

DOCUMENTS DEPARTMENT

SEP 19 1962

Texas Game and Fish

AUGUST 1962

20 CENTS



M. S. GOVAN

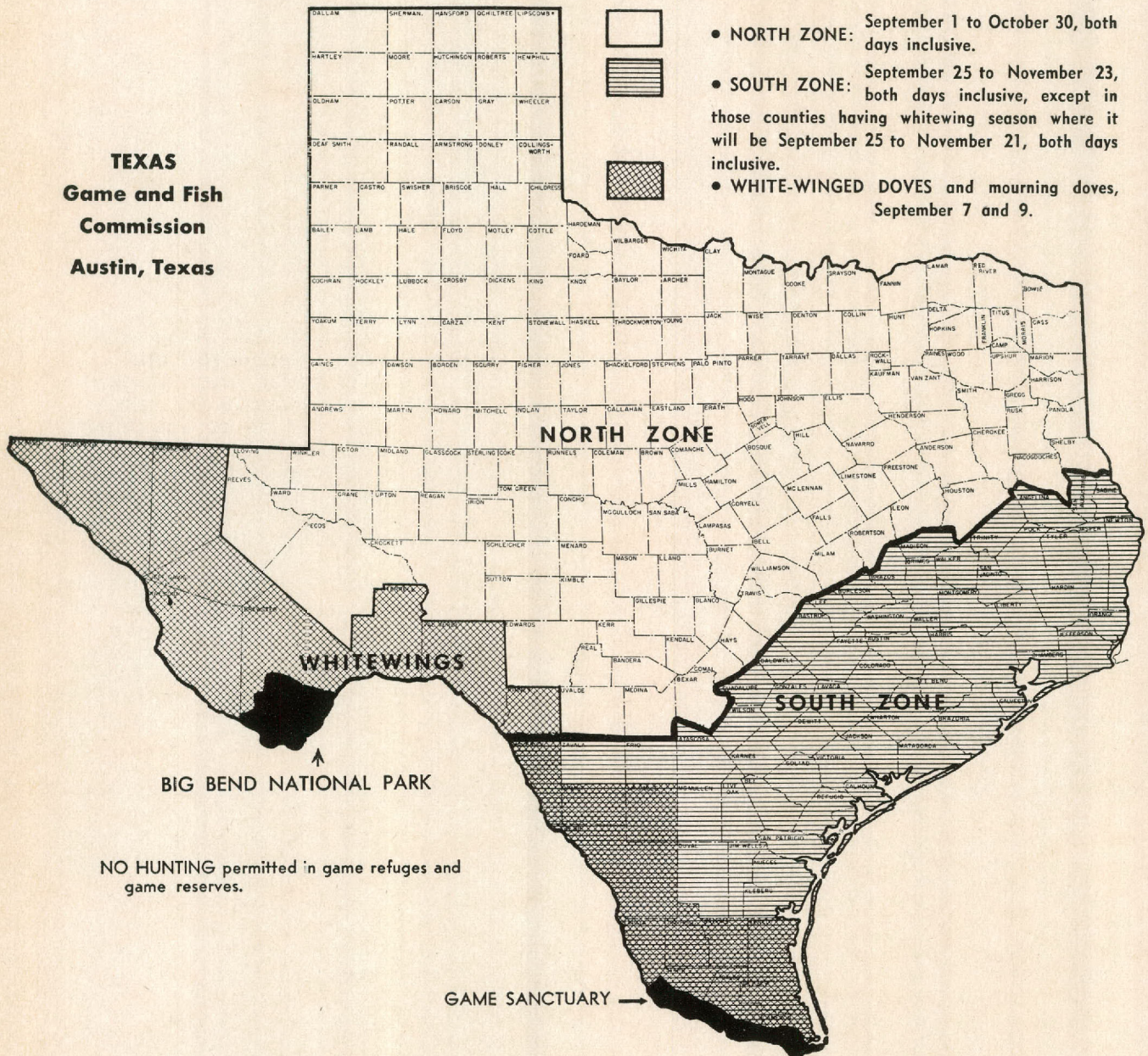
MOURNING DOVE — WHITE-WINGED DOVE

Open Seasons 1962

MOURNING DOVES: Daily bag limit—12. Possession limit—not to exceed 24.

WHITE-WINGED DOVES: Daily bag limit—10. Possession limit—20.

NOTE: When both mourning doves and white-winged doves are possessed—Possession limit—24, in the aggregate, and not more than 20 may be white-winged doves.



NO HUNTING permitted in game refuges and game reserves.

SPECIAL NOTE: Unlawful to take white-winged doves or chachalacas South of U.S. Highway 83, formerly State Highway 4, in southern tip of Texas, marked on map as "Game Sanctuary," and the Big Bend National Park in Brewster County. One feathered wing must remain attached to each bird taken during the two-day whitewing season.

SHOTGUNS: Must be plugged permanently to three-shell capacity, may not be larger than 10 gauge. Hunting doves with rifles prohibited.

SHOOTING HOURS: Mourning doves, 12 noon to sunset—except in areas having whitewing season, where the shooting hours will be from 2 p.m. to sunset on September 7 and 9 only. White-winged doves, in season, 2 p.m. to sunset.



WAYS TO THE WILDS: Some people may be wondering just what a wilderness area is like. The only way in to them is by foot or horseback. In 1933 the American Forestry Association organized the Trail Riders of the Wilderness, to make these primitive areas within reach of the average man or woman. Cost of the trips is between \$200 and \$300 per person for 9 to 11 days in the wilderness, which includes horses, meals and all equipment used by the 20 or so people in each trail ride. Each rider, however, must furnish his own sleeping bag, air mattress, clothing and personal equipment. For information on these Trail Riders of the Wilderness trips, write to the American Forestry Association, 919-17th Street, N.W., Washington, D.C.

FEW DUDES: It's plain enough that the dudes have no corner on hunting and fishing. A recent survey reveals that more than one-fourth of all hunters and fishermen have family incomes under \$4,000 per year. More than half of them take in less than \$6,000 and only 5 per cent make more than \$15,000.

WHOSE HUES: A nationwide study of legal requirements concerning hunting clothes showed eleven states requiring bright clothing. Bright red, yellow or orange is required by five states: Illinois, Montana, North Dakota, Tennessee and Wisconsin require it on cap and coat; Illinois makes checkered coat illegal; North Dakota requires 144 square inches of the bright color on back, same on chest; Wisconsin specifies that 50 per cent of cap and coat be of the bright color. Red or yellow must be worn for hunting in Kentucky, Oklahoma and Utah. Utah limits the requirement to headgear in the case of archers, requires cap and coat for gunners. Red or orange is the required color in Massachusetts and Minnesota. Massachusetts specified 200 square inches on head, back and chest. One state, Wyoming, requires red. New Mexico has no law on the subject, but the Dept. of Game and Fish recommends fluorescent orange.

DOWN THE HATCH: Employees of state wildlife agencies who work on Pittman-Robertson or Dingell-Johnson Federal Aid projects must remain free of partisan political activity or be in danger of violating the Federal Hatch Act. The U.S. Supreme Court refused to review a lower court ruling that the Hatch Act, a Federal statute, applied to a former director of the Illinois Dept. of Conservation. This, in effect, affirmed the lower court's decision, that Federal funds should be cut off from the state agency unless the director was dismissed. It said the former director violated the Hatch Act ban against political activity by serving as county chairman of a political party.

HOME FOR SMOKEY: The U.S. Forest Service's bear symbol of the nation's drive against forest fires is to be housed in a special visitor center and exhibit area in the National Zoological Park in Washington, D.C. School children have contributed more than \$3,700 toward construction of the proposed home, which is in the Zoo's master plan.

FIRST AID FOR FIDO: Next time your dog tangles with a porcupine you might try this method to ease his troubles. To a cup of ordinary vinegar add one tablespoon of baking soda. Stir well. Sop this solution on all protruding parts of the quills. Wait ten minutes. Then again sop with the solution. Wait another ten minutes. Then you should be able to remove the quills from the dog with ease and no pain. Vinegar is a mild solution of acetic acid. Since porcupine quills are made up of lime and calcium, the acetic acid softens the lime in the quills, causing them to soften, wilt and become smaller.

DOLPHIN MODEL: A new form of rubber coating for ships has been developed, to allow them to travel faster without any increase in power. This stemmed from observations of the behavior of porpoises and the structure of their skins. The coating, resembling porpoise skin in structure, is in the form of a thin layer of rubber supported on the inside by millions of tiny rubber pillars. Between these pillars interconnecting channels contain a freely-flowing viscous liquid, which suppresses potential turbulence. Experiments carried out on the hulls of motorboats indicate that there is a considerable advantage in rubber coating of this type on the kind of craft which plane on the water.

Texas Game and Fish

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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

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The Cover



Texas, rich in game and fish species, boasts six cats, two of which are considered big game. The two are mountain lion and jaguar. The other four cats are ocelot, margay, jaguarundi, and bobcat. The cat family (*Felidae*) is a native inhabitant everywhere except Australia, New Zealand, Madagascar and the oceanic islands. Excellent hunters, cats can stalk their prey by day or night because of their eye construction. One other cat, which Texas can call neither large nor small game, is the feral cat, commonly called the wild house cat. Painting by Nancy McGowan. See related story and illustrations page 4.

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.

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Tough Task

THIS IS THE TIME OF THE YEAR when State and Federal wildlife conservationists must establish dates and limits for the coming hunting season. This isn't an easy job. Many factors must be considered before any final dates or bag limits can be set.

Biologists, who have spent many days studying the activities and trends of game animals and getting accurate counts of animals to be hunted, are called in from the field. Trials and errors of the past are pulled from the files. Experience and knowledge gained from long years of wildlife management are brought forth in discussions and in writing. Determined wildlife scientists reach out for all available information, for the facts which can help them make the wisest possible recommendations.

It's not a time for jokes. The responsibility of the Texas Game and Fish Commission in establishing laws, seasons and limits is as important as those of any other agency of the state. And the people who make up Texas' conservation agency handle this responsibility as serious business.

The only reward they receive is the satisfaction that they have handled their important obligation wisely, sincerely and with complete dedication. Not all citizens are going to be happy with the hunting rules and regulations for 1962. The game and fish commissioners and all employees in the department realize this and expect a few criticisms.

One of the most important factors that is considered is public opinion, and the people who set the hunting seasons and limits in some counties this year place this factor along with others on the scales for weighing. Many different groups of people, from the Boy Scouts to the landowner, are considered. And any and all citizens have been given a chance to speak out at the public meetings held in counties as well as the official meetings of the Game and Fish Commission in Austin.

All conservationists, whether laymen or professional, should take a personal interest in their Game and Fish Commission. These men on whose shoulders rest the wildlife resource problems, need the confidence, the trust and the interest of all citizens at this critical time of the year. Every Texan should know personally the commissioner in his region, the biologists, the law enforcement personnel, and all others connected with the department. If you have a doubt in your mind about the activities of this state's wildlife people, it's probably because you haven't taken the time to meet them and attempt to understand some of their problems.

They have nothing to gain by cutting the public short. But they have everything to gain by doing the best possible job with the knowledge, experience, talent and tools available to them. Rest assured that in the interest of the public and the welfare of wildlife, they will do their utmost to provide the most generous seasons and bag limits possible for hunters in 1962. **

EDITOR

Cats

Texas



of



by W. B. DAVIS
Head of Dept. of Wildlife Management
A&M College

AMONG TEXAS BRAGS is listed a "first" in the variety of kinds of wild cats that roam her spacious acres.

Four Central American cats (jaguar, jaguarundi, ocelot and margay) range northward into the brushland south of San Antonio from Mexico. The jaguarundi and the margay occur in the United States only in this brushland; the other two are found also in Arizona.

In addition, Texas can claim as residents the mountain lion, whose range embraces most of North and South America, and the bobcat, which ranges from central Mexico northward into Canada. In fact, there is only one native wild cat living north of the Rio Grande and the Gulf of California which is not found in Texas. It is that lover of cold climates—the Canadian lynx.



Puma, or Mountain Lion

THE MOUNTAIN LION is an unspotted cat. Males may be as much as 8 feet, 6 inches; females, 6 feet, 7½ inches. Weight of three males averaged 184 (160-227) pounds; six females, 118 (105-133) pounds.

The mountain lion now, because of continued persecution, is common nowhere except in the more remote, thinly populated sections.

Retiring and shy by nature, and largely nocturnal by habit, the mountain lion is seldom seen in its native haunts.

The food of the lion is almost entirely animal matter, but, as the domestic cat, it occasionally eats grasses. The chief item of its diet is deer. But the high percentage of predation on deer is beneficial from a game management view in most instances because the lion tends to prevent overpopulation of deer—a serious problem in many areas where the lion has been exterminated. The lion disposes of sick and diseased deer.

Bobcat

THE BOBCAT IS a medium-sized, reddish brown cat about the size of a chow dog. Length of the adult is about 3 feet, 6 inches. Weight is 12 to 20 pounds, occasionally up to 36 pounds in old, fat males.

The bobcat's food consists mainly of small mammals and birds. Among the mammals found in bobcat stomachs, wood rats, ground squirrels, mice and rabbits supply the bulk of the diet. Occasionally deer are killed and eaten, but most of the deer meat found in bobcat stomachs has been carrion. The bobcat also preys upon domestic sheep, goats and poultry. The predatory damage is not great, except in rare instances.

The bobcat is the only native Texas cat which is important as a fur animal.

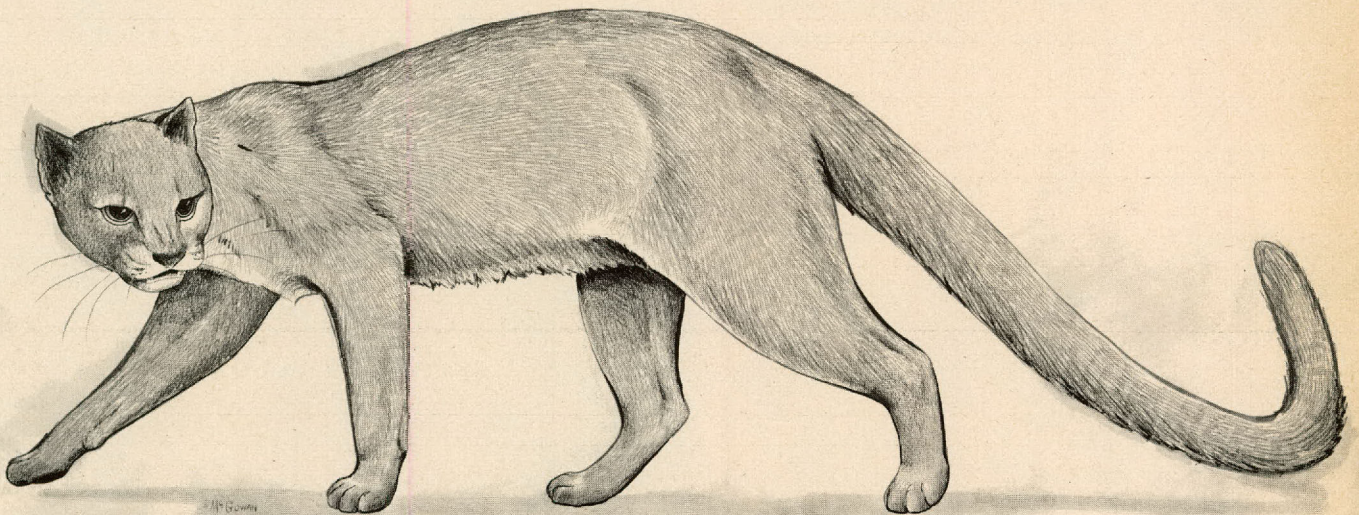
Eyra Cat, or Jaguarundi

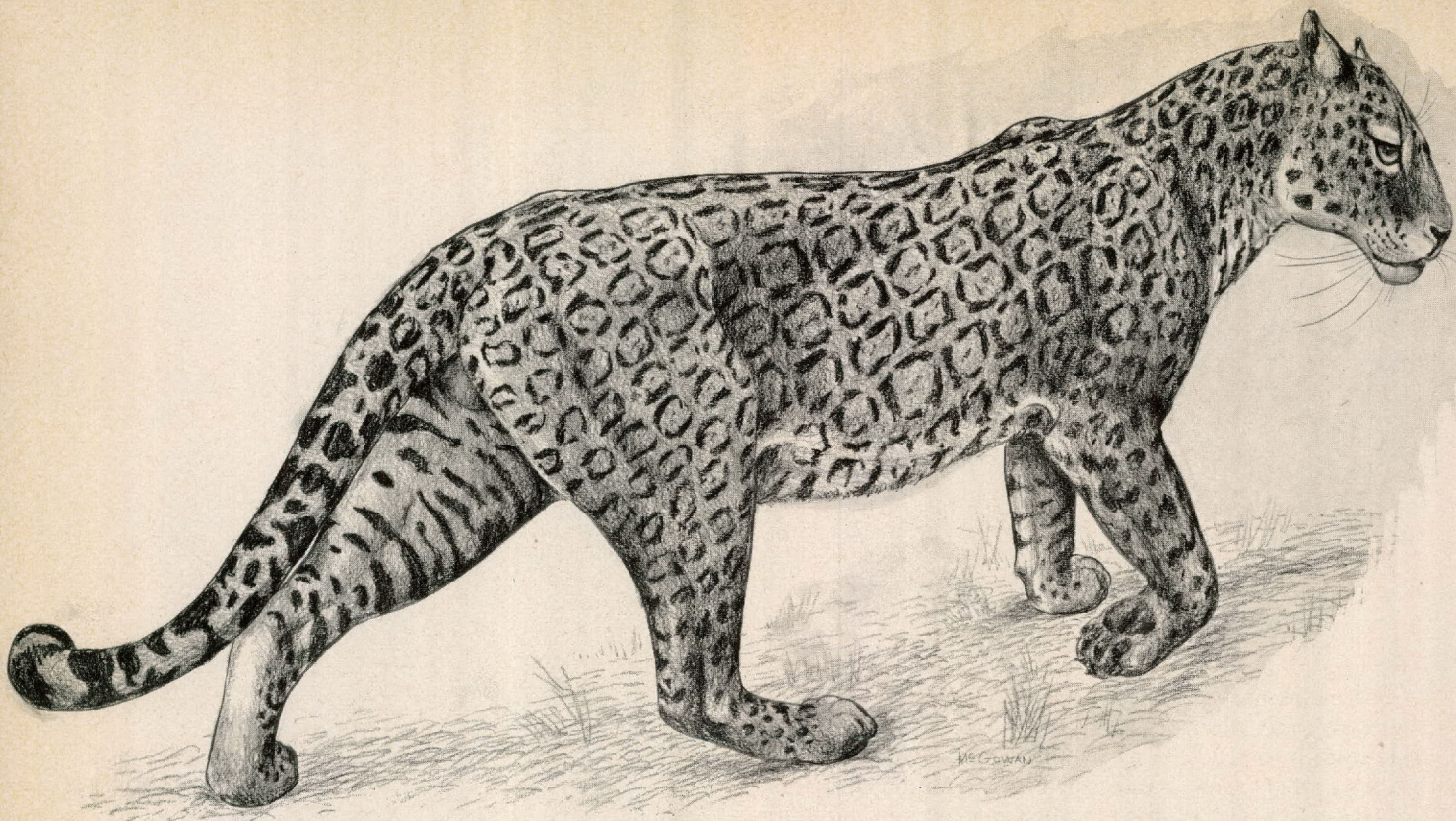
THE JAGUARUNDI is about twice the size of an alley cat. It has two color phases, one grayish, the



other reddish. Length of males is about 3 feet, 6 inches, of which the tail is more than half.

The jaguarundi, a denizen of the dense, thorny thickets of South Texas, reportedly eats rats, mice, birds and rabbits. Of all the cats, this one excels in ability to spring and jump, considering its size. No information is available on home life, growth and develop-





ment. Anyone having the opportunity to study this interesting cat should do so and report his findings for the record.

This cat is too rare in the United States to be of economic importance. The clearing of brushlands in the Rio Grande Valley threatens to destroy its habitat in Texas and to add it to the growing list of "Vanished Texas Animals."

El Tigre, or Jaguar

THE JAGUAR is the largest and most robust of the spotted American cats. Large males may grow as long as seven feet and weigh up to 200 pounds. This cat is now extremely rare in Texas. Its food habits are not well known. In Mexico it is known to prey on pec-

caries and in the Amazon region it catches fruit-eating fish using its sharp claws as gaff hooks, and it probably preys on deer and large ground-dwelling birds when such items are available.

Dr. E. W. Nelson reported that it is also fond of sea turtle eggs. The jaguar roams the beaches on spring nights, digs up the turtle eggs and enjoys a delectable repast.

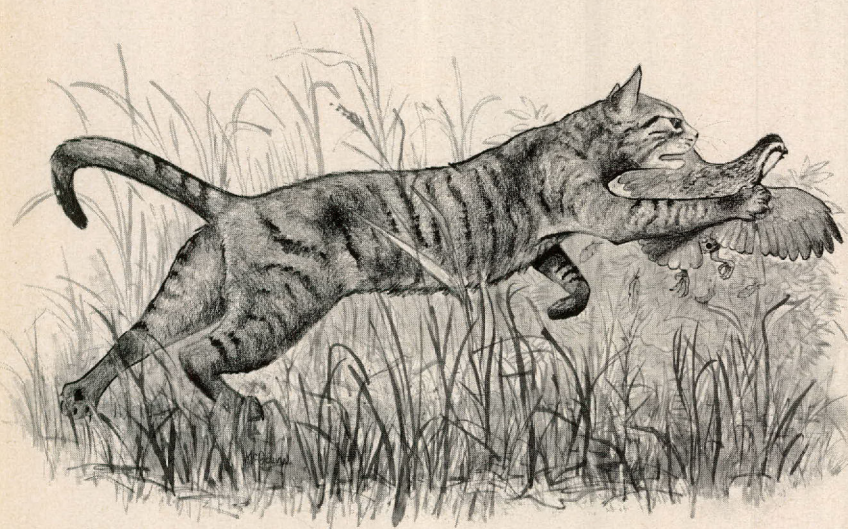
This large cat is not common enough in Texas to be of economic importance. (If you know of records of jaguar kills in Texas, please write the author.)

Domestic, or Feral Cat

WHILE THE DOMESTIC cat has adapted itself in extraordinary fashion to man's customs, it has not altogether lost its wild traits. Often sleek, sleepy, and well-behaved by day, the cat, by night, may become a stealthy and serious predator.

In the course of a bobwhite quail experiment in East Texas, cats killed 8 quail and 10 cardinals in the experimental traps, on one occasion 6 quail at one time.

Cats also are known to catch and consume cotton rats and pocket gophers, and according to studies in Texas, cats consume Attwater prairie chicken, meadowlarks, chicken flesh and feathers.



