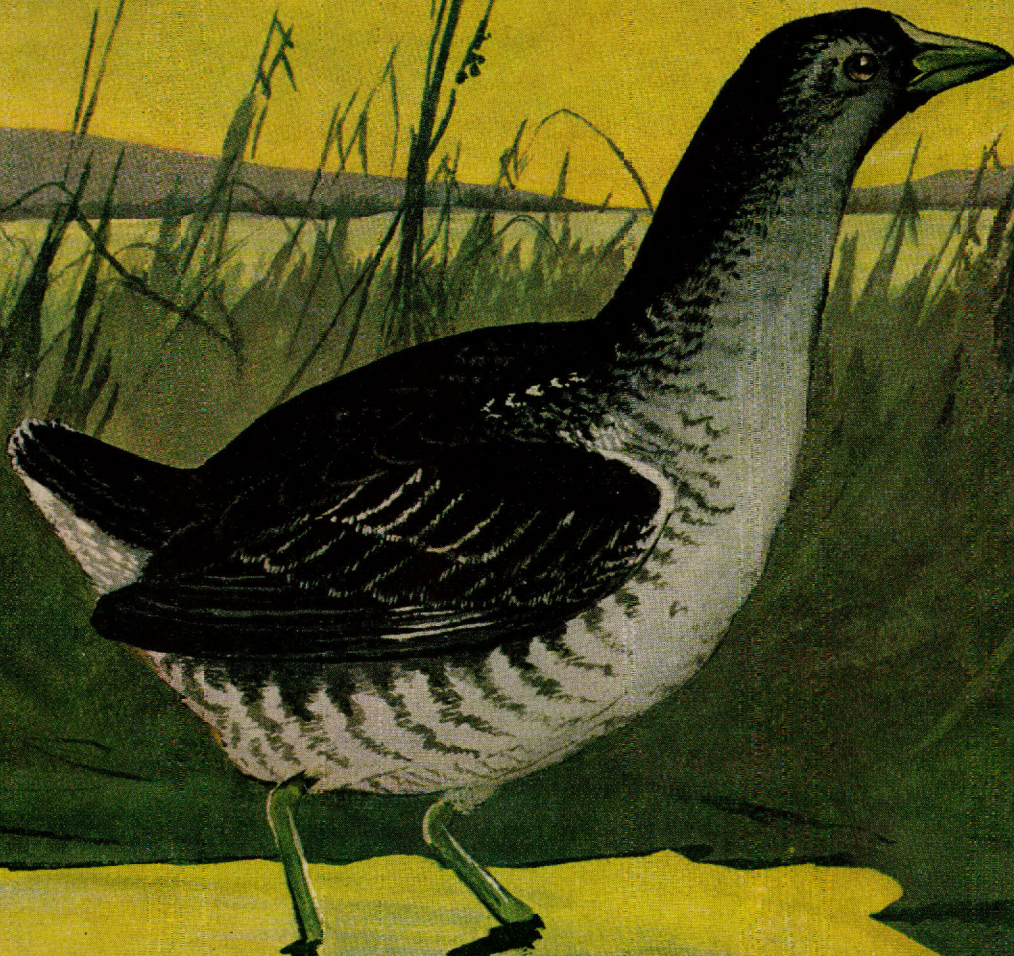


# Texas Game and Fish

OCTOBER

1954

TEN CENTS



WOOLDRIDGE





Found in dry, sandy country of the Texas Panhandle and lower South Texas, the kangaroo rat plays an important part in the diet of two competing predators, the coyote and the bobcat. An underground animal, it spends its night hours foraging for the seed of grasses, which it stuffs inside its cheek pouches and totes with its tail as a balancing force. The kangaroo rat makes a friendly pet which is not known to bite and is easily tamed.

