinto counties. The purpose of these four forests is to protect, grow and harvest the timber crop; to protect watersheds to prevent erosion and increase ground water intake;

to preserve and develop public recreation areas; to encourage restoration and provide suitable habitat for fish and wildlife.

For these resources to be used and properly managed, the forest must be made accessible. Stands of sawlog timber that were once inaccessible can now be managed and marketed properly because of the forest roads. In the early days of the U. S. Forest Service, these stands of timber were in constant danger of the monster of all monsters—forest fire. Regardless



A woods road lets city dwellers replace the stifle of smog with the fragrance of pine.

Pathways

by R. L. SMELSER JR.
Forest Service



Wildlife management is now possible in previously inaccessible areas.

of how diligently and endlessly the Forest Service labored to control forest fire, a truly efficient job could not be done. Many times the fire could not be reached quickly enough. But, forest roads enable firefighters to get to the fire swiftly, resulting in a tremendous saving of timber, wildlife and other resources.

Wildlife and range management can be administered in areas that were once inaccessible. This management is a prime benefit to the growing number of hunting enthusi-

asts who can get away only for a day or two. Almost anyone can drive down a forest road to his favorite hunting spot, test his hunting or fishing skill and be back in the comfort of his home before night. This is all possible because of forest roads.

Recreation areas are located at the end of forest roads that meander over rolling hills and through large tracks of improved timber stands. Without these roads, there would be no recreation areas where they were meant to be, far back in the forest,

for very few people today have the physical stamina required to hike into one of these areas carrying a pack full of camping supplies. Forest roads give admission to these areas without any physical discomfort and in the shortest possible time. Most important of all, one can "get away from it all" into the beautiful and inspiring naturalness of the forest.

One of the primary objectives of multiple use is to protect the soil and water resources of the forest. Timber and its wastes filter the rainfall runoff so that when it enters a stream it is clean and clear. This filtration action keeps the soil where it belongs, not where it would float down a stream. Roads are kept away from live streams whenever possible. The cut and fill banks are vegetated with various grasses and plants to keep the soil where it is.

Forest roads in these isolated areas create varied problems in their location, design and construction. These problems only accelerate the interest of Forest Service engineers. Surveying and designing these roads requires a special kind of engineering know-how to produce the most economical road that blends into the natural surroundings of the forest.

When traveling along a forest road, a person never sees an unending line of billboards and business establishments. Instead, he is traveling along a road flanked by large sawlog stands and dense pulpwood stands, intermingled with wild flowers and natural shrubs of all kinds. **



Firefighters can rush to trouble spots on forest roads, saving much timber and wildlife.

GUNS



... and Shooting

By L. A. WILKE

AT THE BEGINNING of World War II, the Army Ordnance found that a short 30-caliber rifle would be a more effective fighting weapon than a .45-caliber automatic pistol in most types of combat. Accordingly, one was developed by Winchester, which found favor not only among military personnel but civilians.

At the end of the war, a few were

"liberated" by returning soldiers, but Uncle Sam was fairly careful not to let them get out too freely. But it was a neat appearing, popular little weapon, and the demand for it kept growing. Independent gun shops began acquiring component parts and putting the gun together.

This demand for the gun was so heavy, shops around the country began making them on wholesale basis, and today they can be bought over the counter and from newspaper and magazine ads without difficulty. But the holdback has been the unavailability of ammunition. Only reloads were to be had, except perhaps a few million rounds that were slipped out of various military installations and bootlegged, sometimes at rather high prices.

Now, 20 years later, Winchester has decided it is about time that the cartridge be loaded commercially. Whether this will be good or

This Month: **New Handgun**

These ballistics put it in the general category of the .25-20 and the .32-20, with a slightly heavier bullet, but not much more effective killing qualities.

There are those who think Winchester might have done better to develop this little carbine to carry the new .22-magnum cartridge. Except for its lighter bullet, it is just as good a killer on predators and varmints. None of them should be used on deer, not ever.

Remington also made its contribution to something new, with a .221 Remington Fireball cartridge and a freakish looking pistol to go with it. Remington says it is a hot hand-gun cartridge combination. It is an answer to long range pistol shooters for varmint guns.

The grip and stock are one-piece model Du Pont zytel. Because this material maintains stability, barrel bedding is completely uniform, very



essential to accurate shooting, especially when the barrel gets hot. But since this is a single-shot, the barrel probably never will get too hot.

It is a bolt-action pistol, which can be adapted to either right or left-handed shooting. The gun has a ventilated rib and is tapped for scope sights. The barrel length is 10½ inches, with an over-all length of 16¾ inches.