Margay

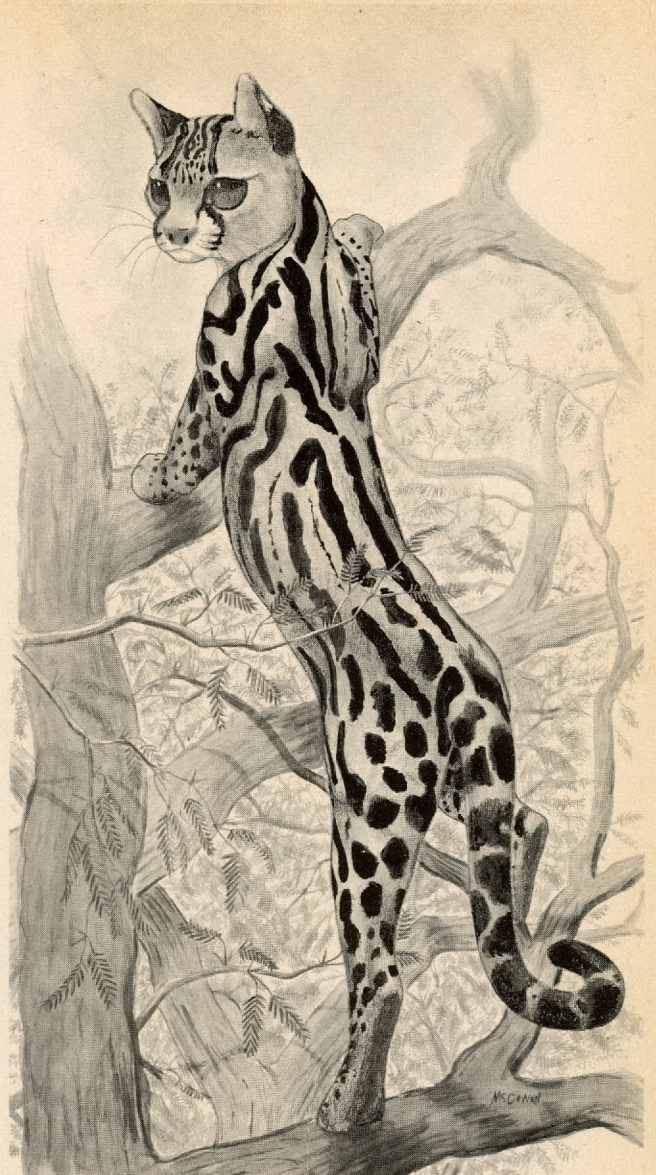
SIMILAR TO THE OCELOT in color and color pattern, but smaller and more slender is the margay. Total length is about three feet. Little is known of its breeding habits and food, but opossums are included in its diet.

It is known from Texas only on the basis of one specimen taken at Eagle Pass by Col. S. Cooper almost 100 years ago. Hunters and trappers should take particular pains to save all skins and skulls of the spotted cats and send them in for positive identification. It seems unlikely that the margay is as rare in Texas as records indicate.

Ocelot

THE OCELOT IS THE MOST beautiful Texas cat. It is unique in that no two ocelot pelts are alike. Adult males may be as much as 3 feet, 10 inches long; females up to 3 feet. Weight is 20-35 pounds. Although the ocelot's food habits have not been determined completely, Dr. Nelson found that birds, including domestic poultry, are captured on their roosts, and rabbits, wood rats, mice of many kinds, as well as snakes and other reptiles are important items in the ocelot's diet.

The beautiful cat is of slight economic importance in Texas. Its raw pelt commands a price of from \$6 to \$10 as a curio. Also, it has some value as an object of sport when hunted with dogs. Its population in the United States is being reduced year by year, chiefly by predator control activities of the Fish and Wildlife Service and the clearing of brush in the Rio Grande Valley. Its complete extirpation in Texas is anticipated in the near future. **



COMMISSION EXTENDS THREE SEASONS

by CURTIS CARPENTER

ANOTHER VERY IMPORTANT SESSION of the Texas Game and Fish Commission is now in the record books. But before it ended, most of the seasons and bag limits were established for the 129 regulatory counties of Texas. Relatively few major changes were presented to the Commission for consideration. And not all proposals presented by department biologists were adopted. Generally, the seasons will run about the same as last year with the exception of the Panhandle antelope hunt, and the Trans-Pecos antelope and mule deer dates.

The most important changes were the extension of the antelope season for two days—Sept. 29 through Oct. 7, including all counties having a season on antelope hunting in the Panhandle district; seven days were added to the mule deer hunt in the Trans-Pecos, with the new season set for Dec. 1 through Dec. 15. The requirement in all regulatory counties for the need of metal tags on antlerless and/or doe deer was dropped.

The elk season was extended along with the mule deer season—Dec. 1-15. It is confined to Culberson and Hudspeth Counties and only those persons with landowner-issued permits can hunt.

District by district, here are the proclamation changes as approved by the Commissioners:

In the **EDWARDS PLATEAU DISTRICT** (Bandera, Blanco, Burnet, Comal, Crockett, Edwards, Gillespie, Hays, Kendall, Kerr, Kimble, Llano, Mason, McCulloch, Menard, San Saba, Schleicher, Sutton and Travis), during the season a hunter can take three deer in the aggregate; only two can be bucks. Metal tags are not needed for antlerless deer. Burnet and Hays Counties will have an October archery season along with Webb County. The daily bag limit for channel, blue and flat-

head catfish in the Edwards Plateau Area was set at 25 with no possession limit. A 25 crappie-per-day limit was set for Lake Travis in Burnet County with no possession limit, and no bag or possession limit in the other counties of the district. The possession limit on black bass was removed from all counties. Lake Travis will keep its daily bag limit requiring that only 15 bass be taken per day, none of which can be less than seven inches long and not more than 10 can be longer than 11 inches. Only Lake Travis will have a 25 white bass limit per day. No county in the district will have a possession limit, and no other lake will have a daily bag limit.

In the **TRANS-PECOS DISTRICT** (Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, Pecos, Presidio, Reeves, Terrell and Val Verde), open season on mule deer will be Dec. 1-15 inclusive. No metal tags will be required for antlerless deer. The prong-horned antelope season will be Sept. 29-Oct. 7, inclusive.

The **PANHANDLE DISTRICT** antelope season will run the same as Trans-Pecos, from Sept. 29 through Oct. 7. Doe antelope can be taken this year in the Panhandle counties, with a bag limit of one antelope, either sex. Counties open to antelope hunting in the district are Dallam, Hartley, Hutchinson, Linscomb, Moore, Oldham, Potter and Roberts. Antlerless deer may be taken, by permit only, in all counties in the district. Instead of being restricted to two week ends as last year, the pheasant hunt will run for seven consecutive days, Dec. 1-7. Pheasants may be hunted in Dallam, Hansford, Hartley, Hemphill, Hutchinson, Lipscomb, Moore, Ochiltree, Roberts and Sherman Counties.

Changes in the **SOUTHEAST DISTRICT** (Hardin, Houston, Jas-

per, Jefferson, Liberty, Montgomery, Newton, Orange, Polk, Trinity, Tyler and Walker) include a change in the definition of antlerless deer to mean those with no hardened antler protruding through the skin. The bag limit for deer will be two bucks, except that antlerless deer may be taken by special permit, but not more than three deer in the aggregate may be taken during the season by any one person. A metal antlerless deer tag will not be required this year. Trinity and Walker Counties will be included in the squirrel hunting areas this year. All fishing regulations for the district were changed to conform with those of Trinity County, and a wire loop or gig may be used in the district to take rough fish. The Commission voted to continue for another year permitting the use of dogs for hunting deer in Hardin, Jasper, Liberty, Newton, Orange, Polk, Trinity and Tyler Counties.

The few changes made in the **SOUTH CENTRAL DISTRICT** were the elimination of the need for metal tags on antlerless deer and a change in the turkey bag limit to two gobblers in all counties except Frio, where three gobblers may be taken during the season.

In the **NORTHEAST DISTRICT** (Bowie, Fannin, Harrison, Red River and Titus), all counties, including Fannin, will be open to antlerless deer hunting on special permit. Metal tags will not be required on antlerless deer. In Bowie County, does may be taken on the Red River Arsenal only. One buck is the limit, except that by special permit antlerless deer may be taken, but no one person may kill or possess more than three deer in the aggregate. Bowie and Harrison Counties will have a spring season during the full month of May, as well as the fall season of Oct. 1 through Dec. 31.

Ben F. Vaughan, Jr., chairman of the Game and Fish Commission from Corpus Christi, presents Executive Secretary H. D. Dodgen a token of the Commission's gratitude for Dodgen's 30 years of service. Commission member Carl L. DuPuy of Lufkin gives a standing approval.



Because of a population increase and damage in Fannin County, that county will have a beaver season this year, with the same dates (Dec. 1-Jan. 31) as other counties in the district. Where fishing is concerned, Harrison County regulations will conform with those of the rest of the district. There will be no possession limit on black and white bass; the bag and possession limits on catfish have been raised to 25 and 50.

The **POSSUM KINGDOM DISTRICT** changes amounted to adjusting the antelope season to Sept. 29 through Oct. 7. Ten days were added to the deer season in all counties except Borden, Bosque, Brown, Ellis, Mitchell, Nolan and Taylor. Borden, Nolan and Taylor Counties season runs from Nov. 16 through Dec. 5. Bosque, Brown, Ellis and Mitchell Counties run from Nov. 16 through Dec. 31. All other counties will run Nov. 16 through Dec. 15. Borden, Nolan and Taylor Counties will have a one-buck bag limit; all others in the district will have a two-buck limit. Antlerless deer will be legal in all counties by special permit. Metal tags have been eliminated in all counties. Borden County will be closed to turkey hunting. Nolan and Taylor Counties will have a turkey season from Nov. 16 through Dec. 5. All other counties will be open for turkey hunting Nov. 16 through Dec. 15. Only Borden County will have a 25-per-day bag limit on white bass. All other counties will not have a bag or possession limit on whites. All counties will have a 25-per-day catfish limit. Borden, Mitchell, Nolan and Taylor Counties will have no possession limit on catfish; all other counties will have a possession limit of 50 catfish. Borden will have a 25-

a-day limit on crappie. There is no possession limit in any Possum Kingdom District counties.

A few changes were made in the **TRINITY-BRAZOS DISTRICT**. The limit on deer was increased to three in Bell, Colorado, Coryell and Williamson Counties. No doe permits will be issued north and east of the Colorado River. Special metal antlerless deer tags will not be required in those counties where antlerless deer may be harvested. Major nets and seines are prohibited in Milam and Colorado Counties.

Seasons and limits for mourning and white-winged doves were set by the Commission. Dove hunting in the North Zone will begin Sept. 1, the same as last year, and run through Oct. 30. The South Zone season will open Sept. 25, and close Nov. 23, except in those counties open to whitewing hunting, where it will close Nov. 21. This means dove hunters in southern Texas will be able to begin hunting mourning doves twelve days earlier than last year.

The 21 counties included in the whitewing zone will be opened for whitewing shooting Sept. 7 and 9.

Daily shooting hours for mourning doves will be from noon until sunset in the Northern Zone. In the Southern Zone, shooting hours will be from noon until sunset, except Sept. 7 and 9 in those 21 counties where the white-winged doves will be hunted. In the whitewing zone, Sept. 7 and 9, the daily shooting hours for both mourning and white-winged doves will be from 2 p.m. until sunset.

The daily bag limit on mourning doves will be 12 with a possession limit of 24. In the whitewing zone, Sept. 7 and 9, the daily and possession limits on mourning and white-wings, in the aggregate of both kinds,

are 12 and 24 of which not more than 10 in the daily bag limit and not more than 20 in the possession limit can be white-winged doves.

Rails may be hunted Sept. 1 through Oct. 20. Bag and possession limit is 15. December 3 through Jan. 1 has been set for snipe hunting with the daily and possession limit set at eight. Hunters can go after woodcocks Dec. 7 through Jan. 15, take four a day and have eight in possession.

Seasons and bag limits for migratory waterfowl will be set by the Commission as soon as the framework dates are received from the U.S. Fish and Wildlife Service. Dates for quail probably will be set at the next quarterly meeting of the Commission, Oct. 19.

We have just listed changes in regulatory country regulations which were approved by the Commission. For complete information on hunting, fishing, trapping and other regulations be sure to get a Law Digest and Supplement at your local sporting goods dealer where you purchase your licenses. The supplements and migratory waterfowl regulations will be available as soon as the last dates can be obtained and included in the publications. This probably will be sometime in October.

To be absolutely certain about the seasons and limits in the area where you intend to hunt, contact a game warden or call the regional or district office nearest you.

All counties not under the regulatory authority of the Texas Game and Fish Commission have their seasons and bag limits set by the state legislature and are listed in the general game and fish laws.

Know the rules, before you play the game. **



FLOAT

Fishing

by L. A. WILKE

WHEN THE WEATHER is hot and the fishing is slow, try wading for bass.

This type of fishing is available for all areas where there are shallow waters. Or, if you have an inner tube, equipped with proper harness, you can take on deeper water. This fishing seat in an old inner tube takes the place of a boat. It lends a great deal to the excitement of fishing.

Equipment, made of heavy duck, can be bought in sporting goods stores, or you can make your own equipment. But as with boats, every safety rule must be observed.

If you fish the real shallow water with an inner tube or just wade, there is nothing like a fly rod with a few good popping bugs, either in the early morning or late afternoon.

On the other hand, if you venture into deep water, you should be prepared for the natural hazards of deep water. In the first place, you should know your equipment is the best. Although you can move about without the use of "frog feet," it is best to don the type of flippers used by the skin divers. This will assure maneuverability in deep water.

Although the danger of upsets is slight, unless high winds prevail, the danger does exist. Before putting on any type of floating device, you

should first know how you can get out of it if necessary.

This word of caution is expected to encourage you to use proper precaution, and not to just frighten you.

On the other hand, you can experience some new thrills with this type of fishing. You are sitting in a comfortable position. The water beneath you is cool enough to have some influence on your body temperature.

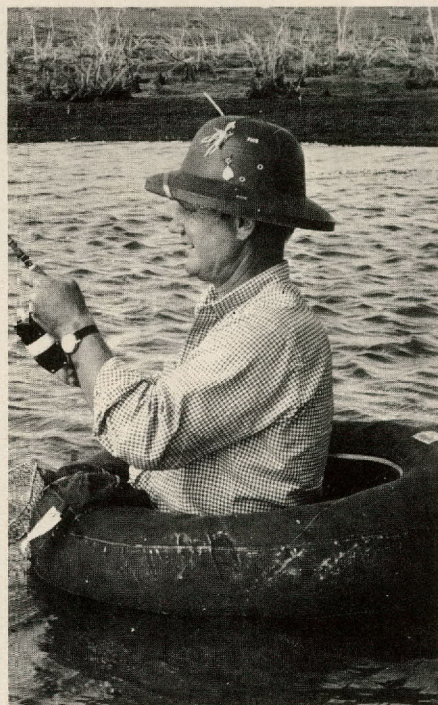
You can carry additional lures in your hat or in a pouch built into the canvas harness. You can tie a fish stringer to the harness, but don't let the stringer get tangled in brush or between your feet.

Best fishing may be obtained by working out from weed beds or along rocky ledges, where the fish enter the water. You'll have plenty of freedom for wide casts if you need them.

Your first fish caught from one of these inner tube floats will give you much more of a thrill than one caught from a boat.

If you make your own float, be sure that you use heavy canvas. The cradle or seat should be of the heaviest duck material you can get. It should be thoroughly laced around the inner tube, which should be one from an 18 or 20 inch truck tube.

Don't inflate the tube with too much air, but be sure it does have enough to hold up your weight, plus a nice string of bass. **



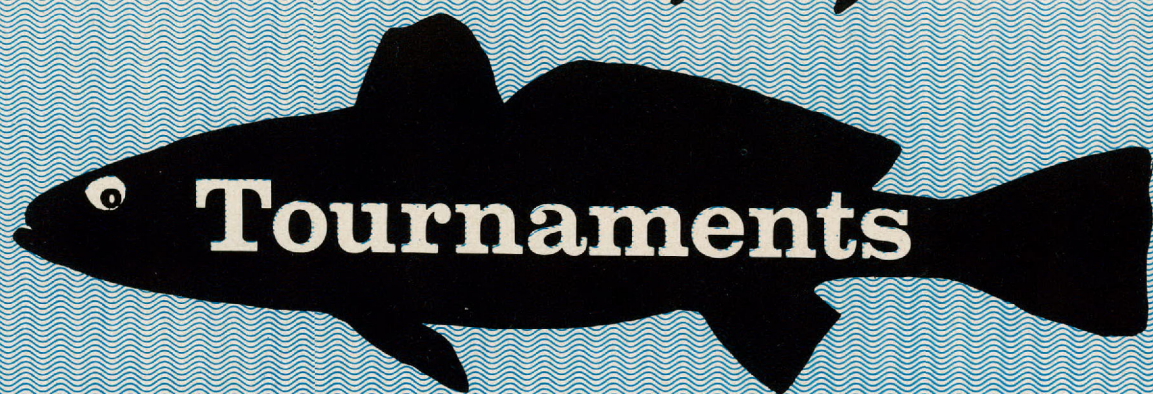
Bill Houston tries Fish-N-Float deal while wade fishing



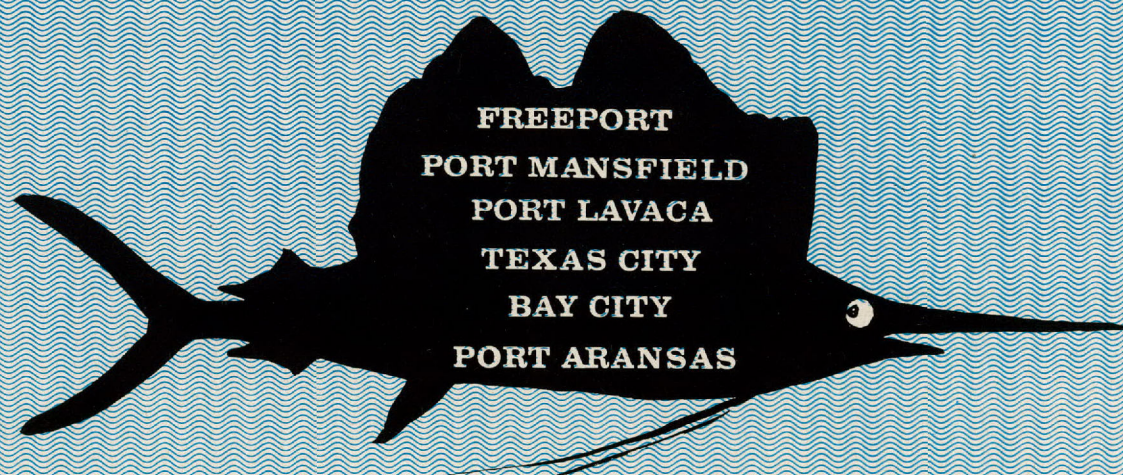
Let's



Talk



Tournaments



**FREEPORT
PORT MANSFIELD
PORT LAVACA
TEXAS CITY
BAY CITY
PORT ARANSAS**



F R E E P O R T

FREEPORT'S FIFTEENTH annual fishing fiesta wound up in a real contest, and set new records.

Bigger fish came in each day of the fiesta, pushing first place winners back to second and third places before the contest ended.

It wound up with three records for the fiesta. One of these was a 664-pound jewfish, caught by an Angleton football player off the Southeast Lump. Robert Hurst, 17, was fishing for sharks, using a Penn 6/0 reel with 250 pound test line, and a 10-pound kingfish for bait. He struggled with the jewfish for two hours before getting it close enough to perforate it with a half-dozen shots from his .22 rifle, taken along to shoot sharks.

Next upset was a 7-foot 1½-inch tarpon, caught in the mouth of the Old Brazos by John Barton, Freeport. It weighed 112 pounds. He beat Jim Jones, Lake Jackson, who hooked a 6-foot 10-inch tarpon, weighing 107 pounds.

D. P. Wheat of Beaumont brought in the largest sail, a 6-foot 4-incher that weighed 45 pounds 4 ounces.

Another close contest was for the largest ling. Jack Kourie, a Houston sports writer, had one that pulled the scales down to 59 pounds. Friday night it looked like a winner. Then came along Ken Foree, outdoors editor of the Dallas News, and caught one that weighed 62½ pounds, to take top place.

The tournament opened July 4 and ended July 8. Excellent weather prevailed throughout the tournament.

Tournament winners:

Tarpon—1. John Barton, Lake Jackson, 7 feet, ½ inch; 2. Jim Jones, Lake Jackson, 6 feet, 10 inches; 3. Ken Hargrove, Houston, 6 feet, 8 inches.

Sailfish—1. D. P. Wheat, Beaumont, 6 feet, 4 inches;

2. Felix Morale, Houston, 1 foot, 8½ inches.

Bonita—Tom Gaines, Angleton, 15 pounds, 6 ounces.

Dolphin—J. M. McCullough, Houston, 28 pounds, 8 ounces.

Amberjack—Mrs. Charles Laws, Houston, 29 pounds, 8 ounces.

Jack Crevalle—J. M. McCullough, Houston, 18 pounds, ¾ ounce.

Warsaw—O. J. McCullough, Houston, 91 pounds.

Barracuda—J. M. McCullough, Houston, 32½ pounds.

Kingfish—J. M. McCullough, Houston, 38 pounds, 4 ounces; R. J. Garrett, Houston, 32 pounds, 6 ounces.

Spanish Mackerel—J. L. Olson, Oyster Creek, 4 pounds, 4½ ounces.

Ling—1. Ken Foree, Dallas, 62½ pounds; 2. Jack Kourie, Houston, 59 pounds.

Red Snapper—G. L. Parker, Houston, 25 pounds, 12 ounces; James South, Tyler, 23 pounds.

Redfish—Red Walters, Freeport, 12 pounds, 4 ounces; E. C. Mueck, Lake Jackson, 10 pounds, 12 ounces.

Speckled trout—Carl Gorney, Clute, 7 pounds, 3¼ ounces; L. M. McBeth, Freeport, 6 pounds, 8 ounces.

Flounder—Wayne Seidler, Lake Jackson, 4 pounds, 2 ounces.

Gafftop—P. M. Winfrey, Freeport, 5 pounds, 4 ounces; S. T. Burnett, Freeport, 4 pounds, 13½ ounces.

Sheepshead—Nursie Clark, Freeport, 4 pounds.

Crab—Roy Young, Freeport, 8 ounces.

Gar—C. E. Seeney, Clute, 126 pounds, 15 ounces.

Drum—C. R. Hanzik, Freeport, 7 pounds, 5 ounces.

Croaker—J. L. Kallus, Clute, 1 pound, 1 ounce.

Juvenile Inshore—Tom Mueck, Lake Jackson, 26-pound 8-ounce gar.

Juvenile Offshore—Jack Hammonds, Freeport, 33-pound ling.

John Barton displays prize winning tarpon caught in mouth of Old Brazos.



Doug English (left) helps Ken Foree of Dallas News with champion ling.



Wesley Van Matre won the grand championship with his redfish (7 lb. 8 oz.), largest drum and largest string of commercial type fish.

OF THE MANY FISHERMEN competing for top honors at this year's 1962 State Championship redfish tournament at Port Mansfield the hottest battle was in the Piggy Perch competition.

This event drew the most contestants and proved to be the hottest competition of all events. Proving superior was a cute little blonde, 10-year-old Peggy Dickerson of Raymondville. The fifth grader had to defeat two sisters, two brothers and over 100 other children during the July 4th war.

Meanwhile, with the sun shining brightly and a medium wind blowing from the southwest a record number of older fishermen were fishing in the bay for honors.