Staff photo by Clyde Graham



# Texas Game and Fish



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

October, 1954

Vol. XII, No. 11



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### The Cover

The sora rail or "Virginia rail" is a usual fall and winter resident of Texas fresh-water marshes and sloughs. It is a rather shy and secretive bird, preferring to run or dive rather than fly when disturbed. Popular with hunters in the middle Atlantic states, few are killed in Texas. The cover painting is by Sidney A. Wooldridge.



**Rattlesnakes**

Editor:

In reference to letter from W. G. McMillan in July issue of your magazine concerning "Rattler Challenge." I hope this offer will still be in good standing when deer season opens here in South Texas, because for the past three years my friend, E. A. Thompson, and I have killed one or more rattlers that were well over the six-foot mark that he is questioning.

His offer has my hopes very high of making some easy money this winter, although I do not relish the idea of handling a live rattler of that size. But for the offered \$5 per inch, I will handle them all day if they can be found

H. Wayne Ferrell  
1016 South 9th Street  
Edinburg, Texas

(We hope you will be able to take advantage of Mr. McMillan's proposition. Please bear in mind, however, that he is offering \$5 per inch for every inch over six feet, and not \$5 per inch for the whole snake. In other words, he would pay \$20 for a six-foot, four-inch rattlesnake. And remember, Mr. McMillan refers to rattlesnakes in Texas only.)

**Tall Rattler**

Editor:

I see in the last issue of TEXAS GAME AND FISH Magazine that some man has never seen a rattlesnake more



than 5 feet, 11 inches long. I am enclosing the original snapshot of a real rattler, killed by some Mexicans just north of Rio Hondo, in the Sugarland tract. Brought to town on a one-horse wagon by Leonidas Lopez, it measured 10 feet, 11 inches without head or rattles. The rattles were kept by the Mexican who killed it. The photo was made in 1929, several years after the snake was killed. The shotgun hole, plainly visible, shows where the head was practically shot off. I saw this snake in the wagon when it was brought in.

J. R. George  
Rio Hondo, Texas

**First Signs**

Editor:

Please enter the enclosed subscription as a Christmas gift for Mr. E. H. Pierce, Western Union Telegraph Co., Corpus Christi.

H. M. Gresham  
3300 Front St.  
Tyler, Texas

(You are the first Christmas shopper in this year, Mr. Gresham! We hope others will follow by getting their gift subscriptions in early, for each Christmas TEXAS GAME AND FISH is deluged with several thousand such orders. November 1 would be best. Gift cards will be sent for all, but we cannot guarantee their arrival before Christmas unless the subscription order reaches us before December 5. Remember, TEXAS GAME AND FISH is the most luxurious gift \$1 will buy.)

**Animal Freak**

Editor:

A recent issue of the Marble Falls MESSENGER carried the story of a

"freakish little animal" about the size of a small possum killed near the Wallace Jay residence there. The animal, the story went on to say, had a head like a polecat, a long, slick tail like a 'possum, and feet like an armadillo. Its fur was white. Can you explain how this animal came to be?

H. A. Donovan  
Marble Falls, Texas

(In the accompanying photo, submitted by H. E. Faubion, former Assistant Executive Secretary of the Game and Fish Commission, the strange animal might appear to be a cross between a skunk and an opossum. However, such a cross is a biological impossibility. Positive identification, of course, is impossible without having the specimen in hand. However, biologists who have examined the photo are of the opinion that the animal is a white skunk which, for some unexplained reason, has lost the hair on its tail.)



**ARE YOU CHANGING YOUR ADDRESS?**

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# Lookin' In on the Outdoors

With Townsend Miller, Editor

## MIDGET BINOCULARS

Binoculars are a necessity for some types of hunting. They aren't necessary in many cases, but the hunter who hasn't discovered the added pleasure which can be derived from always carrying a pair along doesn't know what he is missing.

A relatively new trend in binoculars is making this fun easier to come by. We were a little slow waking up to what was happening, but we finally caught on.

It was early last fall. Joe Small, publisher of *Western Sportsman*, and yours truly were at a football game. Joe pulled a tiny pair of binoculars from his pocket. We had a look through them. It was amazing!