The new fireball cartridge has a 50-grain jacketed bullet that leaves the muzzle at 2650 fs and 780 fp energy. At 100 yards it has 2200 vfs and 535 pounds of energy. The mid-range is one inch. **

Game Bird Eggs

BOBWHITE QUAIL EGGS
12 Cents Each

CHINESE RING NECK PHEASANT EGGS
20 Cents Each

Minimum Order \$5.00

Postage Prepaid

Please Mail Check With Order

Keechi

QUAIL & PHEASANT FARM

Telephone Number DA 2-4770

Route #2

BUFFALO, TEXAS

DEER HUNTERS—

For first time ever the C. T. White Ranch in McCulloch Co. is accepting reservations at \$100 per gun for the entire season only on an exclusive pasture basis. Have pastures accommodating as few as five hunters and as many as fourteen. No meals, lodging or camping facilities provided but campsites are numerous and many are on running water well stocked with fish. Contemplate Commission setting same limit in 1963 as in 1962 which was three deer with at least one being antlerless. Prefer hunters inspect before making reservations. Call—

FRED WULFF

at LY 7-2330 or write P. O. Box 1270
BRADY, TEXAS

for information and appointments.

bad depends a lot on the sensible use of them. Despite the popularity of the little .30-caliber cartridge, it definitely is not a hunting gun except for varmint and predator shooting.

The new cartridge will have a 110-grain jacketed hollow-point bullet. It will leave the muzzle at 1980 foot seconds, with a muzzle energy of 960 foot pounds. At 100 yards the vfc drops to 1540 and the fp to 580. The mid-range at 100 yards is 1.4 inches.



Region I—San Angelo

ANOTHER LOAD of saltwater game fish has been placed in Redbluff Reservoir on the Pecos River. Since 1961, 409 redbfish, 50 flounder, 74 speckled trout and 490 golden croaker have been stocked in Redbluff. Growth of all species has been exceptionally fast. Redfish weigh six to seven pounds and flounder weigh more than four pounds.

Grass fires on management areas in the Texas Panhandle cost the Game and Fish Commission an estimated \$6,845 this year. Fires starting on adjoining property destroyed two and one-half miles of fence on the Gene Howe Management Area near Canadian, and destroyed four and three-fourths miles of fence on the Matador Wildlife Management Area near Paducah. On both areas five and one-half sections of grass were destroyed. Records show that burns, such as these, increase growth of quail food plants as much as 15 per cent with a corresponding reduction in grasses.

Region II—Waco

WILD SQUIRREL in Region II, as a game species, seem to be holding a high position in spite of the fact that squirrel hunting apparently is not as popular in Region II as it is in some parts of the state. In Region II, to protect the pecan industry, there is no closed season on squirrels, except in Shackelford County. In the Possum Kingdom counties and McLennan and Coryell counties, there is a bag limit of 10 per day and a possession limit of 20 squirrels, except in Brown County, where there is no bag or possession limit. The Edwards Plateau district includes some very fine pecan timber and as a result has no bag or possession limit. The season never closes in the Edwards Plateau district.

In the non-regulatory authority counties, most of the seasons are similar to the others, except Shackelford County, which operates under a squirrel law with an open season during the months of May, June, July, October, November and December, and a bag limit of 10 per day and 20 in possession. Coleman County has no closed season on squirrels but has a bag limit of 10 and a possession limit of 20. The following counties have no closed season and no bag limit: Cooke, Throckmorton, Callahan, Real, Lampasas, Eastland.

Region IV—La Porte

GAME AND FISH Commission marine biologists from Galveston Bay to Port Isabel are continually netting, seining and trawling for samples to study fishery conditions and trends in the bays.

Many trout, redbfish, flounder, drum and croaker

taken are measured, tagged and released. When these fish are caught, the fisherman should return the tag along with the length, weight, date and location of the capture of the fish to Game and Fish Commission, Rockport, Texas. He will receive in return four saltwater lures, free, donated by Texas tackle manufacturers.

The information gained from these fish tags helps biologists determine movements, growth rates and population densities of Texas' most important bay fish. Only through fishery management, based on such research, can fishermen expect more fish in their ice boxes.

Region V—Rockport

AT HEADQUARTERS, Region V, a good example of inter-agency, inter-regional cooperation occurred. The Game and Fish Commission boat "STAR-GAZER" had been loaned to the Marine Institute of The University of Texas for the last two years. Having no further use for her, they returned her to the Rockport headquarters. There she was pulled out of the water, overhauled, scraped and painted. As soon as she could be returned to the water she was taken to Region IV and loaned to the Department of Health who will outfit her as a floating laboratory to check pollution in the Galveston Bay Area.

Coastal fisheries biologists of Region V are still searching for the answer to a mystery which turned up last February in Redfish Bay in the form of a stained shrimp. In movement and growth studies, shrimp are injected with green dye which collects in the gill area making them quite distinctive. Biologists chart the place and time of release and plot the places the shrimp are taken, usually by a commercial shrimper. A small reward is paid for the return of stained shrimp and reports pour in for a week or two, and occasional shrimp with green gills are reported for as long as two months. By this time the shrimp are huge and far away from the point of release.

But the mystery is that the last shrimp stained (June 1962) were released not far from the Redfish Bay capture site of this shrimp caught in February. It was just about the same size as the shrimp used in the staining program. This would indicate, if it is one of those stained last June, that it hadn't moved very far and that it had grown very little, if any.