Champion redfish honors went to Wesley Van Matre of Edinburg. His prize redfish weighed 7 pounds 8 ounces and measured 28.2 inches. Van Matre also had the second largest redfish with a 23.75-inch, 5-pound 3-ounce catch.

Jerry Sarro of San Antonio placed third in this event with a 4-pound 1-ounce redfish.



Peggy Dickerson, age 10, of Raymondville shows her trophy for the piggy perch division. She caught a string of 65 in a two-hour span.

Officials of the tournament reported the fish smaller this year. They said, however, that many more fishermen participated and more fish were caught than in the past.

Van Matre added the commercial fish trophy with a string of 12 fish and a total weight of 23.8 pounds.

In the trout division, Bert Brown of Raymondville had a 3-pound 6-ounce catch to edge Fred Stone of Raymondville by an ounce for the 1962 trophy. Stone's trout (22½ inches) was a half inch longer than Brown's, however. Third place was taken by Warren Stansbury of Odem with a 3-pound 3-ounce trout measuring 21.9 inches.

The competition was even closer in the flounder division with J. W. Smith of Harlingen having a .1 inch victory. Both Smith and Marvin Perry of McAllen caught flounders weighing 4 pounds 10 ounces, but Smith's 22.7-inch catch was the winner. A close third was Robert Smith of Harlingen who captured a 4-pound 8½-ounce flounder measuring 22.7 inches.

PORT MANSFIELD



Fran Robbins, a Raymondville high school student, won first in three divisions of ladies' competition—trout, drum and redfish (5 lb. 3 oz.)

In the ladies' division, the largest trout trophy was won by Fran Robbins of Raymondville as was first place honors in the drum and redfish competition. There were no entries in the flounder division for the ladies.

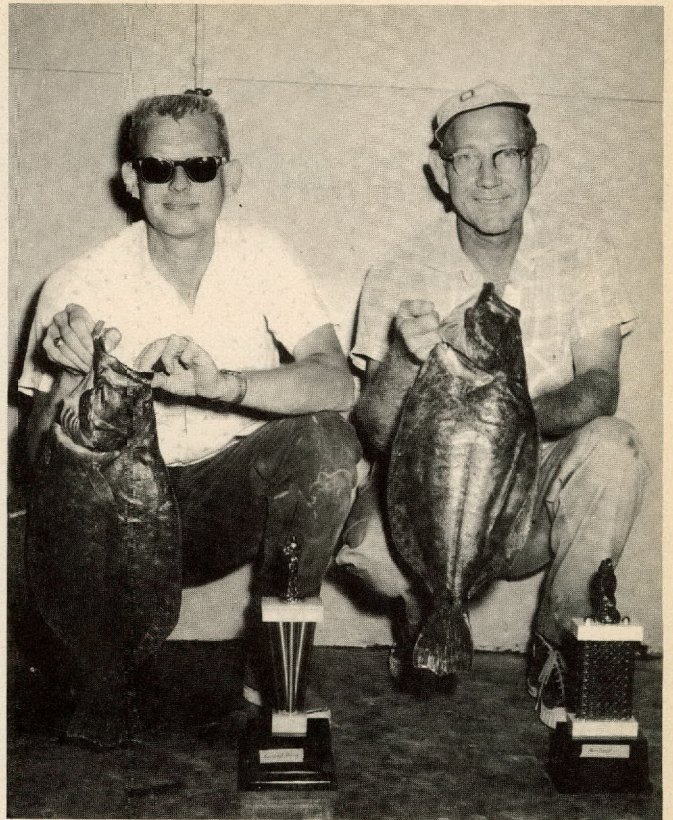
Miss Robbins' trout (1 pound 8 ounces) was 2 ounces heavier than second place winner Lona Mae Jobe of Harlingen. Third place went to Connie Lance of Harlingen with a 1-pound 4-ounce trout.

The pretty high school student caught a 1½-pound drum for her second trophy of the day and finished out the tournament with a redfish trophy.

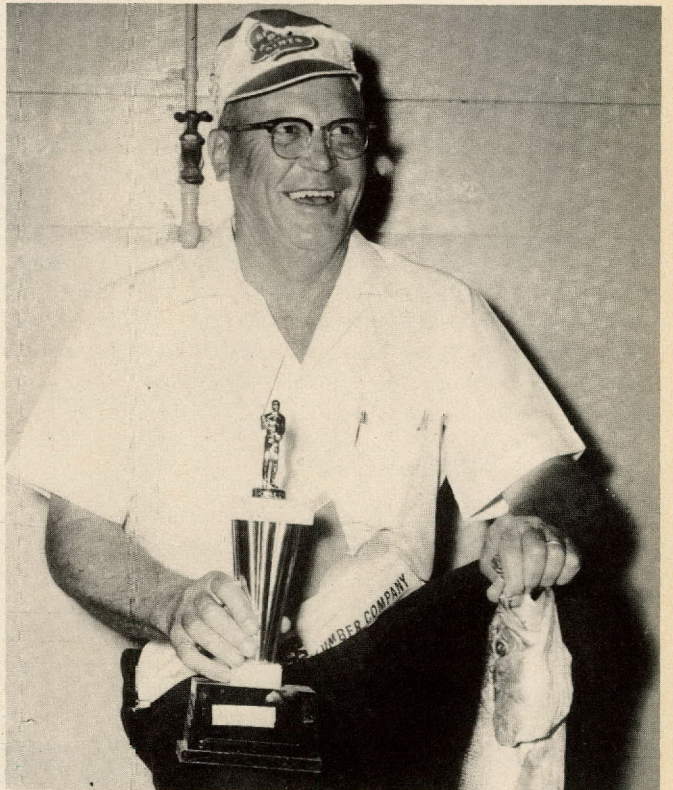
While the fishermen were fishing, others were getting ready for final judging in the Miss Port Mansfield bathing beauty contest.

Using general appearance, poise and grace and stage personality as criteria, the judges presented the 1962 trophy to Toney Medley of San Perlita. The 16-year-old high school junior was sponsored by the American Legion Auxiliary No. 390 of Raymondville.

Final highlight of the day was a fish fry. Six hundred and fifty persons were served—redfish, of course.



First and third flounder titles went to Harlingen father and son, J. W. Smith and Robert. The father's was 4 lb. 10 oz. and son's, 4 lb. 8 oz.



Bert Brown of Raymondville captured trout honors with this prize. It weighed 3 pounds, 6 ounces for first in men's division of meet.

WINNERS

PORT LAVACA

AT PORT LAVACA, WHERE the weather cooperated except for the first day, four tournament records were set in a six-division event of the Calhoun County Fishing Festival.

Mrs. J. S. Taylor of Port Lavaca caught a 13-pound 4-ounce redfish to win top honors and break the 12-pound 14-ounce mark set by Earl Smart of Port Lavaca in 1960.

L. E. Kolar of Point Comfort caught a 48-pound drum, break-

ing the old mark of 36 pounds set by L. E. Linville of Bloomington.

A 4-pound 14-ounce gafftop caught by Henry Meyer of Victoria was 6 ounces heavier than the record set by David Hawes of Port O'Connor in 1961.

Rayburn Haynie of Seadrift caught a crab measuring 9 9/16 inches, breaking the old record of 8 inches set by Mrs. Doy Moody of Victoria in 1961.

Besides the record breakers,

Frank Jaycox, Jr. of Port O'Connor, Harry Carpenter of Port Lavaca and G. M. Atkinson of Corpus Christi received honors.

Jaycox won with a 6-pound 4-ounce trout and Carpenter with a 6-pound 6-ounce flounder. Atkinson was awarded a 16-foot Starcraft boat, a trailer and a 40-horsepower Johnson motor in a drawing.

There also was a record in the number of participants this year.

TEXAS CITY

THE END OF THE TEXAS CITY TACKLE TIME fishing tournament was one hour away when Richard Wolters weighed his 29-pound 7-ounce redfish to win first prize in the division. Wolters of La Marque and his family were fishing at Galveston's South Jetty when the lunker took his bait.

Kenneth Higginbotham of Texas City repeated his feat of last year, winning the largest fish crown with a 314-pound hammerhead shark. Last year his prize winner was a 550-pound mako. Both were caught at the Galveston jetties.

There was a big crowd of fishermen from the upper Gulf Coast on hand for the roundup. However, they were just a small part of the outdoor fans who thronged to the bays, gulf and beaches for the July 4th holiday.

One of the proudest fishermen was Wayne Tennison of Houston. Wayne, a 13-year-old, landed an 8¼-pound speckled trout.

TOURNAMENT WINNERS:

LARGEST FISH: 1. Kenneth Higginbotham, Texas City, 314-pound shark; 2. Elmer Higgs, Texas City, 32½-pound shark.

LING: 1. Julian Caldera, La Marque, 47½ pounds.

KINGFISH: 1. Jimmy Braeselton, Texas City, 36 pounds.

TARPON: 1. Bob Love, Galveston, 137½-pounds; 2. Boyd Chapman, Texas City, 104 pounds.

STINGAREE: 1. Lavelle Osteen, Texas City, 166½ pounds.

SPECKS: 1. Leno Leder, Alvin, 7 pounds, 8½ ounces; 2. Jim Barnett, Texas City, 7 pounds, 7 ounces.

REDFISH: 1. Richard Wolters, 29 pounds, 7 ounces; 2. Sammy Wright, Houston, 20 pounds, 13½ ounces.

SAND TROUT: Pearson, Texas City, 2 pounds, 6 ounces.

FLOUNDER: 1. Carl Shilling, Galveston, 4 pounds, 1 ounce.

CROAKER: 1. W. L. Pearson, 2 pounds 2½ ounces.

GAFFTOP: John A. Barfield, Baytown, 5 pounds, 6 ounces.

SHEEPSHEAD: George Freshour, Houston, 8 pounds.

DRUM: James C. Brown, Texas City, 38 pounds, 2 ounces.

CRAB: Clarence Berg, 8½ inches.

YOUTH DIVISION:

STINGAREE: Steve Estep, Texas City, 90 pounds.

SPECK: Tommy Schlapkohl, Jr., Houston, 7 pounds, 15 ounces.

RED: Larry Roberts, 13 pounds, 15 ounces.

SAND TROUT: Alvin Brown, Texas City, 1 pound 8 ounces.

FLOUNDER: Michael Helfenstein, 3 pounds, 1 ounce.

CROAKER: David Pilsner, Texas City, 1 pound, 1¾ ounce.

DRUM: David Brown, Texas City, 24 pounds, 8 ounces.

GAFFTOP: Charles Wayne Evans, Texas City, 4 pounds, 3 ounces.

SHEEPSHEAD: Andy Hemeline, Texas City, 4 pounds.

CRAB: Cornel Schultz, Galveston, 8½ inches.

Bayshore Fry



Winners of the Bayshore Rod, Reel and Gun Club tournament.

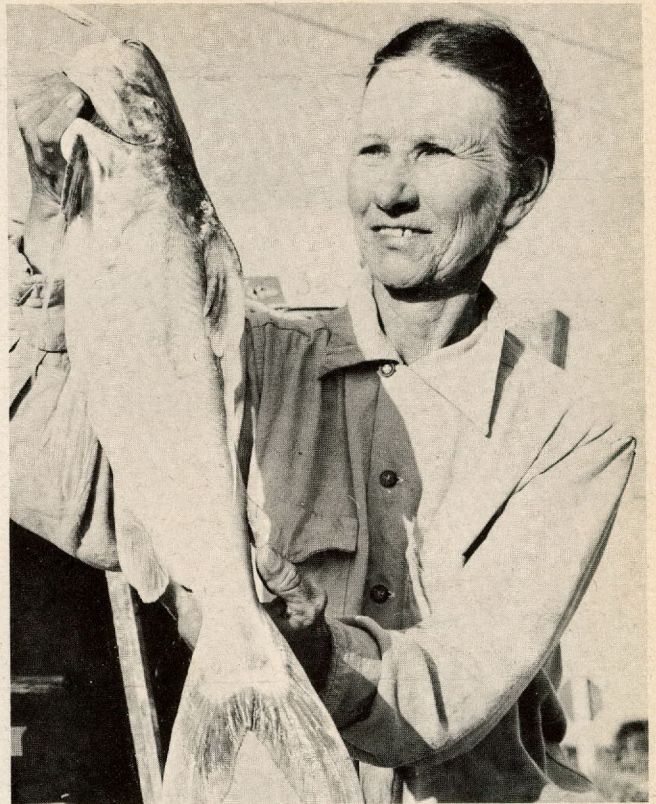
L. M. WHEELER'S RECORD-CATCHING entry highlighted festivities of the Seventh annual fishing contest sponsored at Baytown by the Bayshore Rod, Reel and Gun Club this year. The Houston Rapid Transit bus supervisor was drift fishing in Trinity Bay on the last day of the contest when he landed his record speckled trout. It weighed 8 pounds, 2 ounces.

Sharing honors with Wheeler was the honorary queen of the fish fry, Mrs. W. J. (Bill) Dalpes. With her 4-pound 13-ounce gafftop, Mrs. Dalpes was the only woman who won a first place.

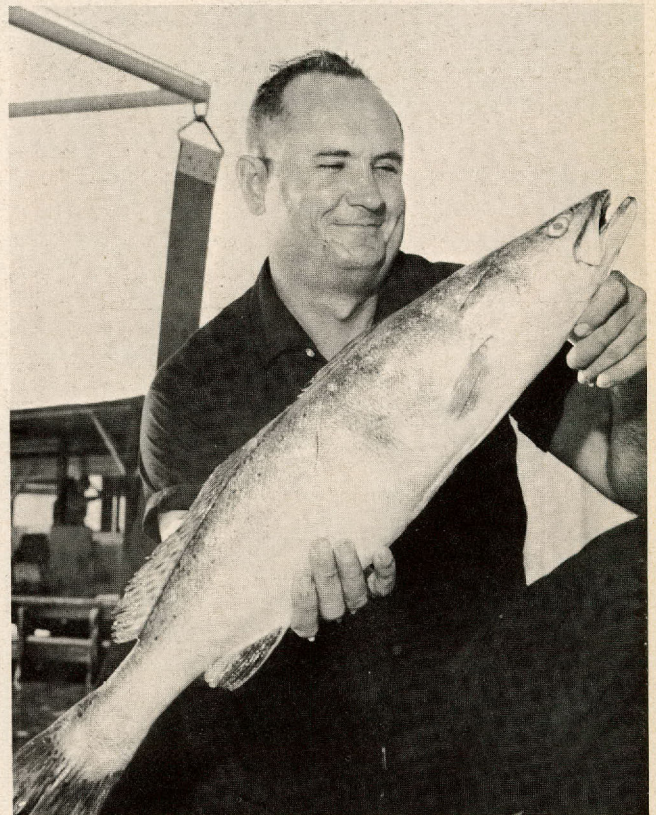
In other competition, B. C. Olive led the redfish entries with a 14-pound 8-ounce fish. J. W. Riggs entered a 2-pound sand trout to win this division, and C. F. Gallaway won with a 2-pound 3-ounce croaker.

In the junior division, Blair Graham's 5-pound 8-ounce speckled trout was first in its class. George Leavins won the junior redfish with an 8-pound 14½-ounce entry. In the sand trout competition, Jerry Wooster was first with a one pounder. Charles Clark was the No. 1 fisherman for gafftop with his 3-pound 4-ounce entry. Roy Leavins Jr., won the junior croaker with a 1-pound 14-ounce entry.

Mrs. Elmer Hargis' 2-pound 2½-ounce entry placed second in croaker competition, and Vicky Prenzyl placed third in the speckled trout, junior size, with a 4-pound 12-ounce fish.



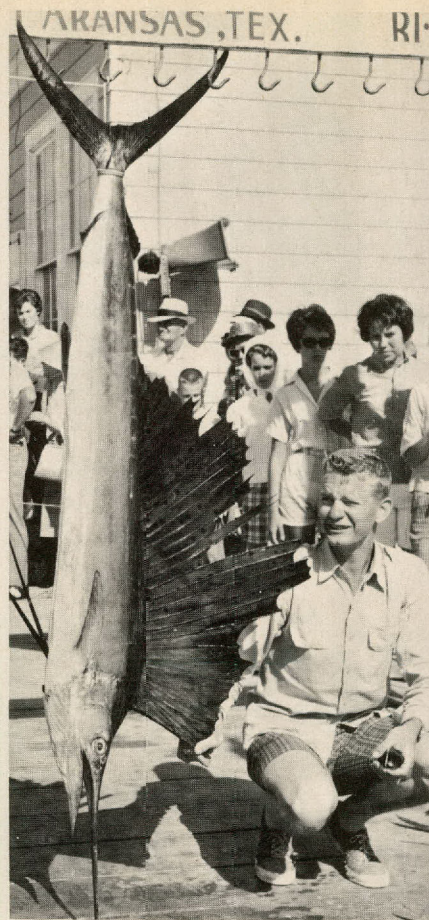
Mrs. W. J. (Bill) Dalpes shows winning gafftop to friends during Baytown Tournament. It weighed 4 pounds, 13 ounces. She was also honorary queen.



L. M. Wheeler, Houston bus supervisor, captures first at Baytown with record 8-pound 2-ounce speckled trout. He was drift fishing on last day.



J. T. (Jigger) Reaves of Corpus Christi (right) won the overall off shore division with his 7-foot sailfish and kingfish. He also won a trophy for the largest fish from outboard. Jimmy Meyers also of Corpus Christi (left) won the bonita division with his 11½-pound catch.



Eighteen-year-old Tommy Caldwell of Corpus Christi was champ in the sailfish division. His prize catch measured 6 feet 11 inches.

PORT ARANSAS

Tommy Caldwell of Corpus Christi shared top honors with J. T. Reaves, also of Corpus Christi, in this year's Port Aransas fishing tournament.

Caldwell captured the sailfish championship for the second year with a 6-foot, 11-inch, 38 pounder caught on a 10-pound test line and spinning tackle. This is the third fishing tournament title in three years for the 18-year-old youngster. He also won the Deep Sea Roundup in 1960 and last August won the Port Isabel International Fishing Tournament men's division.

Reaves scored the most overall points in the 27th annual roundup. He landed a 7-foot sailfish opening day and accounted for additional points on kingfish. He had 1,611 pounds to Caldwell's 1,328.

Even though 10 sailfish were caught the last day of the meet, it ran the tournament total to only 16, lowest figure in recent years, and certainly since 1955 when 18 were caught.

While Caldwell was tops in sailfish, Glenn Arthur of Alice, who with his wife brought in a double in sailfish, was second and Pope Noel III of Harlingen was third.

Very oddly this year not a single tarpon upon which the fame of Port Aransas was originally built nor a jackfish, one of those most stubborn fighters of the sea, was caught.

Most unusual fish was one identified as a rare threadfish, which was said to look like threads or string, by Philip L. Messurier of San Antonio.

Other winners presented awards at the annual ceremony included first sailfish, E. G. Dunn, Shreveport, La.

Biggest shark, Ben F. Vaughan III, Corpus Christi, a 4-foot, 4¾-inch.

Largest ling, Ray L. Brown, Port Aransas, a 51-pounder.

Biggest kingfish, Harding Black, San Antonio, a 20-pounder.

Biggest barracuda, Mrs. F. C. Caldwell, Corpus Christi, a 24½-pounder.

Biggest and only wahoo, D. H. Lanier, San Antonio, a 41½-pounder.

There were 197 contestants registered, about the same as for the last two events. The water and the weather were perfect, but fishing generally was slow.

The bay-surf division, added again this year, drew just four entries. J. B. Casparis of San Antonio had it almost to himself with the largest red, 9 pounds, and the largest trout, 2 pounds, 9 ounces. Willard Mahavier of San Antonio won the flounder division with a ½-pounder.

Turkey in the Swamp

by CHARLES BOYD
Biologist II

THE MIND OF MAN IS THE most fertile spot on earth, once a seed is sown. The hybrid seed of an idea, nourished and watered with work and care, produces flowering leaves of imagination and may result in a harvest of satisfaction. Such a seed was planted in the minds of Game and Fish Commission biolo-

gists, and the harvest is being enjoyed by the landowners of lower, *lowest* Southeast Texas in Jasper, Hardin and Tyler counties.

Landowners wanted turkey; biologists wanted turkey. But the turkey themselves didn't seem to care. Native Texas Rio Grande turkey released in the Neches area didn't seem to like the heavy morning dew of thicketed near-seacoast Southeast Texas. Transplanted turkey seemed to live out their healthy lives without reproducing.

But an idea was planted. Biologists decided that turkey from places like Georgia—swamp-dwellers—and turkey from the wetlands of Florida might have a chance.

Areas in South Carolina were overstocked with turkey, which were accustomed to marshy, wet habitat. Biologists made a wildlife trade with those states, and soon success began to spring from the idea in the Lower Neches River wild turkey project area.

Project leader Charles Boyd, and Game Biologist Roy Oglesby began releasing turkey (*Meleagris gallapavo sylvestris*) from South Carolina and

Georgia in March, 1959. The total release was 9 gobblers and 19 hens in the Alabama Creek area in Trinity County.

In the Lower Neches River area they placed 14 gobblers and 15 hens (*Meleagris gallapavo osceola*) and over a three-year period released three more gobblers and 11 more hens of the Rio Grande specie (*Meleagris gallapavo intermedia*). This made a total of 71 birds, 57 of which were eastern varieties. They settled back and watched.

Eyes and ears became alert, brows furrowed, and while the serious type of bird-watching was going on, ques-

• Continued on Page 46



State signs warn that the new land of gobblers is not yet ready for a hunting season.



This hen sought the safety of a 60-foot pine when she heard the shutter click.

Biologists released turkeys from swampy states, hoping they would thrive in the Lower Neches area.



MOST TEXANS WOULDN'T BE TOO SURPRISED to hear that another man has been orbited into space via a rocket. They wouldn't get very excited to learn that the ice caps have been explored once more by a manned, nuclear-powered submarine. But when some of them discover that Texas now has a Fly plant which produces weekly up to 75 million live flies for release over a strip of land extending along the Mexican border, they may leap up and pull their hair out.

Housewives, who daily battle with the common housefly, may shudder to envision a fly factory of any kind. However, the flies produced in the plant at Moore Field, near Mission, are of the screwworm variety and are made sexually sterile before they are released. And they are not considered house pests. The production and release of these artificially produced flies promises something great for all Texans—the eradication of the screwworm fly in the Southwest.

Ranchers, who have been realizing something like \$15 million each year in livestock losses, can look for-

the pupae in seven days become flies; the females are ready to lay eggs six or seven days later. Each plant operation is precisely timed to coincide with the normal cycle of the screwworm fly. The one change in the cycle at the plant is that the pupae are subjected to radiation from cobalt-60, which emits gamma rays. The product of the plant's fly cycle then is sterile male and female flies which when released mate with wild flies and each other, producing no fertile eggs and consequently no screwworms. Although both sterile males and females are released in Arkansas, Louisiana, Oklahoma, New Mexico and Texas, the sterile females are more a precautionary than functional portion of the program. It is expected that the males will mate with wild females. The possibility of the plan is due largely to one fact—that the female fly mates only once during her lifetime. Once she has mated with a sterile male, her potential threat has been destroyed.