Up to that time, we'd always had the idea that GOOD binoculars had to be big—that only manufacturers of cheap glasses made the little fellows.

Joe's binoculars were excellent; plenty of power and a sharp image. The little fistful retailed at just under \$200!

Working on from there, we discovered that a lot of quality binoculars were being made in palm sizes. We definitely were interested. This meant that the sportsman could carry a good pair of binoculars without uncomfortable bulk or weight.

Some of these fine little glasses weigh as little as four or five ounces as compared to the usual pound and a half to two pounds. Then we discovered a person still could get a quality glass for far, far less than two hundred or even one hundred dollars.

We stampeded to get a pair. Actually, we passed up the extreme midgets—going from what might be called a palm-sized model to a pocket-size. We settled for a Bushnell "Broadfield." It's six power (fine for

all-around use), has a good-sized 25 mm. objective lens, weighs only 12 ounces, and costs \$39.50. We have found the quality superb throughout.

## Choosing Binoculars

In learning more about small-sized binoculars, we learned a lot about binoculars in general. Joe, Hart Stilwell, and this writer not long ago were discussing how little the average person knows about trying to choose a binocular, what to look for in buying a pair. And it occurred to us some of our readers might have a hankering for more of this type information.

When a pair of binoculars is described, the most common figure seen usually is something like this: 6 X 25 or 7 X 35. These figures represent two very important factors—(1) power and (2) size in millimeters of the objective lens.

Power, of course, means simply that the object will appear six or seven or some other number of times larger through the binoculars than as viewed with the naked eye at the same distance. Or to put it another way, a 6-power binocular will make an object 120 feet away appear to be only 20 feet away.

The second figure represents the size, in millimeters, of the lens which is closest to the object being viewed. This is important, for a large objective lens means a brighter image. Contrary to popular belief, the diameter of the objective lens has little or no bearing on the width of the field which can be seen through the binoculars.

Thus, a 6 X 25 binocular is six power with 25 mm. objective lenses, and a 7 X 35 is seven power with 35 mm. lenses.

Another important factor in choosing binoculars is the field of view.

This specification sometimes is expressed in degrees, but usually it is stated as the width of the view as seen through the binoculars at 1000 yards. For instance, the field of view might be 500 feet in diameter when viewing objects 1000 yards away.

A bright image is important. Roughly, brightness increases with the size of the lenses and decreases as power is increased. Thus, if the power is increased, the size of the lens also should be larger to obtain the same brightness.

Two index figures commonly are used to indicate the degree of brightness of image produced by binoculars. One is the size of the "exit pupil." This figure is obtained simply by dividing the diameter of the objective lens by the power of magnification. For instance, the exit pupil of a 6 X 30 binocular would be 5.

The other figure used to indicate brightness is the "relative light efficiency." This is merely the square root of the exit pupil figure. However, 50 per cent is added if the binocular has coated lenses. By coating the glass surfaces, more light enters the lens instead of being reflected to create haze, and the brightness of the image thus is increased greatly.

The exit pupil, by the way, may be seen by pointing the binoculars toward a bright view and holding them at arm's length. The bright spot of light which appears in the eyepiece is the exit pupil.

Actually, binoculars having an exit pupil rating of 8 mm. may not appear 4 times as bright as those with a rating of 2 mm. For in normal daylight, the pupil of the human eye contracts to approximately 2 mm. Thus it is unable to take advantage of the extra light entering the 8 mm. exit pupil binoculars. However, at dusk or in poor light, the eye pupil enlarges, and it is under such conditions that a binocular with a large exit pupil proves itself superior.

## In a Nutshell

To summarize, we have four measurable characteristics usually indicated in the specifications for binoculars:



1. *Power*—Power should be chosen carefully to suit the use for which the binocular is intended. High powers are not always best. They are good for long distances, but must be held extremely steady, or the object will appear to “jiggle” and be difficult to observe. For hunting, spectator sports, and general all-around use, 6 to 8 power is good.