That summer is going full blast is evident to the staff in the Rockport headquarters. Thousands of visitors from every state in the union and from many foreign countries pour through the lobby of the marine laboratory to look at the aquaria and the displays. **

What Others Are Doing

by JOAN PEARSALL

DON'T SPARE THE HOT ROD: Juveniles in South Dakota who run afoul of the law are liable to end up with a much heightened respect for it. One tried to kill an owl, which is protected there. He was remanded to custody of his parents, made to surrender his gun for 60 days, was prohibited from obtaining a hunting license for 30 days and required to pass an identification test on state birds and animals. Another two youths, arrested for night rabbit hunting, were ordered not to hunt for six months, had to be home by 9:30 p.m. each night, and were not allowed to drive a car for three months.

ALL DONE BY MIRRORS: Here is how the Dutch are preventing deer and other wildlife from meeting death on the highways. Two small (10 x 10 cm.) metal mirrors are mounted on a slender post, and these posts are set across from each other on highway shoulders. As cars approach at night, their lights strike the mirrors and reflect the light into the forest at a 90-degree angle. At a distance of 10 meters the lit-up area is 10 by 10 meters. When the deer get such a flash of light in their eyes they freeze, and the accident is prevented.

BEARS HONOR: The black bear (*Ursus Americanus*) has become the official state mammal of New Mexico. Some of the interesting reasons for this choice were as follows: the prominence of Smokey and his mate, Goldie, both New Mexico black bears; the reverence that Indians have for this animal and the fact that the N. M. Dept. of Game and Fish identifies its vehicles with the black bear's head on its insignia. No other state has the black bear as its official mammal.

DETERGENT DETERRENT: The Maryland Water Pollution Control Commission recently adopted rigid regulations to prevent laundries and car-washing businesses from flushing untreated detergents into streams and septic tanks. The new regulations, which will become effective next Jan. 1, will require many businesses to install special filtering plants. No discharge will be allowed into streams unless treated to a minimum standard established by the Commission.

FAVORED FOWLS: The bald eagle, of course, is the bird symbol for the U.S. Other countries' national birds include: Denmark, the skylark; Belgium, the kestrel (sparrow hawk); Germany, the white stork; Great Britain, the robin; Burma, the Burmese peafowl; Japan, the green pheasant; and India, the Indian peafowl.

BELOVED BACHELOR: Mr. Magoo, the celebrated mongoose of the Duluth, Minnesota Zoo, has received a full pardon from the Secretary of the Interior. The animal was donated to the zoo by a merchant seaman last November and was threatened with deportation to India under a law that bars mongooses. Magoo's deportation was stayed until May 1 by popular demand and has now been extended indefinitely. The Dept. of the Interior explained that the potential dangers of a mongoose population in the U.S. do warrant concern because the animal is a rapid breeder with no natural enemies in this country and could be a major danger to the poultry industry, ground-living wildlife and birds. However, because Mr. Magoo is a bachelor, he can stay but the rest of his species will have to stay out.



with NEW

AQUATHOL PLUS

Here's a remarkable new addition to our line of aquatic weed killers. When used as directed it is...

- NOT HARMFUL TO FISH, fowl or aquatic animal life.
- EASY AND NON HAZARDOUS to apply in liquid or granular form.
- FREE OF TOXIC BUILD-UP... leaves water usable for recreation.
- EFFECTIVE AND FAST ACTING for spot or complete lake treatment.

Mail coupon for helpful brochure on aquatic weed identification control.



PENNSALT CHEMICALS CORPORATION

Department TG
P. O. Box 153, Bryan, Texas

Please send me your Aquathol folder. I'm interested in treating:

Pond Lake Dock or Beach Area
Approximate size of area to be treated

Name.....

Address.....

City..... Zone..... State.....

Texas

Tackle Talk

by CURTIS CARPENTER

I'M CONVINCED that a good straw hat is about the only tackle box a fisherman needs. I have three spacious, handled containers in which all sorts of fancy, flashy, colored lures and other doodads are kept. But—when I get down to fishing, I usually take out a handful of choice artificials which seem appropriate for the day and the lake, hook them in my old straw hat and get with it. The tackle box is carried along, but seldom is it popped open for a change of lures. The assortment flopping noisily about in the straw hat usually suffices.

As a matter of fact—I'm pretty well convinced that the reason many fishermen fail to catch plenty of fish during the day is because they spend most of their time changing baits.

Not too long ago, a tournament

was held on Granite Shoals Lake. Conditions for fishing in the event were that each fisherman could use only one brand of lure, a Smithwick Pacer, and could have in the boat with him just three colors of this brand. In other words, he could fish with only three artificial baits. Tackle boxes were left at home.

It turned out to be one of the most successful tournaments ever held on that lake. The wind came

up during the day and hampered fishing, but even at that some nice strings of bass were weighed in before the day ended. **

Wolves play a part in nature's balance.