As the program progresses, barriers of live sterile flies will protect the newly eradicated area from activity of migrating fertile flies. The

cate the screwworm." From that 1938 germ of an idea to the optimistic operation of today lies a long struggle for support. But the result is a delicately precisioned, carefully controlled operation that functions on no small scale.

Security measures and precautions seemingly as comprehensive as those used in an atomic energy plant surround each stage of the simulated life cycle and the entire plant itself, since the escape of just one fertile fly could interfere materially with the plan's success.

Every crevice and opening in the main plant has been sealed. There is just one door for entering and leaving. Entrances for both men and equipment are controlled by a security guard. Workers come and go through an entrance into the guard room. They pass into a locker room to remove street clothes, and then go unclothed through a vestibule into another room to dress in work clothes and shoes before entering the operational areas. All articles and clothing brought into the plant from the locker room must remain, be destroyed or be placed in a 140-

Deadly Relations

by CURTIS CARPENTER

ward to an increase in production. Hunters and wildlife management people can relax knowing that the thousands of deer and other game killed by screwworms each year will be spared once a total eradication has been accomplished.

The eradication plan in principle is simple. The plant houses screwworm flies and simulates normal conditions necessary for their life cycle. The cycle is briefly this: adult flies lay eggs which hatch into larvae (worm state) in 12 to 24 hours; the larvae feed on warm blood from four to six days before they pass into the pupae stage (comparable to the cocoon state of a moth or butterfly);

sterile flies which comprise this living barrier will be released along a line from Brownsville up to the Rio Grande to El Paso and west across New Mexico to the Arizona border.

The ideas for this basically simple principle yet intricately detailed operation originated in Texas with two entomologists, Edward F. Knippling and Raymond C. Bushland. The two U.S. Department of Agriculture employees at Menard jointly began working on the problem in 1938. One day on a coffee break Knippling remarked to Bushland, "It appears that these females mate only once during their lifetime. If we could sterilize the males, we could eradi-

degree-hot room for 24 hours before leaving the plant. Work clothes are washed in the plant each day. Five hundred pounds of clothing are laundered every 24 hours.

All trucks are driven into a screened vestibule before being unloaded. After the truck has been unloaded and has left the area, outside doors are locked. Equipment is brought into a security room and doors are closed. From there it is passed through the hot room and then into the plant. Material being removed from the plant must first be placed in the hot room where it remains 24 hours. Only then is it passed through the security room

and the truck security entrance.

The first operation of the vast plan calls for production of brood flies. In the CAGE PREPARATION ROOM (1)—(See the chart below.)—large screen cages confine fertile flies that provide eggs for mass production. Scores of paper streamers are hung from the top of each cage to provide roosts for brood flies. Some 56,000 pupae in the cages are placed in trays and given special food. Fly pupae for these are obtained from non-irradiated pupae production. From the preparation room the brood fly pupae are taken to the COLONY ROOM (2), which is completely dark and has a temperature of 80 degrees F. and 50 per cent relative humidity. When the pupation has been completed the new brood flies remain on the paper streamers in the cages for about seven days.

The females are then ready to lay eggs and are taken to the OVIPOSITION ROOM (3). A tray containing specially prepared meat kept at 99 degrees F. is placed in each cage for

the female flies. A light bulb attracts the flies to the meat and they deposit eggs there in orderly masses of about 250 eggs each. Two cages are egged and two started every eight hours.

After the flies have deposited eggs, each cage goes into the COLD ROOM (4) where exposure for a few minutes at temperature of 32 to 36 degrees F. chills and immobilizes the brood flies. Then the flies will not escape when the vats are removed. Some of the males and eggs are reserved for brood stock.

In the EGG ROOM (5), egg masses are removed from the meat. Cages are stripped of all paper, flies, and pupal waste which is immediately destroyed in an incinerator. Cages are moved to a wash room to be thoroughly cleaned with steam and water.

Egg masses are weighed and six grams (120,000 eggs) are placed on moist paper in a small container which is taken to the HATCHERY (6). The larvae emerge in about 12 hours. Newly hatched larvae then

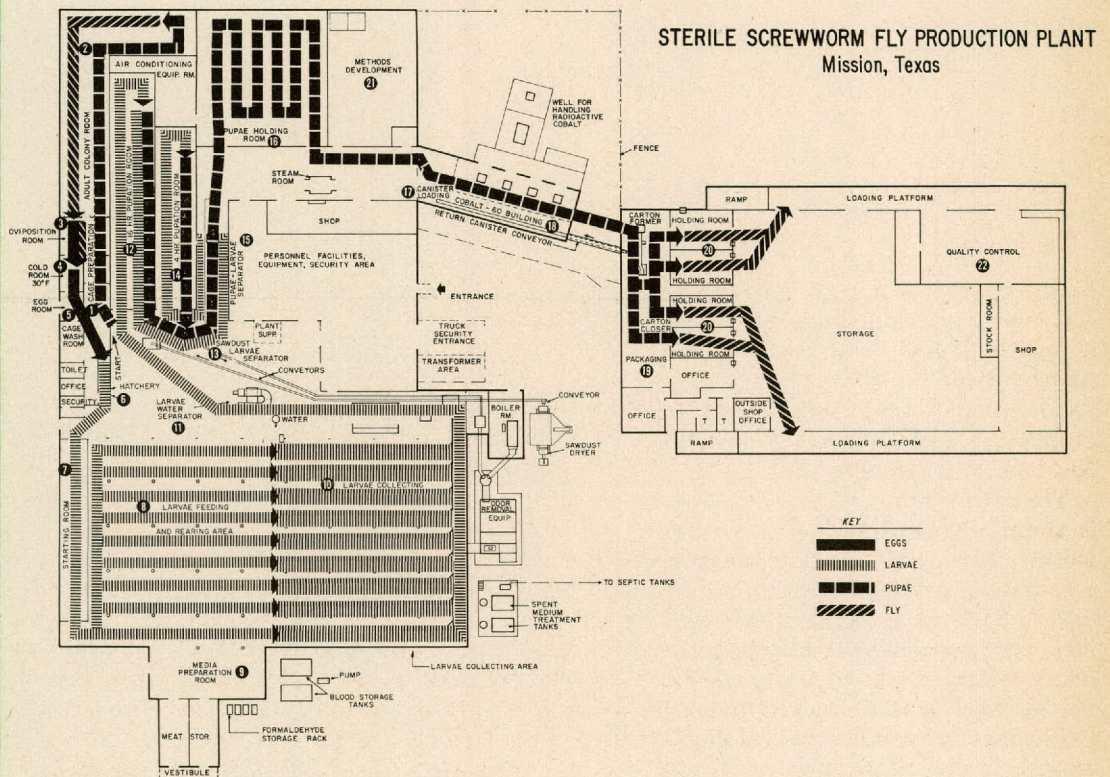
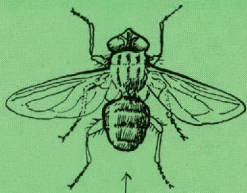
are passed through a security drawer into the STARTING ROOM (7).

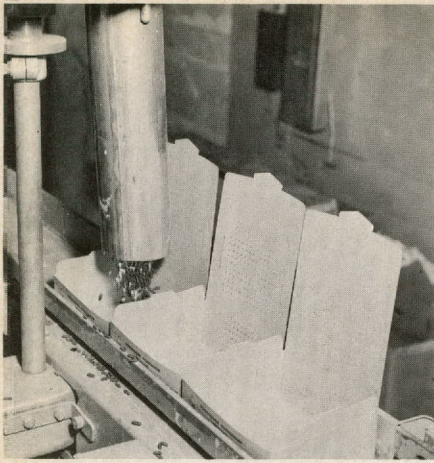
In the starting room, newly-hatched larvae are transferred to trays containing a special starting food medium—ground meat and blood plasma. They remain there for 24 hours at a temperature of 103 degrees F. and 95 per cent relative humidity. More than 3½ million larvae are placed in the starting room every eight hours.

Upon completing the starting cycle, the day-old larvae are moved to the LARVAE REARING AND FEEDING AREA (8). They are placed on a food medium of ground meat, water with a small percentage of formaldehyde and citrated whole beef blood which is held in vats. The medium is kept at 99 degrees F.

In the MEDIA PREPARATION ROOM (9), the medium ingredients are stored and mixed.

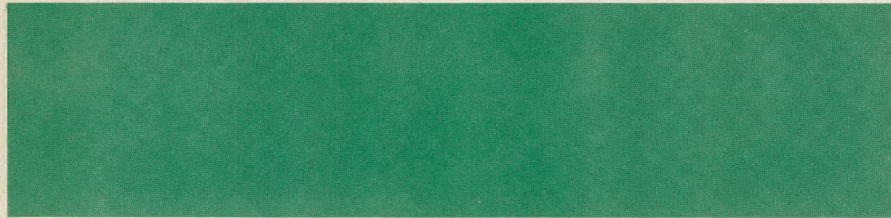
On the third day, many larvae complete feeding and begin to migrate from vat to pupate. Consequently, the racks are mechanically timed to be over the LARVAE COL-





Pupae are placed in cartons and sent to the holding room until they become adult flies. Then they will be distributed via airplane.

LECTING AND WATER CONVEYING AREA (10). Collecting funnels direct larvae to water conveyor troughs under the vats. The water, which flows about 1½ feet per second, carries the larvae to a common conveyor trough.



Water and larvae are siphoned from a collecting pit to the LARVAE-WATER SEPARATOR (11). After the water is removed, three liters of larvae—about 27,000—are placed in measuring trays containing sawdust. Larvae burrow into the sawdust to pupate. They begin to pupate after 12 hours and continue up to 36 hours. Within the pupal shell (a dry, sectioned covering) the maggot becomes a fly. Two PUPATION ROOMS (12, 14) are maintained at 80 degrees F. and 85 per cent relative humidity. After 16 hours the developing larvae and sawdust are placed in the PUPAE-LARVAE SEPARATOR (15). There larvae moving on a conveyor belt are subjected to fluorescent lights with shades to produce graduated shadows. Larvae which haven't completed pupation crawl away from the light toward the shadows and drop back into sawdust trays. There they are allowed four more hours to complete pupation.

Pupae remaining on the separator belt are placed in trays where they are kept at 80 degrees F. and 85 per cent relative humidity and sent to the PUPAE HOLDING ROOM (16) for five and a half days.

Then pupae are ready for irradiation. They move into the CANISTER LOADING ROOM (17) where they are measured into aluminum canisters. Aerated canisters are used to lessen radiation time required and to increase the number of pupae per canister that can be irradiated.

Four casks, containing cobalt-60, are placed on concrete pedestals in the COBALT-60 BUILDING (18) so that any escape of rays at the time the units are opened to receive and discharge loaded pupae canisters presents no hazard to the operator.

An operator, working in a screened fly-security area, places each canister on a mechanical hoist that automatically carries it into position over one of the cobalt-60 casks. The

operator does not again handle the canister. The gate to each cask is automatically opened and plugged when the canister is in position. The canister of pupae remains in the cask long enough to supply 8,000 roentgens of radiation. The automatic equipment then removes the canister from the cask, the gate is closed and the canister is dropped onto a conveyor that takes it to the PACKAGING ROOM (19). Another conveyor returns empty canisters from the packaging room to the loading area.

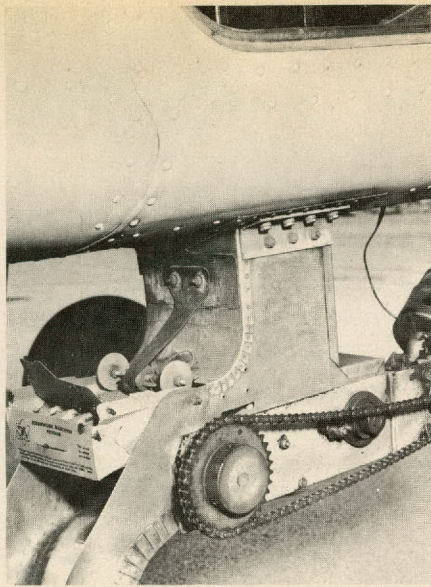
Handling of canisters and pupae following the radiation process is safe because gamma rays pass through materials but leave no contamination.

Safety badges and radiation dosimeters are carried by each operator. Dosimeters are checked before and after each shift.

In carton assembly and packaging area pupae are dropped into cartons from an automatic loading machine. Cartons are automatically closed and



Plant personnel study screwworm infested areas, calculating the number of sterile flies which must be released to overcome normal reproduction activities of the area's fertile flies.



Cartons are opened mechanically by a device on the release hatch of the plant airplane. This operation occurs in air as the flies are released over the screwworm trouble areas.

stored in one of the four holding rooms (20) where the temperature is held at 80 degrees F., 80 per cent relative humidity, for delivery by

truck or plane to distribution centers. Flies may be held at 80 degrees F. for a day or two, or longer at 60 degrees if weather is unfavorable for dispersing cartons by aircraft.

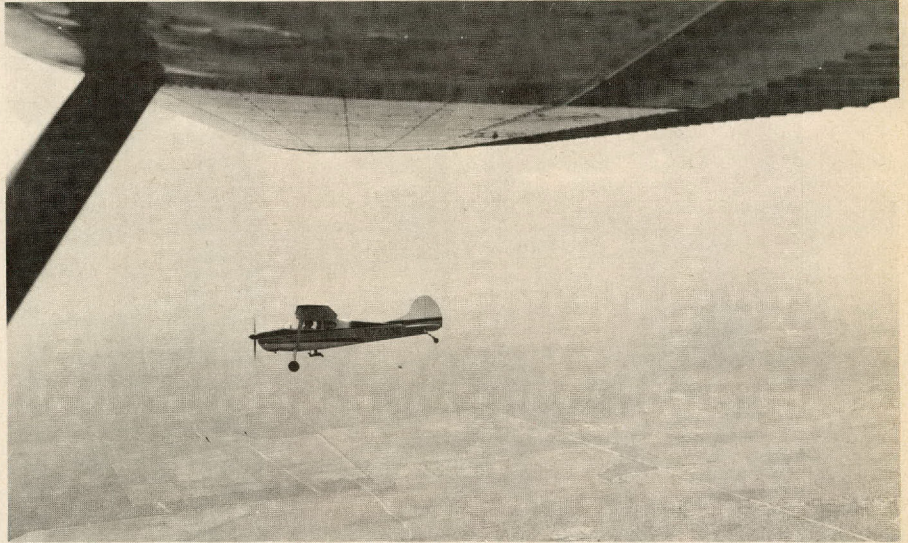
The METHODS DEVELOPMENT (21) section, within plant security, is an important phase of

the operation. Here studies are conducted to improve all phases of the eradication operation.

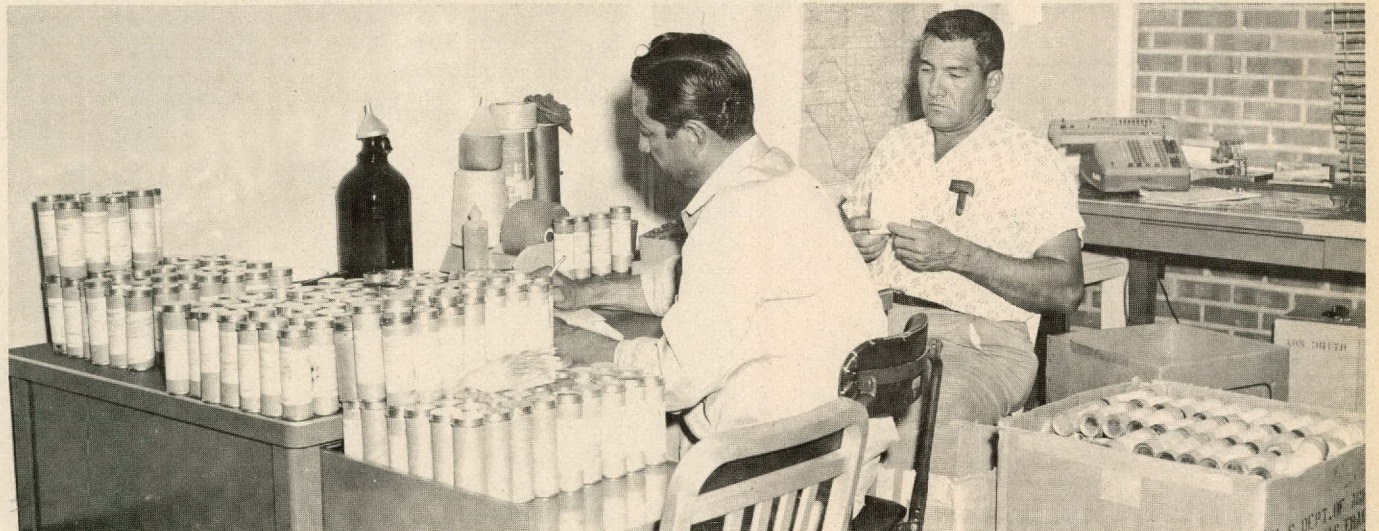
The QUALITY CONTROL (22) section provides a constant check on the mortality rate among flies, sterility, mating and other factors that indicate the effectiveness of program operations.

When flies have emerged and are

ready for release, they are loaded aboard a light plane. The cartons are dropped at intervals in swaths several miles apart and staggered daily so that the entire area is covered. The planes usually fly at an altitude of 1,000 feet, except in areas near the coast. Right now, thousands of flies are being turned loose along the southern border. **



Plant airplane drops cartons of sterile flies which will soon bring relief for cattlemen.

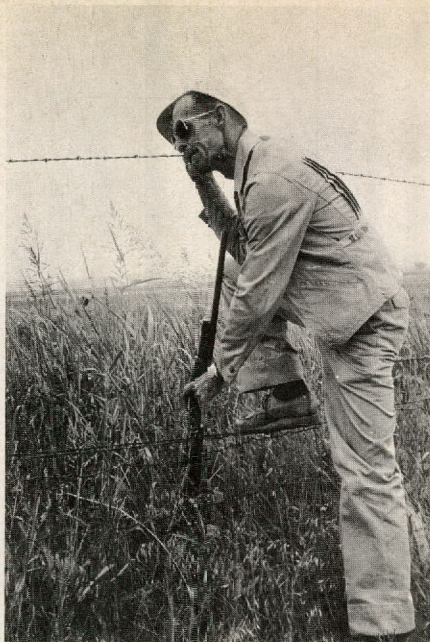


Plant workers sign in samples to be checked as a part of the closely regulated plant operations. Samples of plant-produced larvae and

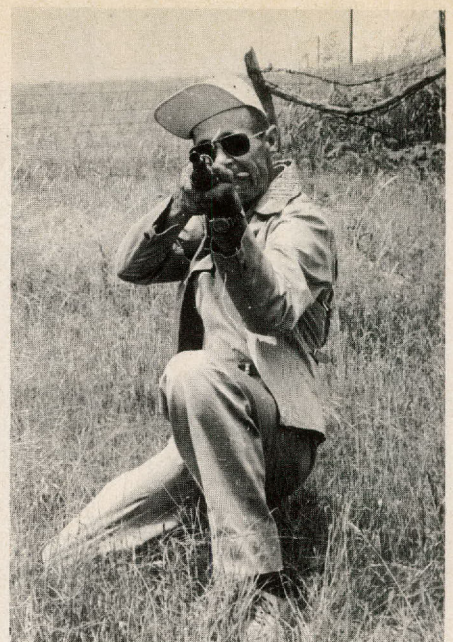
pupae as well as eggs in treated areas are checked periodically to ensure the success of the \$12 million three-year project.



Lookit the doves! Glad I loaded this thing before I left the house. It must be hung!



Don't know who owns this place but wish he'd take the fence down. I'm sure ready to shoot.



This is a startling view from the wrong end of the barrel for a hunting partner nearby.

BANG - YOU'RE DEAD

by W. R. LONG



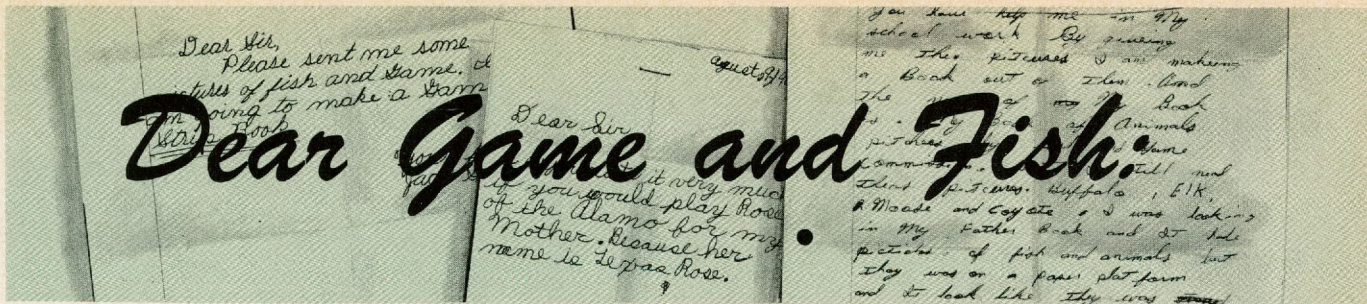
That thing snapped. Must be something hung in the old barrel. I'll sneak a quick look.



Birds are coming in slow now. Believe I'll lean 'gainst this fence for a little rest.



Resting place of a careless hunter who didn't THINK before he leaned, looked and pulled.



by ANN STREETMAN

EVERY DAY the Information-Education branch of the Texas Game and Fish Commission receives a large number of letters from youngsters of the state. Some are printed carefully, bringing to mind the picture of a little boy meticulously making every stroke with a large black lead pencil. Others display the proud third grade script which often resembles a scrawl. Some are quite good—letter perfect.

Most of the letters request colored pictures of the Orville Rice series available in a package of five to all students of the state. Commission policy requires individual students to write instead of letting teachers request in bulk packets for their students. The aim is to make the request an educational experience for children.

Although most of the letters do request these pictures, some contain much less conventional inquiries. For example, several have asked for the rules of games. Just recently one little fellow wrote, "I would also like to know the rules to poker, checkers. But most of all domoes." Not a bad line of reasoning . . . games . . . Game and Fish Commission!

Another unusual request said, "I appreciate it very much if you would play Rose of the Alamo for my Mother . . ." At the bottom of the letter was the assurance, "I always listen to KENS." On the envelope was clearly penned, "Texas Game and Fish Commission, Austin, Tex-

as." It must have been a case of mixing letters and envelopes.

Some of the requests are not so inherently unusual but are amusing because of their breadth. One youngster wrote, "Please send me all the free material you have about Texas and our nation for a project I am working on—Project Texas."

For many the request to the Commission is their first attempt at a business letter. Scores of youngsters quickly and efficiently state their business, as this one, "I would like to have some bird pictures. Send me any bird pictures you have. I would like to get them as soon as possible."

Others, however, begin with a businesslike air, but drift into a more chatty tone. One wrote, "My name is . . . I am 11 years old. If I may ask may I have some of those gome and fishing picture. I hope you like my litter. I try my best for yow. I think I better go now because I have nothing to say. Good-by, thank yow for everthing." One offered, after a polite request, "I have a opossum, and if you would like to see him, come on down."

Some end as friendly discourses on home, family, school and hobbies. Here is a newsy one: "I would like to have a picture. My teacher told us about you. And I like the Idea of it. So would send me the picture. I will send you a lettle every month. A about my family. Do you know what is going on in my house right now. My brothers are working on the

bicycle. We have three bicycles. My brothers have a bicycl I have a bicycl. My Mother has a ear ache. I have a tooth ache. My Daddy is sick. he has been sick for two or three weeks."