2. *Field of view*—A wide field of view, of course, is the thing to look for here.

3. *Brightness (as measured by exit pupil)*—Remember that brightness increases with the size of the objective lens. And keep in mind that the human eye normally can accommodate only a little more than 2 mm., so that most of the value of an extremely large exit pupil is gained if the binocular is to be used in poor light.

4. *Coated lens*—Raises appreciably the relative light efficiency (brightness) without the necessity of increasing the size of the objective lens.

Of course, there are many unseen factors, such as overall optical quality and the sturdiness of the frame and movable parts. Generally, the average person must rely to a great extent on the reputation of the manufacturer regarding these factors.

We hope these hints may prove helpful. For more detailed information, we suggest that you write for a little booklet, “How to Select Binoculars,” available from Bushnell Binoculars, 41 East Green Street, Pasadena 1, Calif., at no cost.

## STATE FISH

*The Fisherman Magazine* has come forth with what we feel is an excellent suggestion—that each state adopt a state fish, just as they have done with flowers, trees, and birds.

In Texas, of course, our state tree is the pecan, our state bird the mockingbird, and our state flower the bluebonnet. The tarpon has been suggested for Texas’ state fish. We will go along with that suggestion 100 percent.

Fish suggested for neighboring states include the white bass for Oklahoma, Spanish mackerel for Louisiana, brown trout for New

Mexico, and alligator gar for Arkansas.

## WATER

The recent drouth years have made Texans acutely aware of the value of water. Floods, which occasionally broke the spell in certain localities, served to point up the waste even further.

We are pleased to note an increasing interest in upper watershed projects, which serve both to conserve water and to prevent floods. The big dam builders, who had gained such a foothold in water-use programs, are at last being forced to give ground.

The idea of using terraces, water-retarding structures, and small lakes to hold water and encourage it to soak into the ground where it falls, without giving it a chance to rush downstream to form a flood, just naturally makes good sense. Such logic reasoning (and its advocates have the statistics to back up their arguments) was bound to prove popular, once folks were made aware of such a movement and how it functions.

Lately, the idea has been getting the publicity it deserved, and as folks have learned about it, they have come to accept it simply because of its inherent good sense.

And just think what good fishing we would have with thousands of small lakes dotting the landscape all over Texas!

## STATE OUTDOOR CLUB

The Texas Wildlife Federation, representing Texas sportsmen on the state and national levels, has an unlimited potential. Now free of debt after being numbed for several years, it is on the go again.

Every local club in Texas should belong. The Federation needs your help and can be a big help to you. If interested, write the new president, energetic Don Maxwell, 806 West Second, Odessa.

## MEXICO HUNTING AND FISHING

Texans continue to turn to neigh-

boring Mexico as a frontier paradise for good hunting and fishing.

We have just received a most interesting booklet about hunting in Mexico from Tex Purvis, who gained the title of “America’s top outfitter” while operating a guide service in Wyoming. His little booklet tells how the American hunter may take advantages of the reopening of hunting to foreigners in Mexico. It describes the kind of game to be found there, where it can be found, and the legal restrictions and privileges of the hunter going into that country.

This 32-page booklet can be had by sending \$1 to Tex Purvis de Mexico, S. A., Casa Latino-Americana, Paseo de la Reforma 77-113, Mexico, D. F.

The excellence of Mexican fishing, of course, is even better known, because regulations make it much easier for the American tourist to fish than to hunt. We hope to be able to report on this personally soon, for we are planning an October vacation fishing trip to Mexico’s West Coast. Our destination is La Paz, at the lower tip of Southern California.