Echoes of a Swan Song — From Page 20
populating the wild. What the wolf did then has been supplanted in part by the action of the Texas Game and Fish Commission in permitting every hunting season the shooting of a limited number of does.

Today when I roam in the woods of Texas I can still hear the Swan Song of the ancient timber wolf which re-echoes in my memories. **

FOR BIG BASS—

Yes Sir, Lead Head Worms! Available solid colors: Red, Black, Blue or Purple. ¼ or ½ oz. SPECIAL OFFER: 1 Regular Model, 1 Weed Guard Model and 1 extra worm All for only \$1.00 Postpaid and Tax Paid. Specify size, color.

LOMO LURES

BOX 392

RICHARDSON, TEXAS

Bait Dealers and Fishermen:

Premium quality Gray Crickets \$7.50 per thousand, 500 for \$5.00 prepaid—guaranteed live delivery.

JIMINI CRICKET SALES

230 Westgate Dr.

CORPUS CHRISTI, TEXAS

Greatest advancement in fishing craft safety and utility . . .



THE BIMBO FISH-'R'-FUN

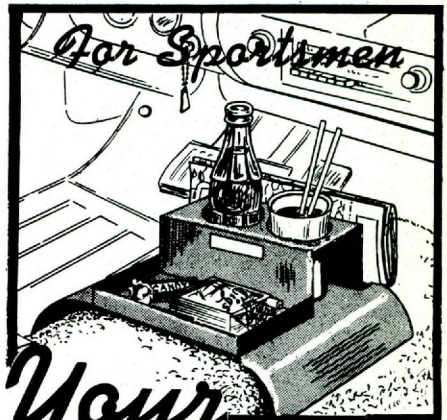
The revolutionary Bimbo Fish-'R'-Fun's non-sinkable, non-tip flotation and design features let you stand anywhere . . . go virtually anywhere SAFELY! Here at last is a superb craft designed, developed and built especially for fishermen—and their families—who appreciate and want the ultimate in fishing craft.

The incomparable Bimbo Fish-'R'-Fun combines its revolutionary safety features with custom hand-crafting of finest quality fibreglas, plus these unique and exclusive features: built-in seats, front and side; molded knee-wells beside front seats to help you bring in the big ones; corrugated safety-deck; spacious unobstructed work area that is far greater

than ordinary 16' boats; whisper-quiet performance; unequalled maneuverability with up to 15 HP motor. Other specifications: modified catamaran, 12', 63" beam, 4" draw, under 200 lbs. Order your Bimbo Fish-'R'-Fun today. You will find it a craft that will provide a lifetime of pleasure and pride of ownership you've never experienced. Sensibly priced at \$395 at San Antonio. Unconditionally guaranteed. Immediate delivery.

For information on other Bimbo built boats—The Yachtmate, Aqua-Skooter and El Pescador—Write for free descriptive folder.

Loop Builders, 1526T S.W. Military Dr., San Antonio, Texas



Your CARTENDER

HOLDS: CUPS, GLASSES, MAPS,
CIGARETTES

This handy "Cartender" will hold many items safely for you while travelling including a full size Kleenex container. Attractive finish. Silver, tan, gold or red.

\$2.98

plus 6c sales tax
35c mailing fee

Kaufman's

100 S. Flores

San Antonio, Texas

Please send me:

"Cartenders" at \$2.98 each, plus 6c sales tax and 35c mailing fee.

Color _____

Name _____

Address _____

City, State _____

The lantern was knocked overboard.
Shipwrecked ————— *From Page 11*

Jerry had first turn at the gig while I sat in the stern and sculled us noiselessly through the open water toward the reed patches. Not a fish was in sight. But at every clump of reeds, we would caution each other to watch out for those "things." (The word, "snake," was forbidden by now.) Finally, Jerry saw a frog and got him through the head. Lifeless, he was thrown in the bilge and we continued to look for carp.

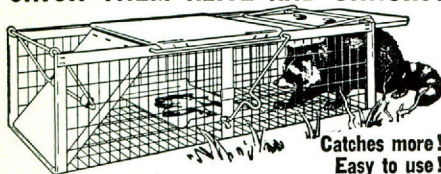
Suddenly the air was pierced with the ear splitting high screech of

"Snake!" The boat keeled far over as both women jumped up on the the seats. The lantern was knocked overboard from its perch on the front seat and the night was as dark as my financial outlook. Eyes accustomed to the light could only see black with big purple spots floating around in the emptiness. But, the feel of the boat let me know in an instant that all wasn't over. Water had come in over the side and in this water something was flopping. We had talked so much to scare the girls that we believed it ourselves, and it sure was a heck of a feeling to be completely blinded, with the boat in immediate danger of capsizing, and someone yelling "Cottonmouth" at the top of lung power. I have never seen any boat go so fast with paddles only, but I believe that we would have given the Harvard racing team a hard battle that night as we headed for shore. Thank goodness, a partial moon silhouetted the tops of the willows, or we might have sped into the Gulf of Mexico before we stopped.