A little briefer one but just as well meaning was "I hop you'll are doing fine in business . . ."

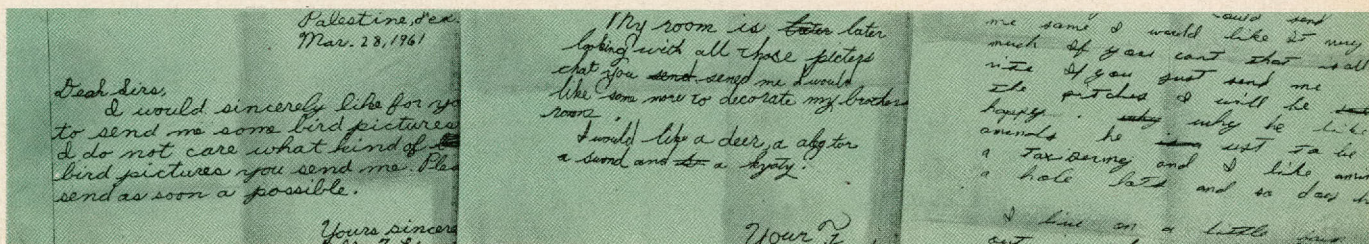
The salutations children choose vary widely. Some of them use a businesslike "Dear Sir," "Dear Sirs," or "Gentlemen." Others choose "Dear Friend," or a simple, direct, "Dear Game and Fish Commission." Perhaps the most original is "Dear Mr. Who ever you are." It got the job done.

The phraseology and word choice are often far from conventional. Here are a few: "I would like very much to have a packet from your company." "I would like to have some Game and Fish Commission." "Please send me 1 of your thing with pictures of animals." "Please sent me some pictures of fish and Game. I am going to make a Game Strip Book."

The mailbag sometimes contains letters from children who remember their friends or brothers and sisters in their requests for pictures. This little fellow was particularly thoughtful when he wrote, "Would you please send me two copies of each picture for me and a friend who has polio."

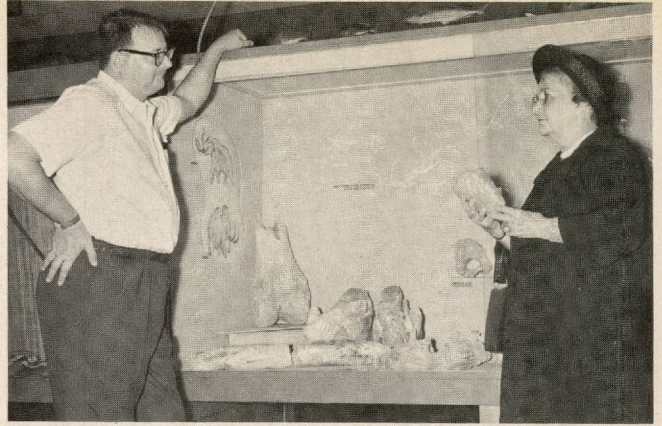
One letter did not contain a request, but shared with the Commission a poem, "America."

• Continued on Page 41



No Dark CORNER

by JOAN PEARSALL
photos by L. A. WILKE



Albert Heine, director, shows visitor Mrs. B. B. Crow of Corpus Christi the museum's collection of teeth and bones from prehistoric animals.

IF ANYONE EVER HAD THE idea that a museum is a dim, dusty place that only a dull sort of person would want to poke around in, the Corpus Christi Museum would soon dispel that illusion. Dynamic is the word for this young endeavor. Only four years old, it now has a vigorous, flourishing program that reaches out to the whole community.

Its most outstanding specialty is supplementary education to the regional school districts. A familiar sight in Corpus Christi is a group of eager children being lined up outside the museum building. In store for them is no boring ordeal, but a well planned and stimulating experience. They'll learn of such things as Indians, dinosaurs and wildlife conservation, gaze at dioramas and cunningly contrived exhibits. Their teachers, too, will be studying the use of museums in classroom teaching.

More than 500 classes came to the Museum last year and 200 were visited in their schools. Although 95 per cent of these groups are elementary classes, the range of educational services offered includes preschool as well as high school and college. The class appointments are made well in advance, the scheduling being as complicated as that of a railroad timetable. A person who has an important role in the system's being so effective is the School-Museum Coordinator, who is paid by the public schools and assigned to work at the Museum. She does curriculum research, schedules classes and field trips, teaches special topics and advises the Museum on teaching methods and school matters.



Joanne Thompson, museum-school coordinator, examines a group of rocks and minerals, which are a big help to many Boy Scout troops in the rock-poor coastal plains area of the state.

The other two paid members of the staff are the Director and Assistant Director. It would be impossible for the three professionals alone to conduct such an ambitious educational program, and they have found the answer to the problem in the approximately 40 volunteers on the staff, who belong to the Museum Guild or the Corpus Christi Junior League.

These ladies are treated as regular staff members, with all the privileges and all the duties. They devote the whole of the time they volunteer to education work for the Museum; there are no social gatherings or fund-raising. Their work is one of the Museum's most important tasks. It is remarkable that these lay people, without previous specialized training, can undertake to teach so successfully, where the topic can sway from Eskimos to insects, from mastodons to meteorites. Long before the stream of classes starts in September, staff and volunteers meet in a two weeks' workshop. There are general lectures and field trips, and every item and exhibit on display is discussed, as well as suitable answers to any possible question a child may ask. The questions of the volunteers are answered until everyone is satisfied. As well as this important two weeks, there are monthly briefing sessions during the school year for the ladies' guild, and each day before the first class arrives the two volunteers on duty have a half hour's discussion with the director.

Ways have been worked out to keep the full attention of the children while their classes are in progress. The lining up outside is important, as a distinct difference has been found in the behavior of groups that just pour in and those that are led in, with the idea from the start that what is going to happen will be orderly and definite. There is a time set aside for free browsing, so the children can subdue their wanderlust. The Museum keeps its doors closed to the general public in the morning while school classes are present. This guarantees undisturbed teaching, without conflicting background noise, and even

allows the teacher to open cases to permit touching or handling.

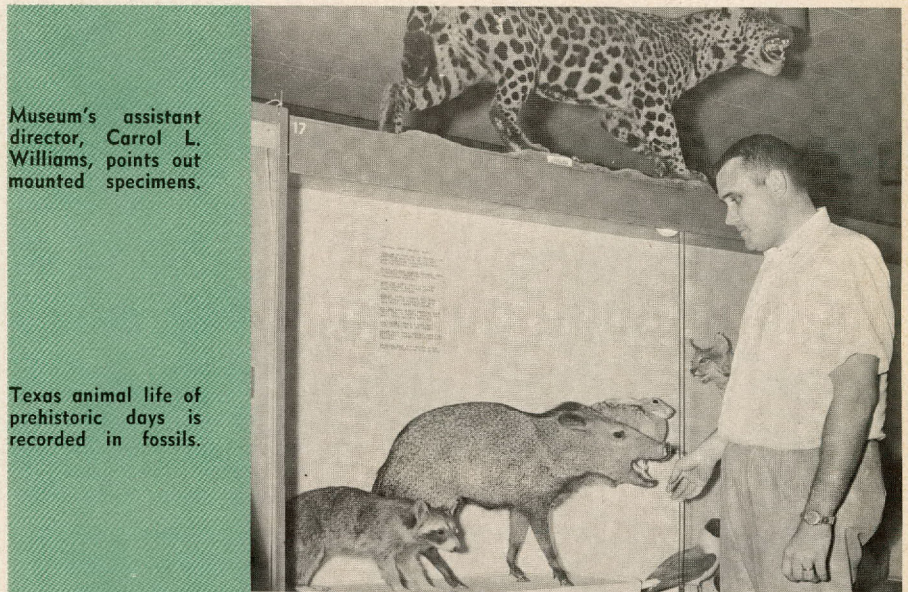
Children are not the only ones to benefit from the educational program. Other offerings of the Museum include lectures for adults, historical and natural history exhibits for the general public, and a weekly schedule of educational TV programs. The staff has judged at science fairs, and helped with mosquito control research. Other organizations have been helped with exhibits; shell and rock collections have been given to other museums and to scout groups, and counseling and information service is provided. There are also many activities planned in the summer.

All of these things make the Corpus Christi Museum a living, vibrant factor in the community. It is not

interested in just having collections that gather dust, but wants the public to participate and to learn. Having a limited budget, there cannot be money for expeditions or for buying articles for the exhibits. The public's generosity must be relied on for that, and this generosity is well repaid.

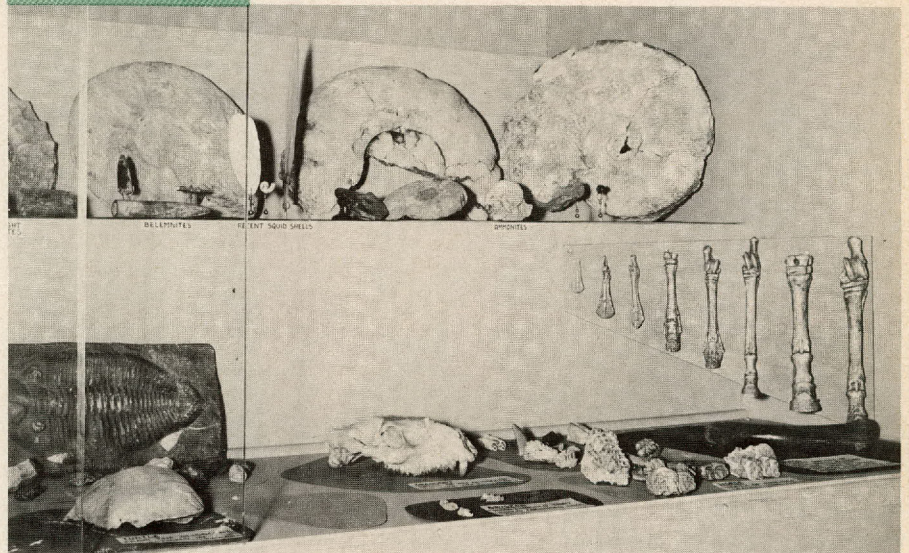
A small miracle has been wrought in the few years the Museum has been in operation. Even greater achievements are hoped for the future. Yet, although it is rich in human resources, the institution has need of an increased source of revenue for operating funds, and for an adequate building. About one half of the current budget is provided by the United Fund, but it has been

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Museum's assistant director, Carrol L. Williams, points out mounted specimens.

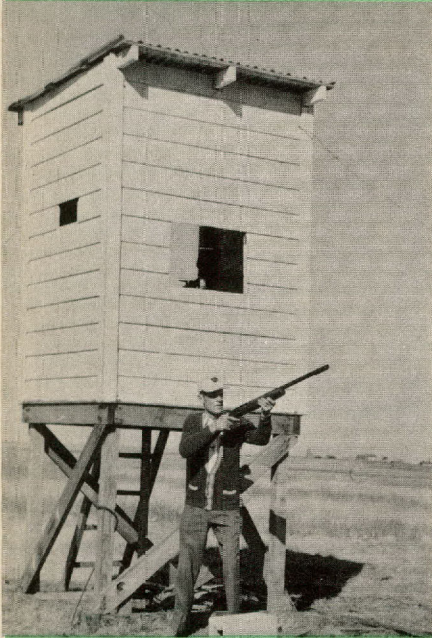
Texas animal life of prehistoric days is recorded in fossils.



Sportsmen Are Enjoying

by W. R. LONG

I&E Officer, Region III



With only a relatively small investment, skeet fields can be built at the edge of any town. This is a small skeet club's "high house."

ANOVICE SHOTGUNNER has to have a place to begin, and a seasoned shooter, after he has tried everything, must have a place to spend a few shells when season's closed on birds. Skeet, with its availability, its competition for amateur and pro, its enjoyment in shooting skill, is supplying the answer to both demands. The game was born years ago, was active, then became dormant, but now is reaching maturity and gaining popular recognition.

Targets on the field are thrown from traps, either electric or manually operated, from a high and low house at each end of the range. The field consists of eight shooting stations, the first seven of which are spaced equidistant around an arc of a circle, and the eighth is halfway between stations one and seven, which are located at each end of the arc.

The usual squad is composed of five shooters, but the number may vary. It is possible for one shooter to compete with himself, or for more than five shooters to enjoy the game at once.

Skeet fields are dotting Texas, as well as other states, like snowflakes on an asphalt highway, and each highway on the map will deadend into a gun club or public range within minutes' drive from home. Ladies and gentlemen from 8 to 80, grandmothers and grandsons, are competing, enjoying, winning and losing and all are loving it!

Men are taking their wives, and usually enjoy showing them that papa is still boss somewhere, even if he isn't at home. But often they come home red-faced when the wife hefts a skeet gun, closes both eyes on every shot, and snags a coveted trophy in the women's class—some-



Skeet enthusiasts await their turn to shoot at the first trap. Strangers and friends alike enjoy the keen competition.

A Passion For Pigeons

thing papa hasn't yet done in the men's class. They both enjoy it though, and next Saturday finds them on the range again.

When the round of skeet begins, the first shooter takes his position at station one and shoots at single targets, one from the high house and then one from the low. The next shooter comes up and the procedure is repeated, with the squad going from one station to the next through the number eight position.

The squad then returns to station one for the doubles; that is, two targets are released simultaneously, one from each house. The proper procedure is to take the outgoing target first and then swing on the incoming. As the saying goes, this "separates the men from the boys," but shooters are never too young or too old to enjoy it. After shooting doubles at station one, the contestants do the same thing at stations two, six and seven.

The first "miss" on a bird allows the shooter a free, or "option" shot. The round is completed after 25 shells, a full box, are fired from the correct shooting stations. The price of targets vary from modest small ranges, about \$1, to the more lavish and elaborate concreted ranges where the price seldom exceeds \$1.50 per round of 25 targets. A husband and wife team can enjoy an afternoon of skeet shooting for a few dollars—fewer dollars than required for an afternoon on a lake water-skiing, considering the initial investment in equipment.

There are game rules to learn and rules of etiquette to observe. Fundamentals, such as proper gun position, figuring line, flight and trigger pull, all come with practice. All shooters refrain from conversation while on the firing line, in deference to members of the squad who are concentrating on the wind velocity, proper lead for the next shot and avoiding distractions that might cause them to swing improperly on their next target. These rules, written and unwritten, are quickly

learned by the watchful eye and assistance from other squad members.

Father may shoot with son, or stranger with stranger, although there is generally a feeling of fellowship that results in introductions and handshaking. Shooters are seldom strangers by the time the game is over.

The parent organization, the Na-

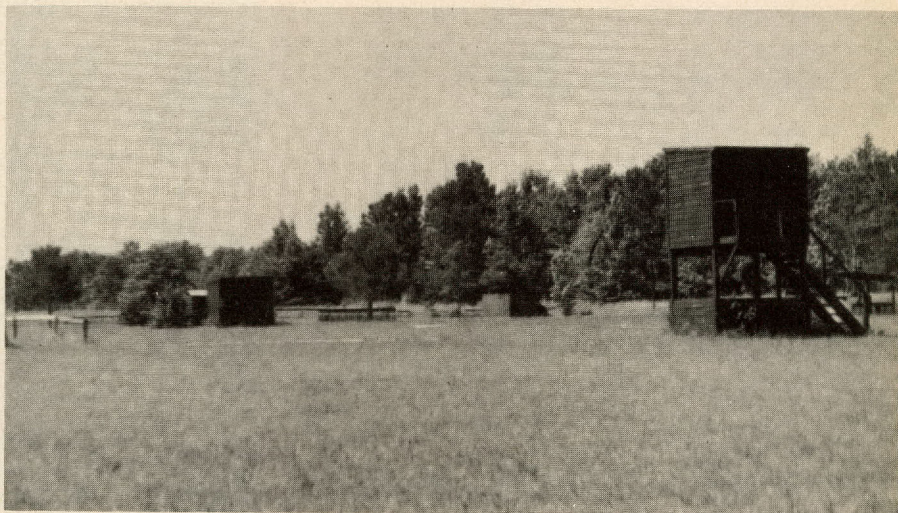
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Sportswomen ranging in age from daughters to grandmothers enjoy this off-season shooting as a sport and excellent target practice.

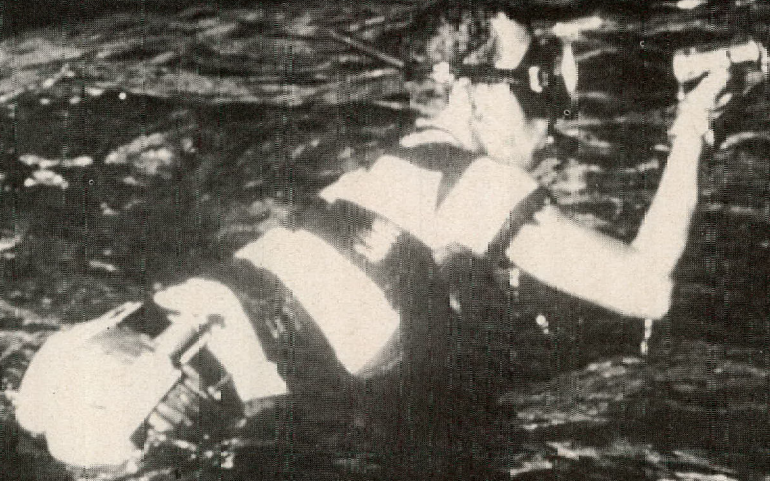


This is one of 12 ranges operated by the Dallas Gun Club. At these modern ranges the club offers lessons to willing beginners, charging them only the cost of shells and clay pigeons.



Like many resorts, Kickapoo Lodge on Lake Texarkana has skeet layout open to public.

Students of the Sea



by LOUIS S. KORNICKER
Department of Oceanography,
Texas A. & M. College

One student comes up for a momentary rest from his underwater assignment. He is cutting shallow water sediment samples on each dive.

GEOLOGICAL OCEANOGRAPHY is one of five scientific disciplines that may be taken by a student working towards the Master



Students aboard the *Hidalgo* pull in a sediment sample from bottom of the Gulf of Mexico.

of Science or Doctor of Philosophy degree in oceanography at the Agricultural and Mechanical College of Texas at College Station. Other scientific disciplines are biological, chemical, physical, and meteorological oceanography. All options are offered in the Department of Oceanography and Meteorology.

The prerequisites for admittance to graduate work in geological oceanography are having completed undergraduate work in high standing and having studied mathematics through integral calculus, chemistry through quantitative analysis, and one year of college physics and biology.

In addition to geological studies, a student in geological oceanography takes courses in physical, chemical, biological, and meteorological oceanography to obtain a broad back-

ground against which to conduct geological research in the oceans.

Oceanographic experience is obtained by taking a course entitled "Sea Laboratory Techniques," given aboard the 136-foot *Hidalgo*, which is operated in the Gulf of Mexico by the Department of Oceanography and Meteorology. A larger vessel capable of being used in conducting research in any part of the world is expected to be in operation within a year. In addition to formal training aboard ship, students take part in scientific expeditions on the *Hidalgo* and other vessels. Several students now are conducting research in the Antarctic aboard ships operated by the United States and Argentina.

The Department of Oceanography and Meteorology is housed in two large buildings on the Texas A.&M. campus. Since the campus is about 150 miles from the Gulf of Mexico,

the department also maintains a laboratory at Galveston, which in addition to being a research facility conducts courses in oceanography during the summer months.

Research in geological oceanography at Texas A.&M. is mostly centered around the Gulf of Mexico and includes all phases of geologic research. Studies have been conducted concerning the transportation of sediment into the Gulf by the Mississippi, the Brazos and other rivers, the formation of barrier islands along the Texas coast and the distribution of the various types of sand, clay, mud and rock that floor the Gulf. Geophysical investigations gathering data used to interpret geologic structures beneath the Gulf are also being conducted.

A major undertaking in recent years has centered around the Yucatan Peninsula of Mexico. The Campeche Bank which extends underwater from the Yucatan Peninsula is a limestone platform similar to the platform west of the Florida Peninsula. Millions of years ago limestone deposits such as these were more widespread than they are today and covered much of Texas. By studying the processes currently at work in areas where limestone is being formed today, the geological oceanographer gets information useful to the land geologist working on ancient rocks.

The Campeche Bank also contains many living coral reefs. These are being studied jointly with geologists from the University of Texas and

scientists and students from many other universities. These include the University of Corpus Christi, Columbia University, the University of Wyoming and the University of Rhode Island. Mexican institutions have also taken part. They include the Institute of Geology, University of Mexico and the Escuela Nacional de Ciecia Biologicas.

Since students take part in scientific expeditions aimed at solving varied problems in deep as well as shallow water, in limestone-forming areas as well as the muds of the Mississippi delta and the sands of Texas' barrier islands, the graduates of Texas A.&M. are well equipped to take a leading role in oceanographic research. Since its inception in 1949, the Department of Oceanography and Meteorology has awarded 22 Doctor of Philosophy and 74 Master of Science degrees. The recipients of these degrees now hold responsible positions in universities, industry and federal and state governments.