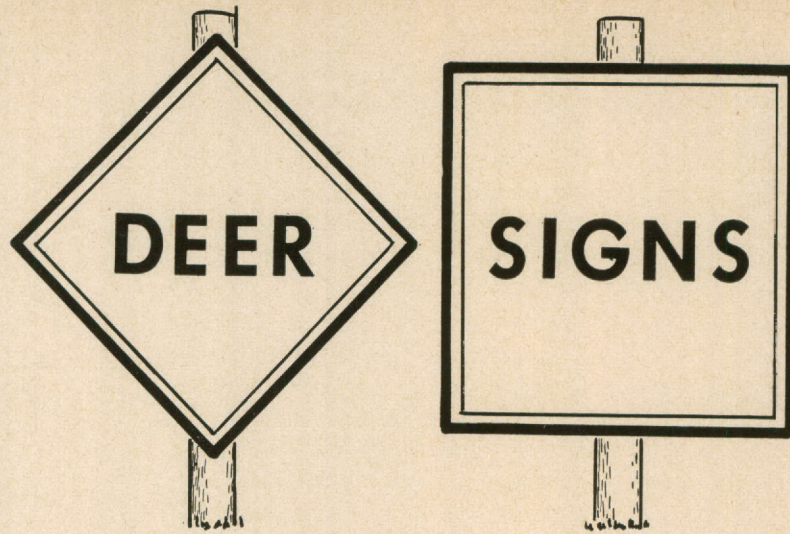
La Paz is at the gateway of the fabulous Gulf of California, which has been called the “greatest fish trap in the world.” Via Trans mar de Cortes Airline from Juarez, it is much closer than you might think. We understand the fishing is fabulous, and this old country boy is looking forward to the trip of a lifetime.

## POSTED

A Californian recently offered evidence which should explain why every year we find more and more land, formerly open to the public, now sprouting posted signs. This industrious gentleman spent a full-day counting the litter left around a small seven-acre public lake.

He picked up 1008 pieces of paper, 144 beer bottles, 256 beer cans, 48 fruit and vegetable cans, 16 milk cartons, 48 candy wrappers, 384 cigaret packs, and 272 pieces of broken glass, plus assorted jars, cartons, bottles, and hundreds of other pieces of trash.





There are many misconceptions about deer signs and how to read them. Veteran and beginning hunters alike should profit by these tips from the author of the new book "Hunting the White-Tailed Deer in Texas."

By **FREDERICK H. WESTON**

Sad is the tale of the deer hunter who goes afield each season without success. His luck is always bad, the weather is never right; there are never anything but does and fawns in his pasture; or the landowner from whom he leased let all his kinfolks hunt or day-lease during the week. The story is always the same no matter who tells it. There are a lot of tellers, too, for the percentage of hunters who kill bucks each year is very small indeed for the number who hunt deer.

Certain it is that luck and weather play a part in a successful hunt, but by and large, the majority of landowners protect with a passion the rights of their

season hunters. True, too, is the fact that doe deer outnumber bucks in the Hill Country, where the bulk of the hunting is done in Texas, but where there are does and fawns, there must be bucks.

The fact is, there are bucks. The presence of fawns proves this, because there had to be bucks the year before to beget young, and the bucks didn't move on in the meantime because Texas whitetails do not migrate over great distances as is popularly believed. Neither did they die off, if does are still present, because the mortality rate of adult deer in die-offs is higher among the does than bucks.



Rubs are easy to see as they loom up by contrast as bared areas on saplings. They are made by bucks rubbing their velvet on convenient trees. Scrapes are pawed-out areas on the ground on the edges of openings in brush adjacent to trails habitually used by deer.



An adequate supply of bucks comes on each year, for among all those fawns the hunter sees, a good proportion of them are bucks. The open season on antlerless deer in Mason and Gillespie Counties last year revealed the sex ratio between male and female fawns is far from one-sided. Of the fawns killed in that hunt, 114 were bucks and 139 were does, a ratio of 1.2 does to one buck.