We hit the bank and piled out, climbing on one another as we came. Later, the girls said that they could remember no such gallantry as ladies first, and frankly, neither could I.

But I do remember seeing, when the truck lights beamed into the bottom of the boat—a flopping, bloody frog. **

CATCH THEM ALIVE AND UNHURT!

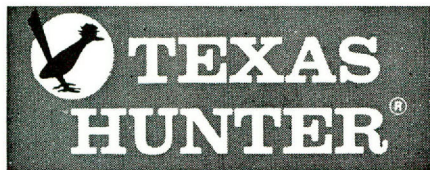


**Catches more!
 Easy to use!**

Amazing HAVAHART trap captures raiding rats, rabbits, squirrels, skunks, pigeons, sparrows, etc. Takes mink, coons without injury. Straying pets, poultry released unhurt. Easy to use—open ends give animal confidence. No jaws or springs to break. Galvanized. Sizes for all needs. FREE illustrated practical guide with trapping secrets.

HAVAHART, 149-G Water Street, Ossining, N. Y.

Please send me FREE new 48-page guide and price list. Name _____ Address _____



For Safety and Comfort!



DELUXE SWIVEL "HIGH CHAIR"

Silent, 360° turn. Framework is all-metal construction. Wide base spread for extra safety. Side arm rests. Front safety bar may be used as gunrest. Available on 10- or 15-ft. stand. Shipped knocked down.



◀ ECONOMY SWIVEL "HIGH CHAIR"

Full turning. Seat can be mounted on 10- or 15-ft. stand.



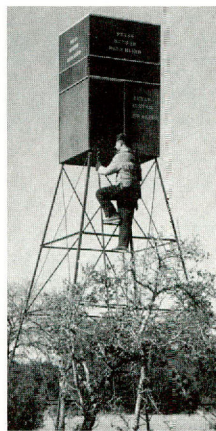
THE FEED-ALL

5-gallon, rust-resistant feeder dispenses dry grains and pellets. Only one moving part. Pat. No. 2,972,334.



SWIVEL ARM CHAIR

Aluminum and wood chair is extra strong, comfortable and roomy.



ENCLOSED DEER BLIND

Shooting ports on four sides have bypassing glass sections and panels in divided channels of extruded aluminum. Blind may be used on the ground or on our Texas Hunter all-steel 10- or 15-ft. towers. Shipped knocked down in easy-to-handle packages. Simple to assemble.

CORRECTION

It is illegal to net freshwater game fish. In the March issue of this magazine, page 6, the author of "Dam Fishing" quoted a fisherman as saying, "Want some more?" after the fisherman had scooped up some crappie with a dip net in the swift water below Marble Falls Dam. The staff, as well as the writer and fisherman, do not condone netting crappie with any kind of net, unless it has been caught by a legal hook and line method. Then, of course, it can be landed with a dip net. The only legal methods for catching crappie are listed in the law book, and this does not include the use of any kind of net. This probably was just a jest on the part of the fisherman, to show the author how saturated with crappie the water was at that point.

• GUDEBROD • GUDEBROD • GUDEBROD •

INSTANT STRIKE RESPONSE!



No Stretch Fine Diameter

606 G-STRING

Super Smooth Waterproof



Gudebrod Bros. Silk Co., Inc., Phila. 7, Pa.

Discount on quantity purchases. For descriptive brochure and price list write

BRADEN WIRE & METAL PRODUCTS, INC.

P. O. BOX 5087 • SAN ANTONIO, TEXAS

Outdoor Books



GROWING WINGS, written and illustrated by Sarita Van Vleck. Published by Doubleday and Company, Inc., Garden City, New York, 128 pages, \$3.95.

Reading this book on the life cycle of birds, one is awed by the careful details of nature that provide for the daily living of the individuals and survival of each species. The surging of body harmones coupled with changes of season urge groups of birds to migrate to nesting grounds, assuming the perennial responsibilities of family life. A detailed, progressive defense of a chosen territory protects a male's rights and allows him to further spring courtship and husbanding. Ritualistic displays of brilliant feathers and suggestive stances bridge the gap between male and female. All these details intricately entwine in the individual and corporate lives of birds to ensure the continuing presence of avian species.

And, all these details are well presented by a person deft with the drawing pencil as well as clever with a composing pen.

"There are almost as many types of auditory lures as there are forms of birds. Songbirds have evolved elaborate songs which, in some instances, may compensate for small size or drab coloring. . . .

"The Common Nighthawk comes out in late twilight and swoops silently through the darkening sky, marking off the buggy stillness with an emphatic *beet* uttered every four or five seconds. When he becomes almost invisible in the darkness, he mounts the sky a hundred feet above ground, hovers there, then plunges earthward, coming out of the dive ten feet above ground with a booming *croon* that can be heard half a mile distant."

Miss Van Vleck's tasteful humor breaks through in delightful style in the passages on courtship and mating. Her descriptions of facts of avian life are humorous yet reliable and unoffensive.

The short chapter on eggs, alone, is worth the reading time of the book. It is filled with fascinating detail of the formation of an egg, which occurs in an assembly line fashion.