A survey conducted in 1959 by the Committee on Oceanography of the National Academy of Sciences—National Research Council revealed the need for an acceleration of the national effort in basic and applied



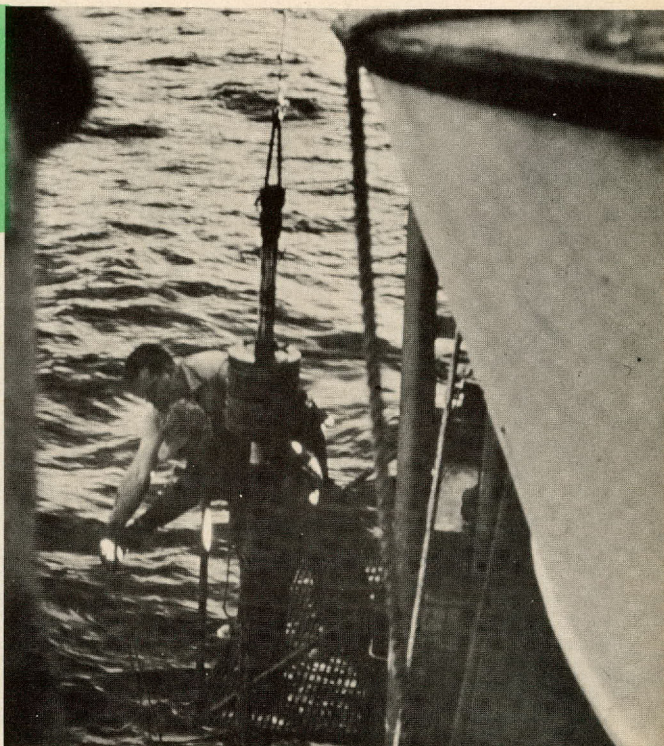
Research takes the students and teachers to the Yucatan Peninsula. Dr. Robert L. Falk examines some geologic structures on Isla Desaparecida, Alacran Reef, Campeche Bank.

research in oceanography. The organizations principally responsible for oceanographic research in Texas are the Texas Game and Fish Commission, the Institute of Marine Science of the University of Texas and the Department of Oceanography and Meteorology at Texas A.&M. These three organizations must work together with the people of Texas in accepting the challenge to discover more of the secrets held by the vast body of water forming the southern border of the state. **

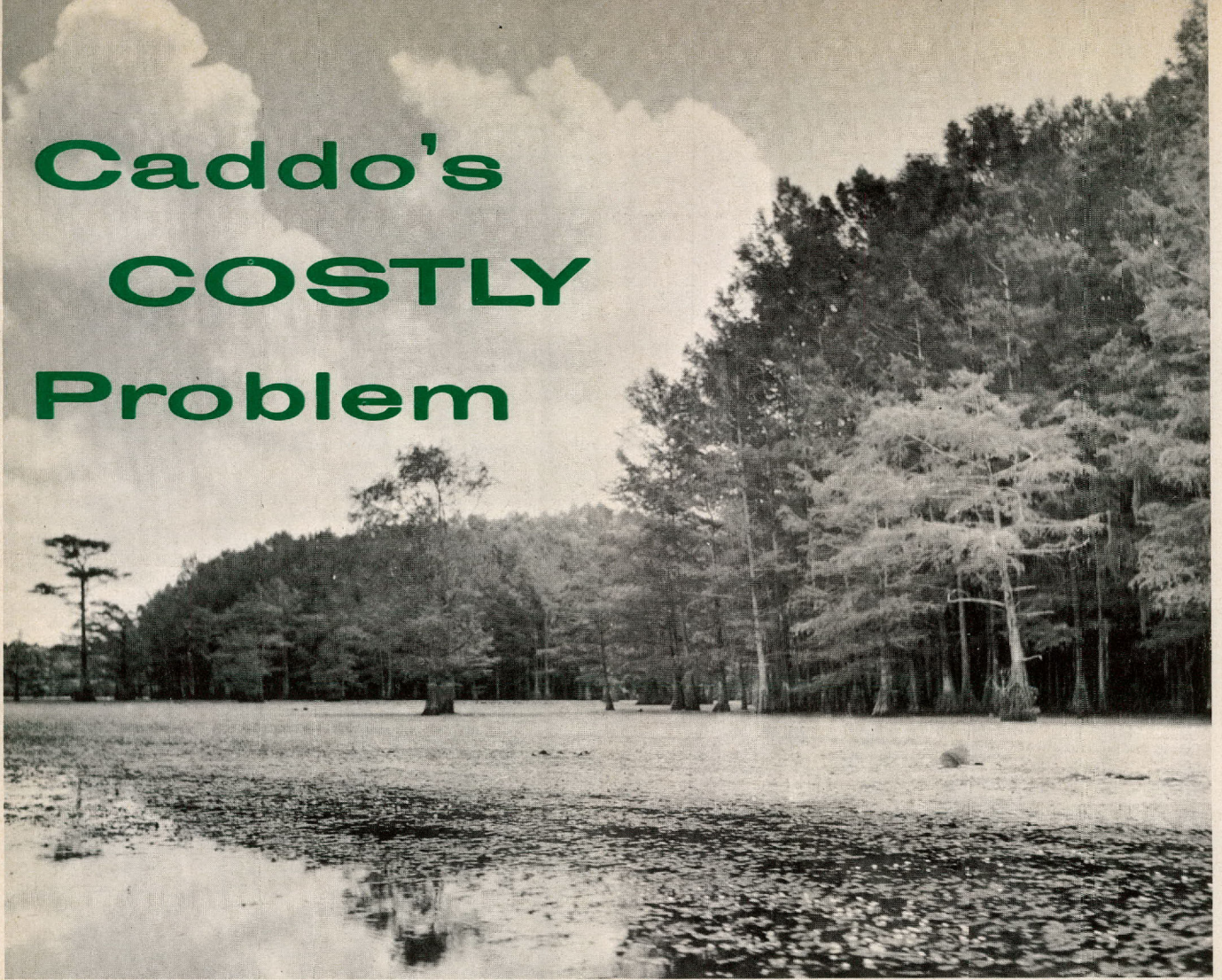
Aboard the Hidalgo, the students lower a coring tube to get sediments from the floor of the Gulf.



University of Texas student unloads equipment on Alacran Reef, Mexico.



Caddo's COSTLY Problem



FASCINATING, MYSTERIOUS CADDO, one of Texas' most beautiful lakes, is being strangled by a monster of nature.

New dams across rivers and streams flowing into the giant lake eliminating the raising and lowering of water, the influx of silt that has been settling in Caddo and the translucent, acid condition of the water have all aided the growth of aquatic vegetation, commonly called coontail. It also is known as elodea, water milfoil and bladderwort. This growth has spread so rapidly that Caddo's water is inaccessible in most areas at this time of year as far as boat transportation is concerned. Only by raking and dragging out a few boat roads is much of the lake open even to small craft.

Where the lake, lying half in Texas and half in Louisiana, used to be 20 to 50 feet deep when the many small lakes were combined by an earthquake in 1811, it now is four to six

feet deep. This shallow water aids the rapid spread of vegetation, and the lake's size prohibits any fast or cheap cure.

There are still hardy fishermen who have good luck on Caddo and enjoy its wild and primitive attractiveness.

Such localities as Hog Wallow, Alligator Bayou, Turtle Shell and Tar Island look more like they would be best for cattle grazing instead of fishing because of the thick growth.

A wild, primitive paradise, Caddo is ageless in sheer natural beauty. The first trip to the lake leaves the visitor breathless with the scenic majesty of cypress trees and Spanish moss which probably were present when the first Spaniards stumbled upon the area during their wanderings in 1536.

As for a quick and painless solution, there is none. The vastness of the lake prohibits most known meth-

ods of treatment. However, this isn't stopping the Texas Game and Fish Commission and other interested persons from seeking relief for the people in the area and for restoring the lake to its former prominence.

Charles Gray, Inland Fisheries Supervisor for Region III of the Game and Fish Commission said, "Although we don't have an answer and don't know anyone yet who does, we are trying to find a solution and some relief."

The Tyler-based biologist said there are three ways to combat the growth: water level fluctuation, chemical or mechanical treatment.

The plant can be killed with chemicals but the cost is prohibitive. It costs about \$10 per acre for treatment and there are about 35,000 acres to be treated. Besides the cost involved, such treatment would not last more than two or three years.

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SAWGRASS, POISON IVY AND mosquitoes are all part of stream fishing in Texas, but a lot of misery can be offset by gurgling water and beautifully clear deep pools that harbor scrapping bass, channel cat and large sunfish. Almost anywhere in Texas there are creeks and rivers within easy driving distance that have splendid fishing long overlooked by most sportsmen.

Rivers are continually flushed by annual rains, leaving them fresh and conducive to good fish production, but many old lakes remain static and become less and less productive each year. Only a few rivers drain West Texas; consequently, each has a large watershed that provides ample water to keep streams in good

kayak fishing is that currents wash the light craft out of position so that you have to paddle as much as you fish. Wading also has disadvantages. Many beautiful holes are so heavily rimmed with brush that fishing from the bank is impossible and the water is too deep to wade. But a combination of small boat and wading shoes will fit most situations.

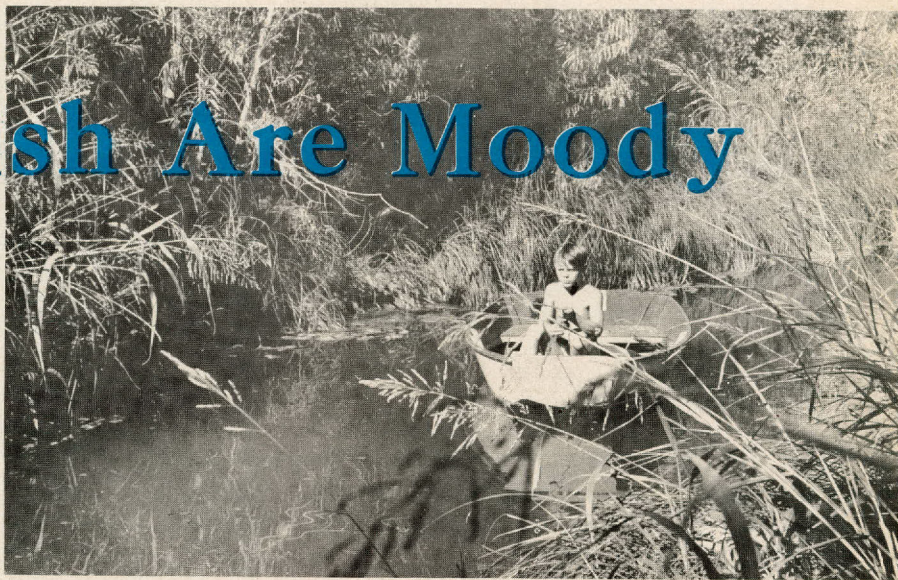
River fish are moody, just as lake fish are, but generally a fisherman can change from artificial to live bait and bring fish charging from cover with blood in their eyes. Since you are either wading or riding in a cramped kayak, you haven't room for minnow buckets, bait boxes and

hoppers, an old tobacco can with holes in the top is satisfactory.

Artificial lures are less trouble to carry, but if you are a meat fisherman, live minnows and frogs are always the most productive bait. Hook a minnow through the lips with the barb up on a No. 10 hook. Larger hooks impair the minnow's natural movement and are more easily caught on brush and reeds. With light spinning tackle, a medium sized minnow can be cast with accuracy and retrieved repeatedly. On occasions the same minnow has been used for catching as many as three fish. Frogs and grasshoppers should be weighted with split shot so they

River Fish Are Moody

by NORREL WALLACE
I&E Officer, Region I



balanced condition most of the year. One such river is the South Concho that joins the North and Middle Concho forks near San Angelo. In spite of an abundance of undesirable carp and sucker even ardent trout fishermen gasp in disbelief when they see the beautiful water and the strings of fish it produces.

In many places the South Concho is only a few feet wide, but here the water is swift and deep. Many small bass and channel cat lie in wait for food below these fast runs ready to take a spinner or fly with enthusiasm like that of high altitude trout. Immediately below each stretch of fast water are long, slow pools from four to eight feet deep that are haunts of larger bass, channel cat and large sunfish which hide under cutbanks and mats of aquatic vegetation.

Small boats of kayak or pram design are fine for river fishing. They are light and easy to carry over portages and will scoot easily through shallow rapids. One drawback to

other tackle, but live bait is readily available on any stream. Grasshoppers are usually thick along the banks. Minnows are swarming in shallow riffles and aquatic insects are stuck to submerged rocks and rotting wood. A small dip net is all you need to catch such live bait. By lining an ordinary landing net with one-fourth inch cloth mesh a versatile tool is created. This mesh adds little weight and you can use the same net for landing bait as well as large fish.

To keep bait alive for reasonable periods, a small net sack four by eight inches can be easily made for holding minnows and aquatic insects. When you wade the sack trails in the water, and in a boat it hangs over the side. Bait kept in this fashion will last a long time. For grass-

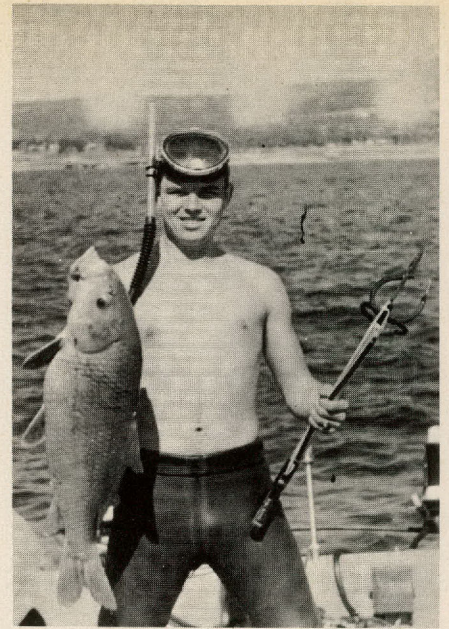
sink below the surface. Top water lures are fun to use, but the bait that is underwater will catch three times as many fish simply because fish feed underwater most of the time. For a starter you might fish with top water baits, but if they are non-productive, sink 'em and watch the action pick up.

In small clear streams, fish can see movement along the banks with surprising clarity. Fishermen who walk, wade or float up to a small hole seldom catch many fish. Always remember that fish you can see have certainly seen you and likely won't grab your bait. Cast into every hole, no matter how small, before approaching it. If curiosity is one of your problems, look into a hole *after* you have dropped your lure, not before.

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Roy Green begins the long job of weighing in the rough fish taken by the divers.



Jim Aden of Longview took a 20 lb. 8 oz. buffalo, which was the largest of the day.

Scuba divers combine recreation and conservation . . .

Rough Fish

A CASUAL APPRAISAL OF THE 1,220 pounds of fish taken by divers of the Southwest Council of Diving Clubs at Lake Travis last April in the Longview Scuba Club's contest, might have convinced the observer that spearfishing is unnecessarily depleting stock in Texas lakes. A closer examination, however, would have revealed carp, gar, shad, buffalo and other rough fish which were removed from the lake to improve the quality and quantity of game fish.

Divers of the Southwest Council work hard at conservation for it is one of the reasons for the Council's existence and ties in closely with the two other points in its program—safety and legislation.

The Council was formed June 7, 1958 at Possum Kingdom Lake with more than 500 divers present. Three years later, the Council represents 42 clubs throughout Texas, northern Louisiana and eastern New Mexico, and has approximately 500 members. They are affiliated with the Underwater Society of America and participate each year in the national spearfishing competitions sponsored by that organization.

The Southwest Council sanctions 10 competitions yearly. Three of them are non-spearfishing in which competition is Brawn-Brain and Dexterity and termed triathlons. These contests determine representatives for national competition. Awards are made in two divisions, free and scuba diving. The contest sponsored by the Longview Scuba Club in 1960 had 160 divers qualifying—a record.

To the uninitiated, diving with any kind of equipment is classed as scuba diving. Those in the know realize that skin divers or free divers wear only mask, snorkel and fins. Scuba divers are equipped with a complete suit and carry tanks of air, as the name itself implies, for Scuba means "Self Contained Underwater Breathing Apparatus."

Although both types of diving require practice and perseverance, it is generally conceded that free diving requires the greater ability because one must be an expert swimmer and have great physical stamina to submerge long enough to track and spear fish. Scuba equipment enables a diver to remain submerged for a much longer time and

is therefore in great demand for rescue work, for treasure hunting, for underwater photography and study of ocean depths. Great care must be taken in surfacing when a diver has been submerged for a long period of time or at great depths; otherwise, he will get the "bends." Much more dangerous but little known is air embolism which can occur in as little as six feet of water provided care is not taken.

The many safety aspects of diving are repeatedly stressed to both old and new divers. Should any diver violate safety regulations or rules of good sportsmanship he is barred from competition and is liable to expulsion from the Council. Every diver in the Council must know the safety rules and pledge himself to observe them.

Third point in the three-fold program, legislation, is most important not only to divers but also to all sportsmen. In 1957 the first bill permitting spearing of rough fish in Texas was passed, largely through the efforts of Hal Lattimore, Fort Worth diver and attorney, and his colleagues of Fort Worth and Dallas. Two years prior, an emergency

measure to control the increase in population of rough fish in the Highland Lakes of the Colorado River had permitted spearfishing. So successful were the results that it was not difficult later to pass the bill in Texas. In 1961, divers removed 3,400 pounds of rough fish from Texas lakes. The largest fish brought in was a 36-pound gar. The year before had seen the capture of a 99-pound gar. It is not only the removal of these huge marauders themselves that is so important but also the prevention of their spawning by destruction of the roe.

If there were a fourth point in the divers' program it would no doubt be "recreation." No group has more fun at a get-together than a group of divers. Once a month they meet at a lake—Travis, Possum Kingdom, Bistineau, Whitney—or perhaps on

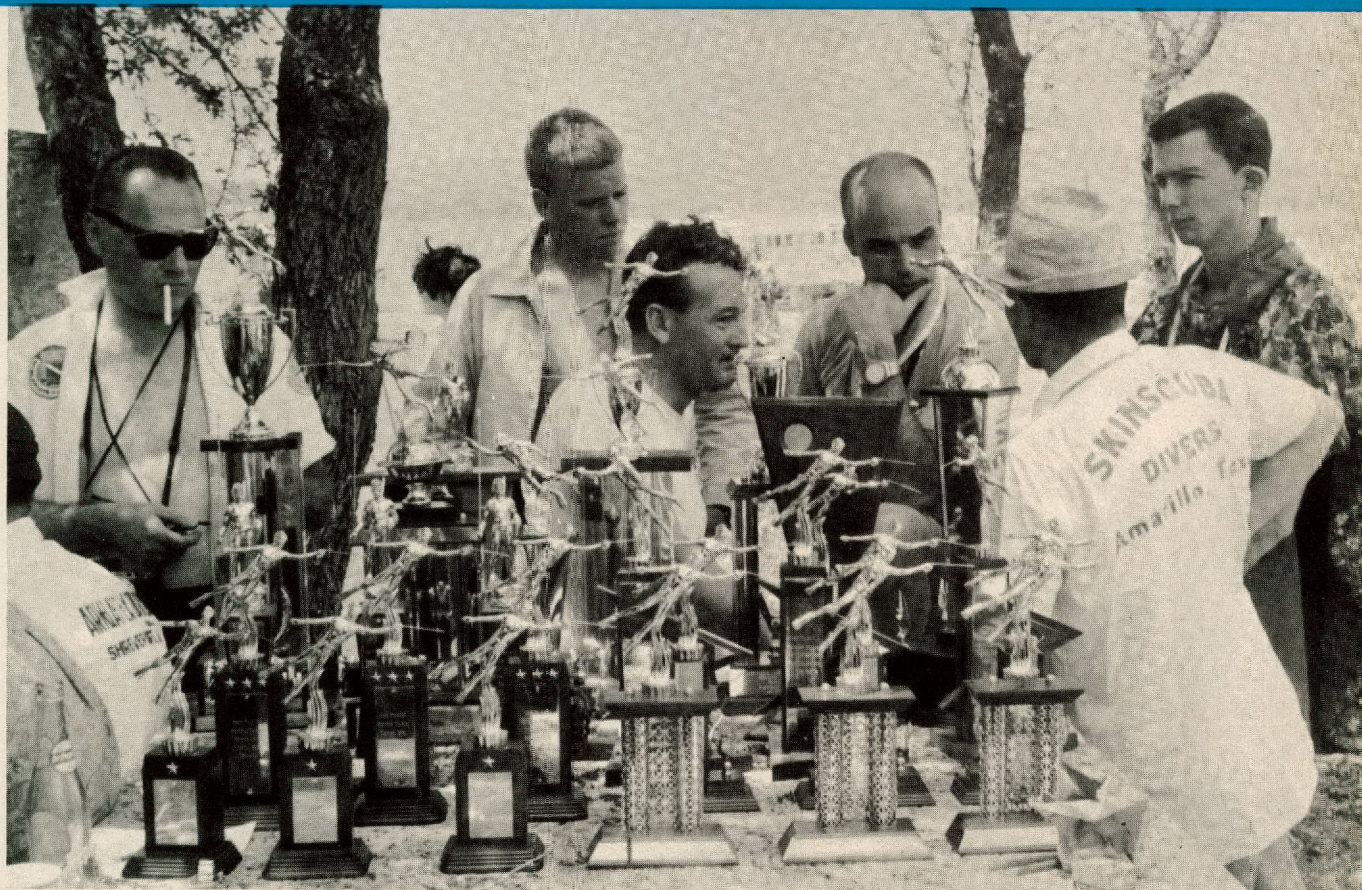


Here is a large part of the 1,220 pounds of buffalo and carp that were taken during the contest. All the rough fish taken in this sports-conservation effort were heavy with eggs, ready to spawn.

• Continued on Page 43

Bonanza

by DICK WILGUS
Secretary
Southwest Council of Diving Clubs



Awaiting the results of the day's competition, divers gather around the store of contest trophies and discuss water conditions at various

lakes, availability of fish, etc. They are Luther Swift, George Cultra, Hans Markinsteen, Bill Flagg, Don Beer and Bob Hollingsworth.

Grande Open



ing

by CHARLES M. HUNTER

IT IS DIFFICULT TO CONVINCE a fisherman that there is plenty of good fishing to be had in far West Texas. All he can think of is an arid country for miles on top of miles.

Gradually the news is leaking out that there are plenty of open waters along the Rio Grande just a few hundred feet from one of the newest and most scenic highways in the Southwest, the Camino del Rio. Here you can stand in the United States and catch fish in a foreign country (Mexico), or if you don't like it that way, just wade over the Rio Grande and fish from the other side.

West Texans have known for years of the good fishing in the Presidio area, but roads and trails being so rough and dangerous, few figured it was worth the trouble.

Several years ago the Texas Highway Department thought so much of the scenic beauty of the area they spent more than a million dollars to open a road between Presidio

and Terlingua, a distance of 62.8 miles, in November 1961.

Starting at Redford, 16 miles east of Presidio, to Lajitas, 40 miles to the east, the new highway parallels the Rio Grande never more than a mile or two from the water, more often just a few feet.

The greater part of this country is open to the fisherman. He can park his vehicle along the water's edge and not be bothered by anyone. There are a few private leases but these are fenced and proper signs displayed.

Fishermen should include trotlines

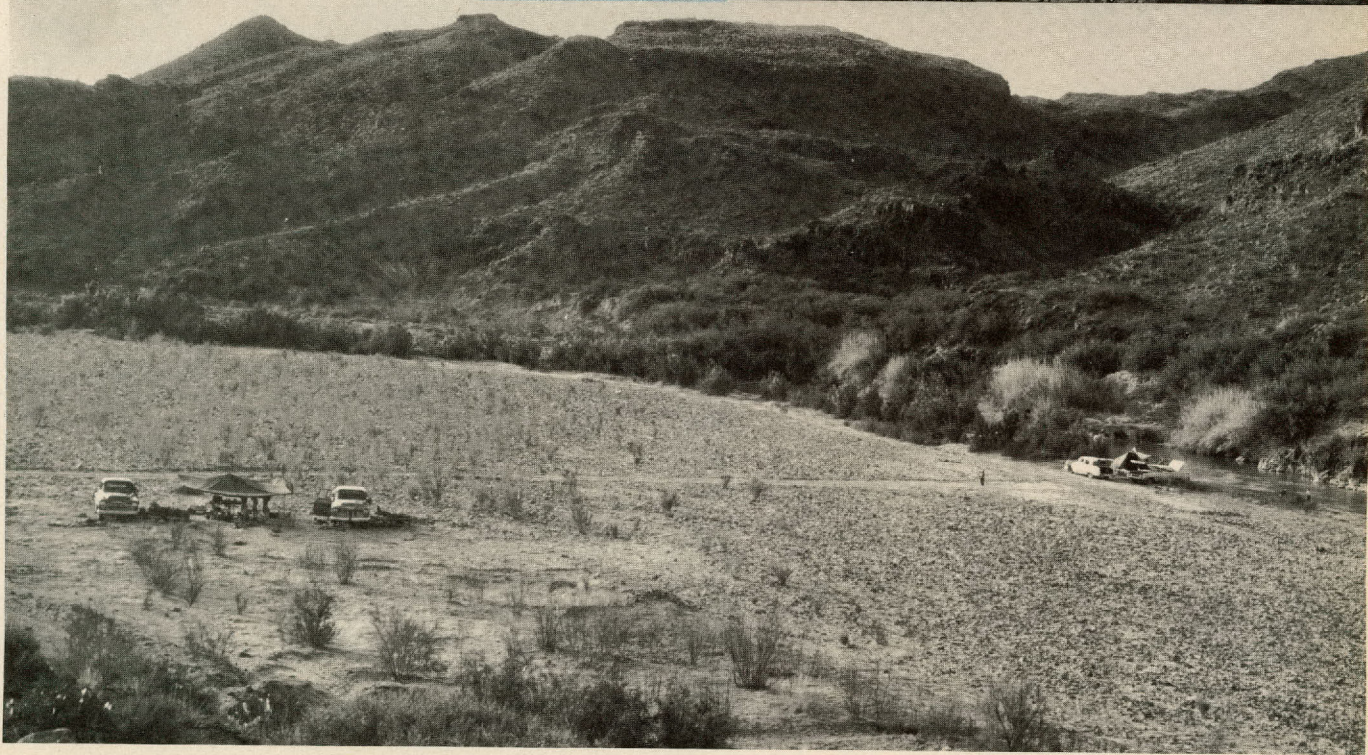
and camping equipment because there are no living facilities in the vicinity. Food can be obtained at Redford or Lajitas with the exception of ice which should be brought from Alpine or Presidio.

It gets hot along the river in the daytime, but look out, some of the nights are plenty cool.

There is one precaution: Take a fool's advice and walk-out the trails from the pavement to your prospective camping place because it is very easy to lose a pickup in the sand and it is a long way to walk for help.

This is food at its best as the sun comes up over the mountains. Mr. and Mrs. George Adkins (right) of Lindsey, Okla., and their son Ralph and his family of Rankin enjoy this scenic campsite by the Rio Grande River.

Plenty of camping places are available just a few hundred yards from the new highway sprawling across West Texas.



FISH FACTS

by ERNEST SIMMONS
Coastal Fisheries Supervisor

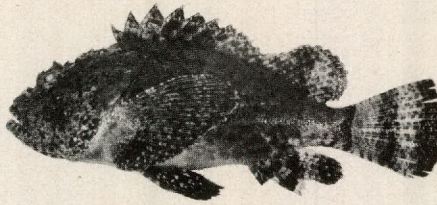
THE ANGLER FROM AMARILLO braced himself. That slight tug at the end of his line just might be a big black drum tasting his bait. Sometimes they bit like that, at least that is what he had heard. Another slight tug and the fisherman jerked hard to set his hook. Nothing happened. "Must have stolen my shrimp, guess I'd better bait up again." Then, "It must be a crab hanging on my line." Finally, "Hey, what's that thing?"

There are a good many "what is its" in Texas bays. Most end up being called "dogfish" although the real dogfish is a type of shark. Chances are the fisherman had either a toadfish, a scorpion fish or a sea robin.

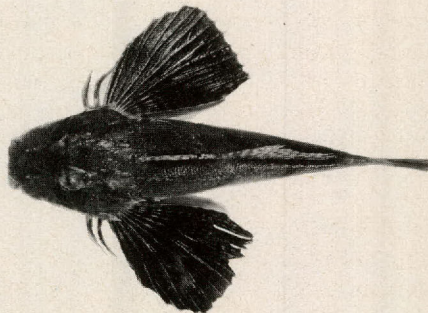
The first of these, the toadfish, is a grotesque creature, seldom over 12 inches long. This odd character is normally found in shallow water hiding in potholes, old tires, and rubbish. It is a sluggish fish and feeds on crustaceans, mollusks and just about anything passing by. A rather peculiar feature is that toadfish often live in submarine tunnels with pistol shrimp, yet seldom consume these small crustaceans. Spawning habits also are unusual. The large eggs are frequently placed in old tin cans, shoes, under boards and in old battery cases. One parent remains with the eggs and the un-



Toadfish



Scorpion Fish



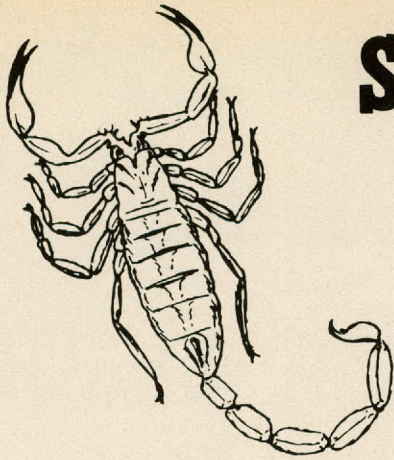
Sea Robin

wary person may have a finger nipped if he disturbs the nesting site. This "nip" can be quite painful since the fish is equipped with powerful, shell crushing jaws.

Scorpion fish resemble toadfish but have heavily armored heads and very sharp spines which may inflict poisonous and very painful wounds. Hence, the name "scorpion." Even the spines on the head are dangerous and care should be taken in handling these fish. Shades of red, orange, yellow and blue are often present on the fins and abdomen of scorpion fish.

The third fish under consideration, the sea robin, is perhaps the most fascinating of the group. Big-headed fish with gaping mouths, they are noted for their large pectoral fins and their "walking fins." The latter are actually modified fin rays which look very much like fingers. Using these, the fish literally crawls along the bottom. It may also glide through the water with pectorals outspread. The sea robin is sometimes mistaken for a flying fish.

These three fish comprise just part of the unusual fauna of Texas bays. While not of much use to anything except other toadfish, scorpion fish or sea robins, they often arouse interest and cause wonder. **



stings. bites. stickers

by DAN KLEPPER

OUTDOOR ENTHUSIASTS heading for the mountains or beach for a day or a month have available to them equipment capable of making a camp almost as comfortable as their own home.

But no matter how expensive that equipment is—how well it is made—there remains a fly in the ointment, and that fly comes in many forms.

The hunter, fisherman, camper, picnicker or nature lover can't escape the problem, because it is found in force throughout the state, from the canyon country of the Panhandle to the sandy beaches of the seashore.

The problem consists of a multitude of stinging and biting insects and other pests that swim, crawl, fly . . . and grow.

Some of them can be deadly, especially to persons sensitive to the venom. The bites and stings of all can be painful, and the outdoorsmen . . . and women . . . should become thoroughly familiar with the problem pests they sooner or later will encounter.

The list of these noxious creatures is lengthy. It includes certain species of salt-water jellyfish, catfish, ants, wasps, bees, hornets, spiders, scorpions, centipedes, caterpillars, mosquitoes, ticks, chiggers, the acid-bearing plants (poison ivy, oak and sumac), and that hairy-leaved clump of catastrophe, the fiery bull-nettle.

The outdoorsman should not take these pests lightly. Strange though it may seem, bees, wasps and hornets rank ahead of venomous snakes as causes of human death.

Even ant stings have been known to cause severe shock and death in man.

The bites of the bloodsucking insects such as ticks, chiggers and mosquitoes actually are more irritating than serious. Care should be taken to prevent infection, however.

These insects, which require the blood of warm-blooded animals to exist, stick their bloodsucking apparatus into tissue and inject a venom that contains an anti-coagulant. This insures them a continuous flow of blood, since the venom prevents clotting.

This venom also contains an anesthetic that prevents the victim from feeling his body attempt to heal the damage done by the anti-coagulant. The anesthetic lasts for only a few minutes, then an annoying itch begins.

The venom injected by stinging insects such as bees, wasps, hornets, ants, scorpions, certain spiders and caterpillars contains an acid that causes pain and imparts a mobility to the venom, enabling it to spread.

The bite of the black widow spider has been known to cause death. Initial symptom of the spider's bite usually is instant burning pain. This is followed by symptoms almost identical to those of appendicitis: severe muscular cramps—particularly in the abdomen—nausea and vomiting.

A physician should be consulted immediately if black widow bite is suspected. Antivenin is highly effective in neutralizing the poison.

The puss caterpillar, more com-

monly known in Texas as the asp, and the scorpion also have severe stinging abilities.

The scorpion's venom is contained in two glands located in the bulbous segment of its long tail. The venom is discharged through a curved, needle-sharp, hollow stinger, and symptoms of the sting include burning pain and, occasionally, local swelling. Nausea, vomiting and shock also might occur.

The asp is unlike other caterpillars in appearance. It has a rather flat, wide body, and the hairs on its back do not stand erect; they lie flat.

Asp venom is discharged through these hairs, and the sting is extremely severe.

The centipede poses a triple threat to the uninitiated. A six-inch specimen is not uncommon, and the multi-legged creatures can puncture the skin with a claw on each foot.

In addition, they are capable of biting with their jaws and stinging with their tails. Venom is injected with all three, head, feet and tail.

Almost everyone is familiar with the painful wound resulting from the puncture of a catfish's serrated fin. The dorsal and pectoral fins, especially those of the saltwater hard head, contain small quantities of irritating acid that cause pain and swelling. The acid also prevents rapid healing of the wound.

The stingaree or stingray is common along the Texas coast where it beds in the sand and mud of shallow waters. The "sting" of the ray is a barbed spine located on the dorsal surface of the tail, and a puncture caused by the spine is extremely painful.

Deaths from severe stings have been reported, and if the spine breaks off in the wound, its removal is difficult because of the barbs.

Jellyfish, including the Portuguese man-of-war, inject their venom on contact with their dangling tentacles. The venom may result in severe pain, allergic reactions and even death.

Contact with the jellyfish usually is followed immediately by instant pain. Lines of contact with the tentacles often appear as purplish, swollen welts. In some cases, the

• Continued on Page 44

GUNS



... and Shooting

By L. A. WILKE

This Month: **Shell Storage**

RIGHT NOW WE ARE in the dog days, that time of the year when dogs go mad, snakes strike blindly, and man is looking for a cool, shady spot.

But the opening of hunting season is only a month away. Dove season will have its traditional start in the North Texas zone, September 1.

That means that right now, as hot as the weather is, those of us who hunt are thinking in terms of both guns and ammunition for fall hunting. During the next 30 days the price of secondhand guns will go up. Sporting goods stores and other places where shotgun shells are available will be filling their shelves with new cartridges, awaiting the hunting season.

Reloaders are putting their components together, and there will be a lot of popping of caps come Sep-

tember 1, which this year falls on a Saturday.

Incidentally, Dr. J. P. Linduska, in his Remington Newsletter, comments on shell storage. We think what he has to say will be of interest to you. It follows:

"Beating the shell game—shell storage, that is—used to take shrewd planning. In the basement, it's cool as called for, but as moist as a postman's hat band. That's no good. It's dry in the garage or attic but hotter than pickled peppers. And that's bad, too.

"So, comes the heat and dampness of summer days, the old problem rears up again—where to put field loads of shot shells to avoid deterioration, power loss and misfires caused by improper storage. According to the Research and Development Department of Remington Arms Company, Inc., that's one problem you can forget if you're holding over loads of the new Remington and Peters plastic shells. Regardless of where and how they're kept off season, these shells are factory fresh when you pull the trigger.

"So you forgot a few boxes in the trunk or glove compartment of your car where summer temperatures soared to 130°. Forget it. They're still as good as the day you bought 'em. Or, maybe your wife used a box to prop open the garage window. The paper box is a pool of pulp, sure enough—just as paper shells would be. But the plastic loads are as good as new. Neither by accident nor design are you likely to put plastic shells in a place severe enough to lessen their peak performance. Here's why:

"A continuing series of shake-down tests shows that these new shells are virtually immune to any combina-

tion of elements. In dry storage tests at 135°F., the plastic loads retained full velocity and power after one year. But old-style paper shells lost more than one-fourth of their original zip. The test temperature is in a range often met in attics, autos, etc.

"Other tests in Remington's climate laboratory involved storage at temperatures alternating between 82 and 120°F. and relative humidity of 55 to 90 per cent. A year of such treatment and paper shells had lost one-fifth of their power. But plastic loads came through factory-fresh and with all of their original punch.

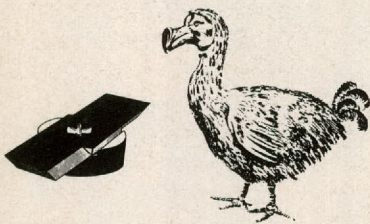
"But it was storage under really hot-humid weather conditions that separated "the sheep from the rams." At 120°F. and 90 per cent relative humidity, 100 per cent of the paper shells misfired after one year. The plastic loads? They functioned perfectly and power loss was a hardly-worth-mentioning three per cent.

"Storage in the rain-barrel or under a hot tin roof is not recommended—even for plastic loads. But if a box should inadvertently spend the summer there, use them with confidence next fall. They'll chamber perfectly, fire surely and kill a goose farther than any air-conditioned paper shell made." **



Manufacture of a new hammerless two-shot super derringer has just been announced by High Standard. It will be chambered for .22 long rifles. The gun is as small as the popular models of a century ago, measuring five inches.

ENJOY SHOOTING IN ALL SEASONS. USE DODO BIRD, TRAP & SCENTS. FOR TRAINING GUN DOGS, SHOOTING RECREATION AND PRACTICE.



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Museum plans new building.

No Dark Corner

From Page 27

agreed that this allotment will be reduced, and withdrawn in five years. The rest of the income comes from gifts and annual donations; there is no charge for services or admission. The Museum Board is now actively concerned with the matter of raising funds and planning for a new building which would obviously be an even greater asset to the community.

Poor spelling brings chuckles.

Dear Game and Fish

From Page 25

I love America,
The land in which I live
Where everyone has freedom
And help enough to give.

The perennial chuckle, however, is evoked by the original spelling found in many letters, as the above quotations show. A number of youngsters have trouble with "pictures." The spelling varies from "pitchers," to "pitchtures." The names of animals also give the young letterwriters trouble. For example, one youngster wrote, "I would like a deer, a aeltor a swond and a kyoty."

There is a growing awareness that in this era of highly specialized technical skill that can so swiftly alter our surroundings, the safeguarding of the world's natural heritage is more important than ever, and that there is too big a gap between expert knowledge and public comprehension. As Alexander M. White, president of the American Museum, has pointed out: "What the biologist sees

beneath the microscope and what the astronomer views through the telescope are becoming, with increasing urgency, the concern of each of us."

The Corpus Christi Museum is playing a valiant part in bridging the gap, and living up to its ideal of being "A private, non profit organization dedicated to gathering knowledge about Man's place in the world of nature and culture and conveying this knowledge to the community at all age levels." **

In each letter, whatever the contents, the charm and sincerity of childhood show brightly through

peculiar spelling, unusual punctuation or lack of it, strange phraseology and difficult scrawls. **

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To the

TEXAS GAME AND FISH

Use Subscription Blank on Page 45

What Others Are Doing

by JOAN PEARSALL

FINE IDEA: In Wyoming, money collected from game and fish violation fines goes to schools in the counties where they are levied.

SENSIBLE SENTENCE: Five Colorado students were tempted by the oversize fish in the show pond at a state fish hatchery. They were caught there late one night with 16 huge fish lying around them; none even had fishing licenses. Their sentence was 30 days in jail, 20 days of which were suspended when they agreed to pay court costs. The judge said the students would spend their weekends in jail until their sentences were served, and that they would work on these weekends. The work? Digging cesspools at the fish hatchery!

SPORT SUPPORT: The observance of the May 4 Fishing Day in Missouri got a special kind of boost from merchants and 17 pond and lake owners. A \$1 "trespassing fee" entitled an angler to fish on the property of any one of the farmers cooperating with the "Fish for Fun" plan. Money collected from the project was used to promote activities to create interest in conservation. Merchants gave prizes for the largest bass, bluegill and channel catfish caught by persons who bought fishing tickets at their stores.

STATE FOR SAFETY: The Wyoming Game and Fish Commission has incorporated the NRA Hunter Safety Program into its own educational program, as it has been illustrated that individuals passing the course are safer hunters in the field. The Department will keep NRA records for the state in addition to providing teaching manuals, official NRA instructors' credentials and shoulder patches.

THERE WAS A CATCH IN IT: In Missouri there is an unusually honest fisherman. When he brought home a bass weighing six pounds, one ounce, word got

around. A conservation agent, keeping in mind the Missouri record of 5 pounds, 14 ounces for this species, looked him up and asked him about the lunger. "I have to be honest," said the angler, "I didn't catch it. It chased a bluegill right out on the bank at my feet and all I had to do was pick it up."

THE FISHERMEN THAT GOT AWAY: A conservation officer in West Virginia stopped to investigate three men fishing on a river bank. As he approached, two of the men jumped into the river, fully clothed, and swam to the Kentucky side, undoubtedly feeling guilty about something. The third man meekly asked: "What is the fine for fishing without a license?" He paid \$20 and costs. Apparently, the two other men preferred to get wet, rather than to get soaked!

DISCIPLES OF THE OUTDOORS: High school boys from all sections of Pennsylvania will be enrolled this summer at Junior Conservation Camp. First held in 1948, the camp is sponsored by the Pennsylvania Federation of Sportsmen's Clubs, in cooperation with the Pennsylvania State University. The program enables boys to learn the wise use of natural resources, firearms safety, and other outdoor skills, while enjoying a rich camping experience.

"EFISHENT" BUSINESS: A sporting goods dealer in South Dakota had difficulty keeping one popular spoon lure in stock. He had laid in a stock of 12 dozen of the popular lures when it became apparent the big northern pike were going to be hitting in a nearby reservoir. He sold out in such a hurry the company had to rush him another four dozen. The dealer picked up the new supply at the post office but before he got back to his store the other lures had all been sold along the way.

The plant can be killed with chemicals but cost is prohibitive.

Caddo's Costly Problem

From Page 32

The chemical would have to be put into water being used as a public water supply by Marshall and surrounding towns. The Public Health Department's approval would be needed before adding chemical.

A mechanical means, or dredging, also is costly but is feasible as it would allow growth as well as silt to be removed, making the lake deeper. This depth would prevent sunlight from reaching the moss, and prevent its growth except in the shallows along the shores.

Of the three solutions Gray offered, he thought possibly the best would be manipulation of water level. By letting the water level down, the plants would dry out and die. This would take at least three months and would require possible cooperation from Louisiana authority. The dam, located in Louisiana, is another problem. It is old and has no locks

to regulate the flow to raise and lower water level. The dam may not be able to stand a three or four foot rise in water and to drain the water the dam would have to be torn down.

Don't think for a minute that Caddo is dead. When the coontail matures, some of it will break up and drift leaving open places here and there. As the cold weather begins to move into the lake of cypress forests, the aquatic weed will settle beneath the surface. There'll be some terrific fishing then. Reports coming in indicate that some nice fish are being caught there right now.

Who's to say that this is a permanent condition? Caddo has had coontail for many, many years. But, so have other lakes in East Texas. This year seems to be a good year for moss all over the state. Even Falcon Lake on the Mexican border has

moss along its shores. Granite Shoals, Inks, Austin and other lakes in Central Texas have vegetation problems every year. It's true that Caddo is suffering more this year than any before. But who can say that this time next year it will be the same? Caddo may be very sick but it is still alive and kicking. **

TRAPPERS

We will buy quantities of wild rabbits and opossum for human consumption. Contact Bernie Zeldner, Zeldner's Wild Game Center, 638 Clinton Street, TL 3-3737, Buffalo, N. Y.

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Scout around your area and locate creeks.

River Fish Are Moody

From Page 33

Scout around your area and locate running creeks and rivers. Gain access at a highway river bridge if you don't know landowners who will allow you to cross their land. Stay in the riverbed proper and no one will bother you. There is no need

to chase bait on private property. Plenty will be available along the stream edge. Wade fish if you haven't a small boat, but this year take advantage of the good fishing and beautiful scenery along some Texas streams. **

Women and children come too, for they are enthusiastic divers.

Rough Fish Bonanza

From Page 35

the Gulf. Although according to the rules the spearfishing contest must take place in one day, the participants begin to gather as early as two days before, bringing boats, trailers, camping and diving equipment. Women and children come, too, for the wives are often enthusiastic divers. Separate competition is held for feminine entries.

Festivities usually start with an executive meeting. Affairs of the Council this year are in the hands of Sonny Logan of Dallas, president; Dick Wilgus, of Longview, secretary and Bill Flagg of Dallas, who is serving his fourth term as treasurer. After business is disposed of, the host club provides the evening's entertainment—a supper, perhaps a film or a beauty contest. The next morning is devoted to contests and presentation of awards and prizes.

Then it's farewell until next month when they meet for another adventure in friendship, fellowship and sportsmanship. **

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entire line of contact may blister.

One great danger from jellyfish

sting is that the victim might drown because of cramps and respiratory muscle spasms.

First aid for the sting calls for the prompt removal of the tentacles and artificial respiration, if necessary. A bath towel or even sand should be used to scrape the tentacles from the flesh.

Until a couple of years ago the outdoorsman had little in the way of tools—other than home remedies—to be used in first-aid treatment of such bites and stings.

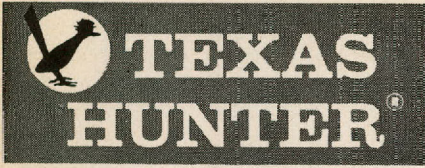
Treatment was limited primarily

to pain-reducing means, the application of ice packs, alcohol, ammonia, household bluing, onion juice, myrrh, tobacco juice and even mud.

The picture has changed today, however, through the development of commercial sting treatments, such as Sting-Stopper, which was developed in a San Antonio laboratory.

The outdoorsman also should remember that no matter how effective a treatment is, prevention is still better than the cure.

Avoid contact with all these pain-bearing pests if at all possible. **



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ENCLOSED DEER BLIND

- 1/4" thick siding throughout
 - insect-proof window frames
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- Shooting ports on four sides have bypassing glass sections and panels in divided channels of extruded aluminum. Blind may be used on ground or on our Texas Hunter rigid, all-steel 10- or 15-ft. tower as illustrated. Shipped knocked down in easy-to-handle packages. Simple to assemble.



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- greater protection from weather . . . hides you from game.

Silent, 350° turn. Framework is all-metal construction. Wide base spread for extra safety. Side armrests . . . front safety bar may be used as gunrest. Available on 10- or 15-ft. stand. Shipped knocked down.



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



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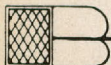


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Mgr., Ira's Bait Shop, Padre Island Park, Texas, says: "My customers say that Sting-Stopper has been used with relief on catfish finnings and Portuguese Man of War stings. Users claim fast relief."

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Banty Biddy Teaches Pups To Cluck

by DICK SANDS Longview News



Four seven-week-old Walker foxhound puppies are going to be bilingual when they grow up.

That is, if a certain bantam hen near Longview has her say.

For a while she wouldn't let them out of her sight, sitting with and upon them in their kennel and ferociously protesting any invasion of the sacred precinct.

She even resented the mother, who had to come in every so often to feed the pups.

With weight and numbers against her, the hen usually gave up after a few protesting cackles of alarm and anger.

And, apparently, the hen had given the food matter some thought, ostensibly in an effort to "outfox" the mother dog.

Periodically, she ventured forth from the kennel, scratched vigorously in the dirt, and then clucked softly to her four-legged "biddies" to come get the goodies she had unearthed.

When they didn't mind her, the hen rushed back into the kennel and, with wings flapping and bill a-pecking, tried to herd them into the yard.

The strategy didn't work. They continued to prefer milk.