"The egg is twenty-four hours in the making after it leaves the ovary. Following fertilization the yolk begins its descent to the cloaca. For three hours it passes by glands that coat it with albumin, or egg white. The yolk is then protected against future shocks by the albumin cushion. For the next hour and a quarter this mass trav-

els past the membrane glands where it is neatly encased in the two membranes that line the shell of a hard-boiled egg. Finally the shapeless egg enters the shell gland through which it moves in eighteen hours, receiving liquid shell and the color pigments. The shell hardens as the egg passes, large end first, to the outside. . . ."

Growing Wings is a collection of facts treated in light but not profane manner that is a pleasure to read and a useful reference. The main point of contention is that the author includes no bibliography

and the reader cannot distinguish, in many cases, accounts of her observation from fruits of other kinds of research.

—Ann Streetman

Oven-Brown Trout, Ummm!

THE HUNGRY SPORTSMAN'S FISH & GAME COOKBOOK

More Than 400 Recipes \$1.00 Postpaid
Fish, Big Game, Small Game, Wildfowl, Turtles, Frogs, Mushrooms, Etc.

EDDIE MEIER
Box 3030—Scottsdale, Ariz.

BOBWHITE QUAIL Booking Orders Now



- Mature Quail90c
- 6-8 Weeks Old50c
- Started Chicks, 4-5 Weeks40c
- 2 Weeks Old30c

MINIMUM ORDERS:

- Chicks50
- Mature Quail20

J. C. COX

1412 Norman St., Ft. Worth 6, Texas

Orders Taken by Telephone After 6 P. M.

Telephone: MArket 6-7843

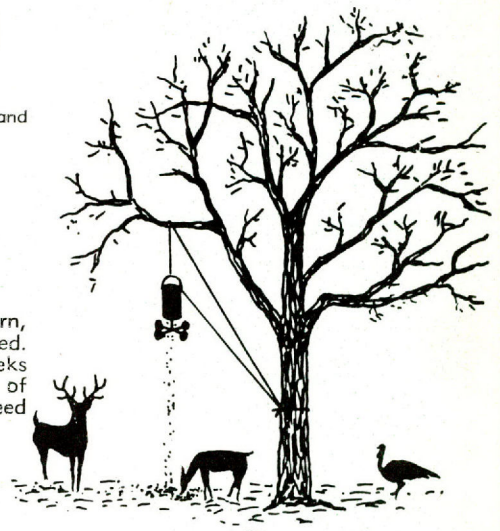
Deer - Turkey - Quail HUNTERS

Why spend endless hours in the cold and rain unnecessarily

Use a FRENCH'S FEED-A-LURE FEEDER

and be sure of your game. Use corn, maize and oats. It's wind-activated. One filling will last up to five weeks average. Holds approx. 32 lbs. of grain. Help preserve your game. Feed the year 'round. **\$8.95 F.O.B.**

817 W. Norwood
San Antonio 12, Texas
DEALERS WANTED



HERE IT IS

TEXAS GAME AND FISH Magazine

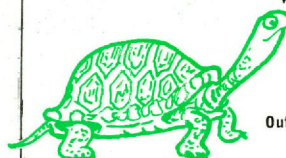
Walton State Bldg., Austin 14, Texas

\$5.10 for 5 years*

\$3.06 for 2 years*

\$2.04 for 1 year*

*2% Texas Sales Tax Has Been Added.
Out-of-State subscribers exempt from Texas sales tax.



Name _____

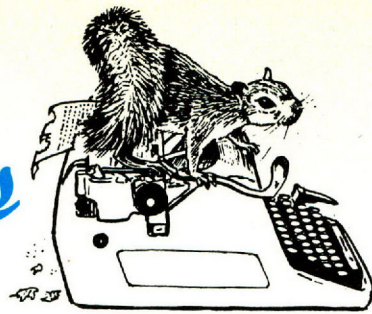
Street or Box _____

City _____ Zone _____ State _____

New Renewal

Allow Six Weeks for Delivery
Don't Forget the Tax!

Letters

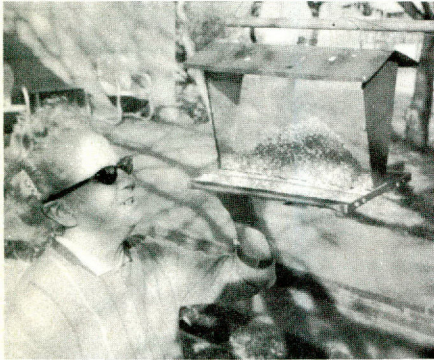


to the Editor

Wily Redwing

Editor:

When I retired, we fixed up a nice home on Lake Brownwood and I built the bird feeder in the enclosed picture out of scrap metal and glass to attract the birds to our



place. We have found the red-winged black bird to be of higher intelligence.