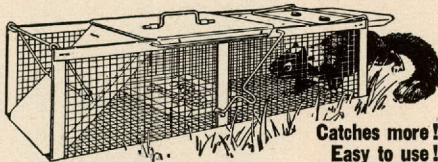
But the banty got some results in another field. She taught her brood to "bark" hen-fashion.

For awhile they didn't sound anything like their mother, Lady, or their father, Pancho, both of whom

have "bell-throats" and give out with tones so sweet, a foxhunter's hair stands on end.

The puppies' parents and seven other blooded foxhounds are the

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joint property of former Rep. Cecil Storey, Earl Tuel, and Marcus Pace, of Magnolia Lane.

The pups were born around mid-February.

Some might call it brain-washing. Others might term it indoctrination. Still others might say it is the outlet of frustrated motherhood.

Everyone hopes the pups don't ever get real hungry. Hungry to the point where they'd eat the babysitter. **

Did You Know - - -

Snakes and fish have ears but these ears have no outside openings. They "hear" mostly through vibrations in the ground or water.

* * *

Most of the early spring-song of birds is by way of announcing their claim on certain nesting areas.

* * *

"Blind as a bat" is a meaningless phrase. Contrary to popular belief, most bats can see perfectly well in bright light.

BRITTANY SPANIEL PUPPIES

Whelped April 12, 1962

Their dam is a daughter of National Champion Towsey. Their sire is a winning son of futurity winner Hels Oklahoma Rainbow.

L. L. GROSSNICKLE

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A few rounds on the skeet field will result in fewer cripples.

Sportsmen Are Enjoying a Passion for Pigeons

From Page 29

tional Skeet Shooting Association, 3409 Oak Lawn Avenue in Dallas, is competent and ready to assist new shooters with problems. Best way to begin shooting is to go to a skeet field and let one club member know your desires. He will take it from there and from that moment on, you are "in."

Gun and ammunition manufacturers have public relations departments and shooting promotional divisions that send shotgunner literature and brochures on the game without charge. The NSSA, Remington,

Western, Winchester and similar industries not only assist the club member but also send material for beginning and conducting a new club in the interest of clay target shooting.

Good skeet shooting, once learned, will not be forgotten. Yet, there are times when a shooter will do the same thing that doves often cause him to do. He may break 25 straight one day and then go back the next day and have the wind knocked out of his sails by dropping his first five birds. This reporter has a pocketful

of emblems and a shelf full of trophies for "25 straight," and the last round of skeet fired produced a 20 out of 25.

Skeet shooters, who also are serious hunters, stand firm in their belief that a few rounds on the skeet field will result in fewer crippled birds in the field when hunting season begins. And they KNOW that a round of skeet will allow the shooter to enjoy the friendship, the fellowship and the warmth and good will of others who are just as interested in good sportsmanship as he is. Try it! You may have been missing something really good all these years. **

"I want my grandchildren to say they stood in grandpaw's front door and saw wild turkey."

Turkey in the Swamp

From Page 19

tions were asked of landowners and farmers.

"Have you seen turkey lately?"

"Do you want turkey in this area?"

"Do you think turkey will damage your garden crops?"

"Are the turkey on your place reproducing?"

"Are you seeing young turkey this year?"

Questions were asked, answers were given and data was compiled and carefully analyzed. Study was given to habitat construction, weather conditions, vegetation measurements and all the answers were filed, along with those from the landowners. Now, three years later, there's not exactly a harvest as far as the game bag is concerned, but certainly the harvest in the minds of those who have put in so much time and effort to bringing turkey where "they ain't" and where "they can't" is rewarding. And landowners jubilantly welcome the *King of the Game Birds* which they are seeing almost daily.

Turkey counts, other than sight-counts, are next to impossible in the impenetrable jungles of the Lower Neches, but study shows more than 300 birds in the area now, and this season's hatch is excellent. Southeast Texas is operating as a gigantic turkey incubator and brooder. Many hens are being seen, followed by a dozen lanky, gangling balls of feathers in the brood, and more turkey are being hatched weekly. What the

population will be in future years is anybody's guess, but evidence supports the belief that the Lower Neches will have turkey aplenty.

A. P. Walters, a farmer near Buna, looked across his pasture with eyes that have seen many green summers, and enjoyed all they saw. He said, "They come into my yard to feed now and then; they are scattered for 15 miles, and they're something to be proud of."

L. H. Lee, a man of dry humor, and one who possesses an insight to the heart of man and the bounty of nature, said with an easy smile, "There's a gobbler that sits on that gate going into the pasture. He looks like meat-in-the-pot, but he thumbs his nose at me because he knows I'm not going to harm a feather on his welcome old head. I want my grandchildren to say that they stood in grandpaw's front door and saw wild turkey."

Verlan Walters and his wife, Jewell, Law Scott and Hardy Richardson, residents of the project area, all want to see turkey come back to East Texas, and believe that restocking seems to be the answer.

The turkey—a majestic game bird—is part of the land; he lives on the land. But he pays his rent with his dieting habit of miscellaneous seeds and insects. Heading his menu is the grasshopper. If he happens to steal a lunch from the pea patch now and again, he pays his debt to the farmer with the harmful insects that he destroys.

Now thanks to the seed of an idea and the work of biologists and landowners to bring it into maturity, turkeys claim Southeast Texas as their land. **

Dalhart Diamondback



Bland Burson of Hartley County killed this diamondback rattler south of Dalhart. Its circumference was 10 inches and length, 70.

Outdoor Books



THINK BEFORE YOU FISH, Earl L. Walker, 34 pages. Published by Exposition Press, New York. \$2.50.

This is a small book with a large amount of information for the beginner or the many fishermen who depend on luck more than skill.

The author discusses bait, rods, casting, patience and the weather in a manner that is both amusing and educational.

Although there is not enough detail for the more experienced fishermen, there is sufficient detail to open the beginner's eyes to the wonders—and pitfalls—of fishing and the outdoors.

Walker discusses mainly bass and trout trolling, but his presentation is general enough that it may be applied to fishing as a whole. For instance, the author discusses his preference for old lures as compared to new, shiny ones.

THINK BEFORE YOU FISH is a fitting title.—*Carl Dingler*

HOW TO HUNT DEER AND SMALL GAME, by Luther A. Anderson, 140 pages, fully illustrated. Published by The Ronald Press Co., 15 E. 26, New York 10, N. Y. \$3.50.

Whether you are interested in stalking deer, leading the bobwhite quail or are one of the few sportsmen who have never hunted big game and somehow never missed it because of the love of pursuit of the smaller species of four-footed game, this book is required reading.

It is filled with practical information for deer and small game hunters. It tells how to select the proper firearms and ammunition and relates the basic fundamentals which must be learned before the hunter can reap the full rewards of his pastime.

This adequately illustrated book explains ways to hunt deer, squirrel, rabbit, woodcock, pheasant, quail, the sharptail and the prairie chicken. There are descriptions of each type of game: its habitat and range, covert, feeding habits and other individual characteristics—everything the hunter should know to find and approach his quarry.

Of special importance are many tips on developing the art of wingshooting and snaphooting and on learning to lead game in motion. Information also is included on training and using hunting dogs, recovering fallen game and preparing game for the table.

Beginner and experienced hunter, alike,

will find suggestions and helps which will contribute to a safe, comfortable and successful hunt.

Of the bobwhite quail the author says, "The light-swinging double or pump in a .20 or .16 makes an ideal quail piece, using No. 8 shot. An open bore is recommended, as shots on quail are close.

"Always lead. Undershooting is the bugbear of many quail hunters. In the open, the bird has to make a considerable flight and will rise steadily until he reaches a height of from 10 to 15 feet. Best to allow plenty of lead whatever the angle. The quail is fast, but don't hurry. Take time to note the direction of the flight, close the aim swiftly then, and hit the wanted bird with a fast snap. With close attention to the rise, the angles, and the correct lead, a hunter may make one or more of those magic doubles every wing shooter is hoping for."

Shifting gears to the smaller species of four-footed game, the author points out that the "Nimrod need not carry a lot of equipment, nor travel hundreds of miles from home for this quarry. He merely picks

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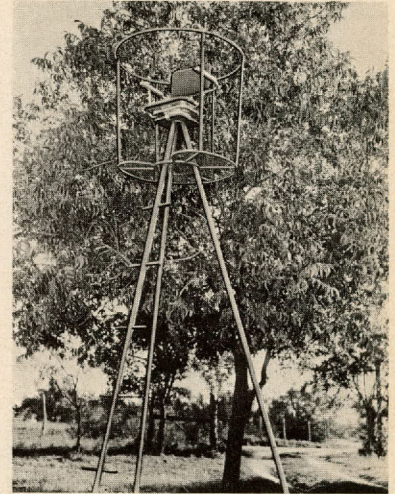
up his small-caliber rifle or shotgun, hies himself out into the autumn fields by car or on foot, and searches out elusive small game such as rabbit and squirrel, raccoon and opossum. It is the sport of the first water as far as many hunters are concerned, excellent for developing wind and limb as well as the shooting eye."

The section on deer is devoted to selecting the proper gun, using the gun, knowing the deer, hunting methods, managing the wounded deer and field dressing and hauling.

There also is a section dealing with the proper dress for hunting, what to do when lost, gun safety and a short review of the hunting camp.

Here is a book to read and re-read before the hunting season.—*Carl Dingler*

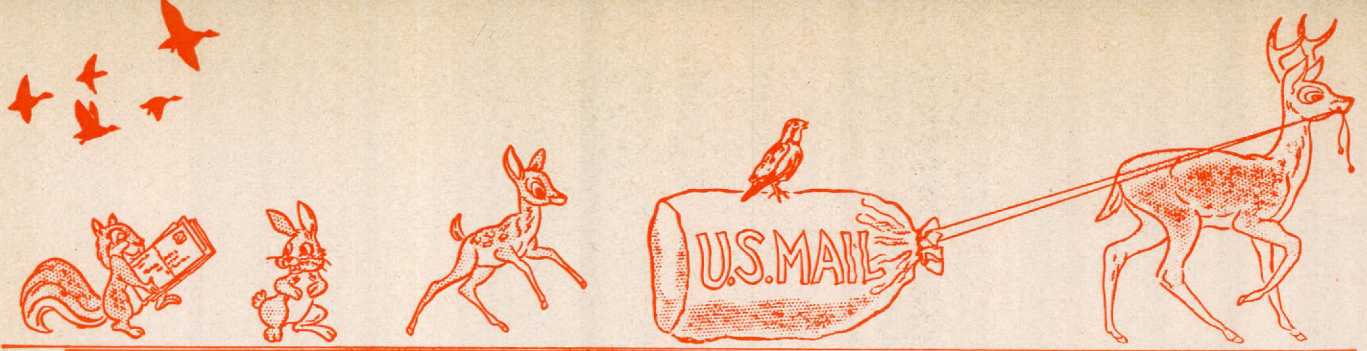
THE SMART HUNTER STILL HUNTS



Portable Hunter's Stand for all deer hunters, 10 or 15 ft. All steel tubing, swivel cushioned seat with banister gun rest. Good view of game. No odor when above. Excellent for hanging game while drawing. You may select game before killing. Gun rest for perfect shots. Cannot be excelled for varmint calling. Makes hunting leases more desirable. Canvas wind breaker as protection from weather — \$10.00. Model shown \$60.00, 12 ft. \$65.00 & 15 ft. \$75.00. Other models available. Also tree ladders in 5 or 10 ft. sections at 50¢ ft. All types of gun racks for cars, jeeps and pickups—\$2.00 to \$12.95. All prices f.o.b. Sales tax 2%.

HUNTER'S EQUIPMENT MFG. CORP.

Floyd Ogden, owner
201 W. 40th San Angelo, Texas
Dealers Wanted



Flathead Fish Fry



Editor:

This is a 14-pound flathead catfish that I caught on a trotline in the Clearfork River.

H. W. Shaw
Hawley

(Congratulations on a fine catch. Thanks for sharing it with *Texas Game and Fish* readers.—Editor)

Orbiting Subscriber

Editor:

Just want you to know that although I don't live in Texas anymore, I look forward to the time each month that your magazine arrives.

The way it is written, illustrated and photographed is excellent. I like that.

A special "Hats off" to the man who writes the Editor's page. Ah—there's an understanding man with a heart of gold.

"Take your son fishing," he said. I did. He liked that. I liked that.

So I'll lift my glass high while working on space capsule Gemini, and with a toast express my best wishes. I like that.

A. W. Stubbeman, Jr.
Bridgeton, Mo.

(We sincerely appreciate your words of praise. We hope that *Texas Game and Fish* will continue to be a magazine of service that will inform, inspire and entertain.—Editor)

Bushytail Bonanza

Editor:

Here is a picture of Johnnie Ricca and Frankie Nemeč with an opening day squirrel kill. These squirrels were killed near Bryan before 8 a.m. The fox squirrels were killed in the Navasota River bottom.

We found that squirrels were not as plentiful this year as before. We think that the freeze may have reduced our squirrel hunting some this year.

Keep up the good work and make *Texas Game and Fish* the best in 1962.

Johnnie Ricca
Frankie Nemeč
Bryan

(Thank you for sharing your hunting experiences with the magazine readers. We appreciate your interest in *Texas Game and Fish*.—Editor)



Are You Moving?

Please fill in the following form and send to TEXAS GAME AND FISH, Walton Bldg., Austin, Texas. Notify this office at least ONE MONTH in advance of your move in order that you will not miss a single issue of the magazine. The magazine is sent second-class mail and cannot be forwarded by the post office or remailed from this office. Allow four weeks for processing.

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Non-Camper Is Now Camper

Editor:

Congratulations on the June issue of *Texas Game and Fish!*

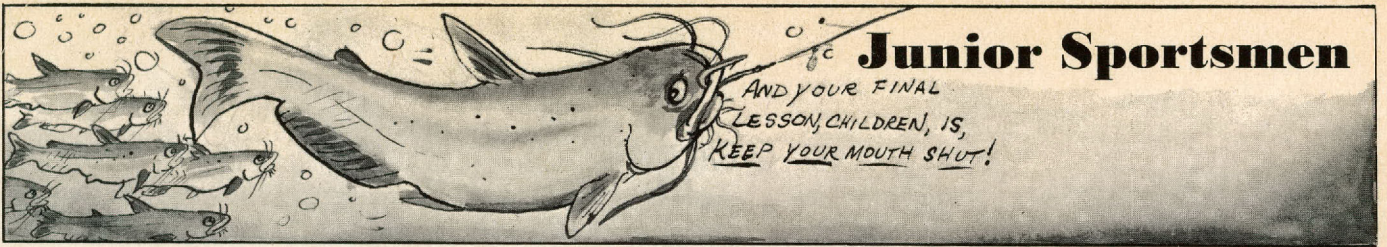
I have enjoyed reading the magazine for six years, but this issue is the "most"—most interesting, entertaining, and educational to date.

This is the highest possible praise, for I have been a confirmed "non-camper-outer" all my life.

Thanks for the good reading.

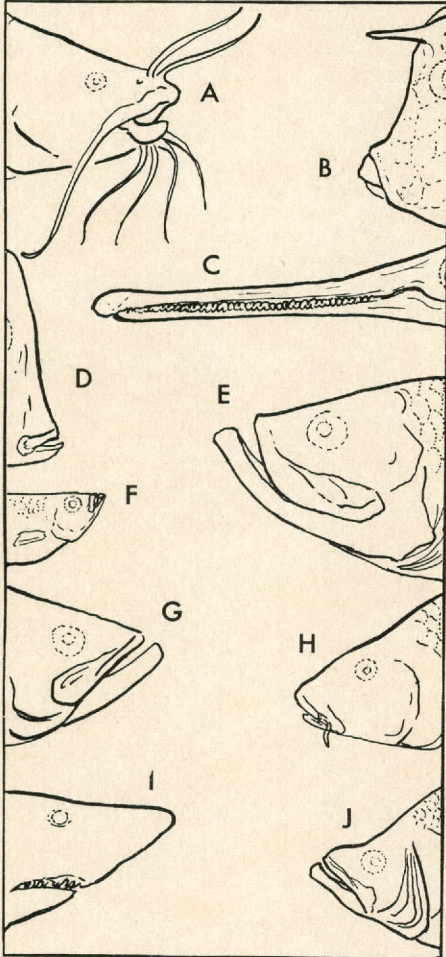
Mrs. Oscar Fuqua
Fort Worth

(Thank you for your kind comments. We are happy to learn that the June camping issue was well received—especially by a "confirmed 'non-camper-outer.'" We are hoping that it helped win you to the enthusiasts' camp.—Editor)



CAN YOU TELL A FISH BY ITS MOUTH?

by ANN STREETMAN



2. This fish lives in ponds, streams, ditches, and salt marshes.
3. The scales of this fish form a solid shell.
4. It is a saltwater fish which is commonly considered a villain.
5. This is a sportsman's fish which is fun to catch and fun to eat.
6. Some species of this fish are saltwater inhabitants, but most are freshwater fishes.
7. This water dweller is famous for huge leaps and coarse scales.
8. This fish is hard to catch and seldom eaten.
9. This mackerel-like fish is caught in channels and near ledges.
10. It is a member of the sunfish family which prefers quiet lakes and sluggish streams.

til they became extinct about 10,000 years ago.

Robert's exhibit (also shown below, center) "Rock - The Imperishable History Book," can be seen at the Texas Game and Fish Marine Laboratory in Rockport.

Fishin' Fun



Editor:

I am enclosing a picture of myself, a friend, and our catch. The string included bass, catfish, bream and bluegill. We used grasshoppers, frogs, minnows and tadpoles.

Tommy Eaton
Lampasas

(Congratulations on such a fine string. It looks like you two are enjoying summer vacation!—A. S.)

Rocks and Fossils



Robert Reed of Rockport enjoys his wildlife in fossil form. The huge bone above is the upper front leg bone of the imperial elephant, the largest of the three types which inhabited North America. Its original owner was an animal about 13½ feet tall. The imperial elephants roamed Texas un-

Puzzle Puzzler

Editor:

I enjoy reading *Texas Game and Fish* very much. I also enjoy working the crossword puzzles at the back of the magazine where the words are already given. However, when I started to work "Camping Crosswords," in the back of June 1962 *Texas Game and Fish*, I discovered that there were 43 word spaces and only 41 words given. What happened?

Emil Michal
Houston

(First, my apologies to you and the other readers of this page. Two more spaces should have been blackened—the fourth space above the "A" in WANDER and the first space below the "R" in WANDER.—A. S.)

Answers

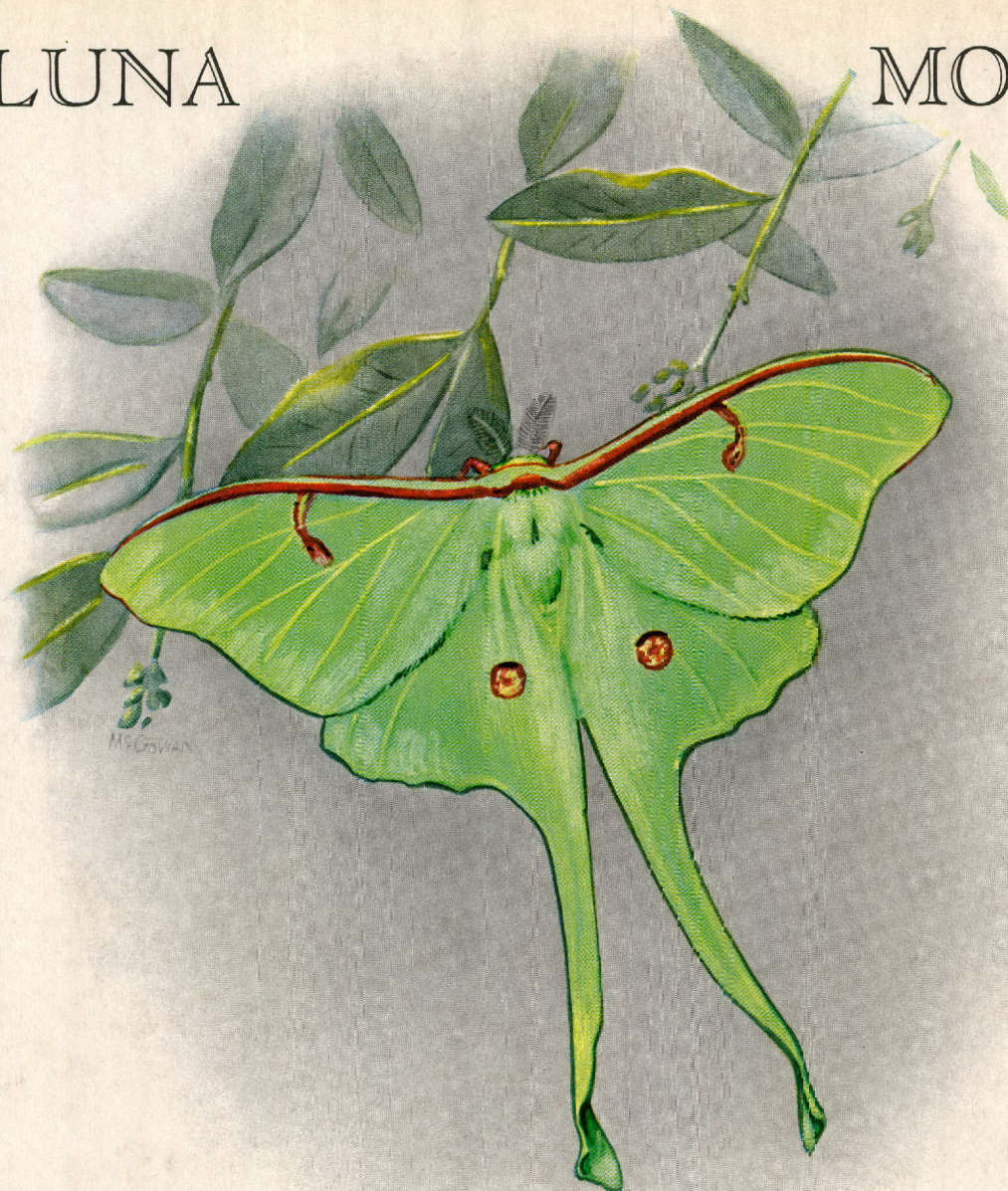
(1. H, carp; 2. F, gambusia (top minnow); 3. B, cowfish; 4. I, shark; 5. C, bass; 6. A, catfish; 7. E, lampoon; 8. C, longnose gar; 9. D, lookdown fish; 10. J, crappie.)

ONE OF THE MOST IMPORTANT identifying characteristics of fish is the mouth. Here is a little quiz testing your ability to identify fish by this characteristic body part. The written clues should give you a little extra help. Some of these fish have been featured in back issues of *Texas Game and Fish*. Others are ones that you have probably caught yourself, or at least have heard and read about. Place the letter and the name of the fish corresponding to the numbered clues in the blanks below. When you have finished, turn the page upside down to see the correct answers. Good Luck!

1. It is a bottom feeder and can often be caught with dough bait.

LUNA

MOTH



Fairy-like, the luna moth (*Actias luna*) is a beautiful sight dancing in moonlight or streetlight on soft summer evenings. Its delicate wings are pale pea-green and its body, furry white. Long streaming tails add to its grace. Both the male and female live only a few days to complete mating and deposition of eggs.

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The Texas Game and Fish Commission
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