One test is to hang a quarter slice of bread to a nearby small tree limb on a string about eight to 10 inches long. The redwing will perch on the limb, reach down as far as possible, about three inches, pull up the string with his bill and clamp it with his foot. After about three such pulls he will have the bread up on the limb where he can eat it.

Walter W. Watson
Brownwood

(Thanks for sharing this fascinating hobby with our readers.—Editor.)

West Texans, Arise

Hey, you guys:

You are producing a fine magazine. The coverage of the Gulf Coast, the South and the East is great. We have visited and enjoyed these areas. However, my wife and I spend most of our time right here in West Texas, so we would like to see more coverage of outdoor events and animals of our area. Sure, the bulk of Texas' population lies to the East of us, as well as some of the more spectacular concentrations of wildlife; but the Pecos, and Trans-Pecos Texas have a number of readers and a great deal of interesting flora and fauna.

Very few areas of the nation can compare with the Texas coast in the variety and number of wintering birds. Fine. We like to know about it. But what about the little known fact that tremendous numbers of waterfowl winter on the Pecos?

That narrow, twisting, salty stream is winter home to thousands of the most popular types of puddle ducks and a few old divers.

Tell us why the middle Pecos, although constant and dependable in flow, supports very few game fish. Is it due to pollution? If so, is it man-made, or caused by the mineral salts from the watershed? Has there been a study to determine what might be done to improve this river as game fish habitat? What is the present status of the redfish that were planted in Red Bluff and Imperial reservoirs? Have they been able to spawn?

How about some more bragging on the Big Bend National Park? The Bend is a sort of intersection and overlapping of several ecological provinces and as a result, contains great variety of flora and fauna. . . .

Don't forget the Davis Mountains. We have seen antelope from Mexico to Canada, but the largest buck, with the most massive horns, was seen a few miles west of Ft. Davis. Like the Big Bend, the Davis Mountains are extremely wealthy in their variety of plants and animals.

We realize that, compared to most of

the rest of the State, we are short on fisheries. However, a certain retired rancher of our acquaintance makes regular trips to the canyons of the Rio Grande and returns with some truly large catfish. He has taken flatheads of more than 80 pounds from these waters.

Information concerning conservation measures in our area is conspicuous by its absence. We have heard some about the antelope management program, fish stocking and rough fish killing; but we are sure that our conservation officers and biologists have more irons in the fire.

How about a real, sure-'nuff, West Texas issue?

Harrell and Margaret Efurd
McCamey

(There's no denying that we are guilty on some counts. Just for a few specifics, see January 1962 issue for answers to your questions about the Pecos River's condition and Imperial Reservoir transplant project; May 1963 brought the Red Bluff and Imperial reservoirs projects up to date. Thanks for your comments and suggestions. We'll keep them in mind in planning future issues.—Editor)

Bass Club Keeps Its Trophy



Editor:

I have been subscribing to *Texas Game and Fish* magazine for about 15 years, and I have found it to be of terrific interest from the standpoint that the articles pertain to local places that most of us are familiar with.

I am enclosing a snapshot of the boys with the Alamo Bass Club, which we formed here in San Antonio last May.

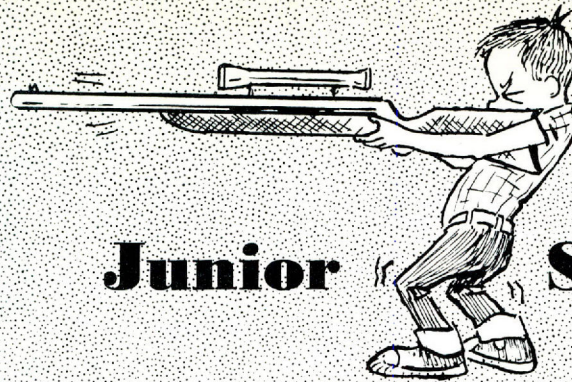
We recently held a tournament with the Austin Bass Club on Granite Shoals Lake; we have a trophy that is called the Texas Bass Club challenge trophy, which is spon-

sored by the Alamo Bass Club. We retained the trophy by defeating the Austin Club in the above tournament.

I might add that most of the boys in the club take *Texas Game and Fish* magazine and sure enjoy reading the fine fishing stories contained within it.

Al Pancoast Jr.
President
Alamo Bass Club
San Antonio

(Long live the rivalry for your challenge trophy!—Editor)



Junior Sportsmen

Hunting Requirements

by ANN STREETMAN

SEVERAL Junior Sportsmen recently have been disappointed when they received letters from the magazine office, stating that pictures and letters describing their hunting feats could not be printed.

The rejection of this material is the result of a new policy: *Texas Game and Fish* will run hunting letters and pictures only of those Junior Sportsmen who are 12 or more years old. It is the staff's belief that youngsters should be trained in hunting skills and safety and have a certain degree of maturity before they go into the field as huntsmen. This restriction on ages for hunting reports does not ensure that youngsters publicized have had proper training, but we believe it is more reasonable to assume that a 12-year-old has had more experience in handling himself and

his gun than an 8- or 10-year-old. We believe youngsters who have not had the benefit of long training and maturity should be discouraged from hunting on their own with firearms. Of course, letters and stories about fishing and other outdoor experiences from all ages will be welcomed.

The magazine will work on the positive side of the hunting situation by running articles which instill an appreciation for wildlife as well as instruct in woodslore and hunting skills. It is in this aim that excerpts from an article, "Outdoor Lore," are carried on this page and that plans are made for such reprints and articles in future issues. The article on this page is the last in a series, *The Hunting Ethic* by John Madson and Ed Koziacky.

Outdoor Lore

THE HUNTER is the sum of his outdoor knowledge and how he applies it. His sport is fullest when he owns a large personal fund of outdoor lore—an intimate knowledge of plants, animals, water, soil and the effects of each upon the others.

The young hunter's most important task is to increase his first-hand knowledge of nature through careful study and personal observation. Every race of hunters has known this and has schooled its youngsters to observe, learn, think and apply knowledge as they acquired it, in order to cement that knowledge. The American Indians trained their hunters from babyhood, and although an Indian hunter's great skill was bound up with magic and mysticism, it was solidly based on his own immense fund of practical outdoor lore.

The best of such knowledge is the hunter's own, earned by himself. Some may be gained by formal education, but the printed page of a book is no substitute for personal field experience and keen observation of the printed page of nature.

Fine woodsmen and hunters have three things in common: alert minds, sharp

powers of observation, and years of outdoor experience. . . .

Today's young hunters can't often begin in the deep forests or broad prairies that trained such men. But even in the suburbs there are insects, birds, trees and weather to study. Keen observation of the available outdoors, plus good books, can build a solid foundation of nature lore.

Two recent publications, "The Study of Birds Made Simple" and "The Study of Trees Made Simple," by Doubleday & Company, New York, are excellent beginners' guides at \$1.45 each. Ernest Thompson Seton's "Lives of Game Animals" and "Two Little Savages" are classics, packed with information for hunters of any age. From trees, birds and animals, you'll want to go on to reptiles, fish, amphibians, flowers and rocks. There are scores of inexpensive handbooks about such things, and all are highly useful. Try not to depend on books alone, however. Whenever possible, link them with personal field observation.

Deciphering animal signs such as tracks, buck rubs, scats, dens, kills, and feeding activities is a fascinating study and can add immeasurably to the success of your hunting trip. Animal signs tell an absorbing study if you have learned to read them.

Hunting, and especially stalking, is a

demanding and effective outdoor teacher. It is a discipline that enforces outdoor training. Wild game is sharply attuned to any differences in the immediate environment, and the young hunter quickly gains a vast new respect for the ability of a hunted squirrel, crow or rabbit to cope with its enemies and use its own outdoor lore to the fullest. . . .

Gobs of Gobblers



Editor:

I am enclosing a picture of my brother and me. We were hunting turkey near Canadian in the Panhandle. The two big turkeys weighed 20 pounds each and the smaller one weighed 11 pounds. The beards of the large ones were nine inches long.

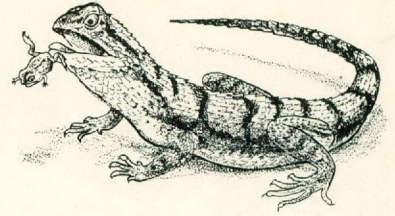
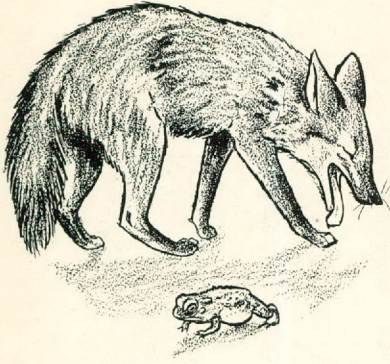
When we were in the blind, there were about 20 hens and 10 gobblers walking by. It was a great thrill. By the way, I shot one of the 20-pounders. This was the first turkey I had ever shot.

I enjoy reading *Texas Game and Fish* very much.

Dave White
Canyon

(Thanks for sharing your hunting thrills with other readers. Best of luck in future hunting.—Editor)

TOAD TOXIN



The giant toad, *Bufo marinus*, is of incalculable value as a roach and beetle exterminator. Nature realizes its worth and has provided it with a safeguard of poison against hungry predators. Even toads just out of tadpolehood are equipped with this noxious substance. A lump behind either eye secretes poisonous mucus when the toad is

handled or injured. Smaller warty glands scattered over the toad's skin supplement the secretion. Both man and beast suffer burning pain if the juice touches the eyes or mouth, and smaller beasts may die if any is swallowed. A hungry aggressor, young or dumb, which bites a toad is afflicted with temporary paralysis. Seldom is a

second lesson needed. Two canny woodland animals, the skunk and raccoon, dine on toads without difficulty. The skunk rolls it until the supply of poison is exhausted. A coon scrubs away all trace of taint with water. Other toads and amphibians are armed with poisonous secretions, but the giant toad's chemical defense is the most toxic.