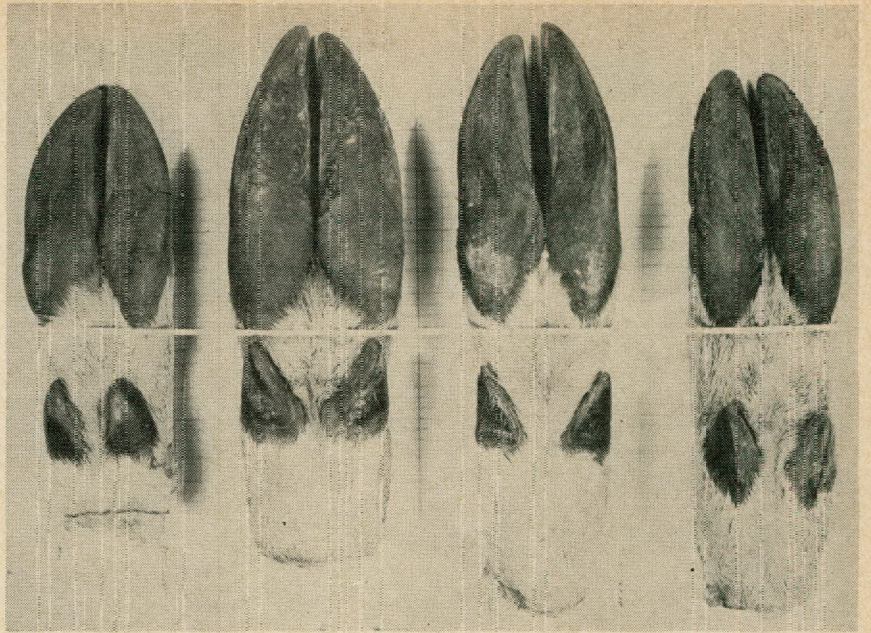
Of interest, too, is the information compiled by the late Henry Hahn that 62½ per cent of the bucks killed each year in the Hill Country will be fawns of the year before sporting from three to eight points on their first set of antlers.

Thus, if there is one buck to 1.2 does left in each fawn crop at the time the hunter sees them when the hunting season opens, and a great proportion of those fawn bucks are going to be legal game the next season why, then, is it that the average hunter does not see more bucks?

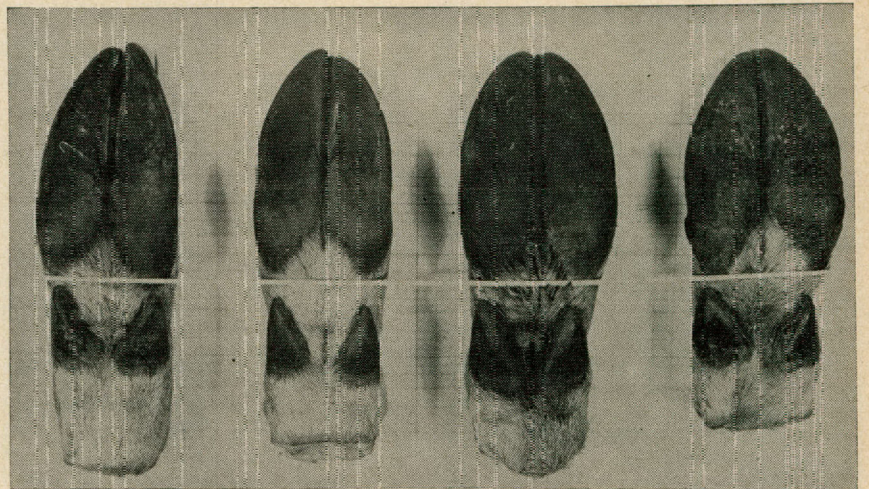
The answer lies in the lack of knowledge about the game sought, and about woodcraft. The average once-a-year hunter knows little about his quarry, and is not a woodsman. His hunting beliefs are predicated on lore passed on to him by equally uninformed individuals. Thus, if he does not bag a yet unsmart 18-month-old buck out of that 62½ per cent, he is not likely to get one out of the remaining 37½ per cent, made up of older deer, because each year a buck survives, the smarter he gets.

If the hunter wants to see more

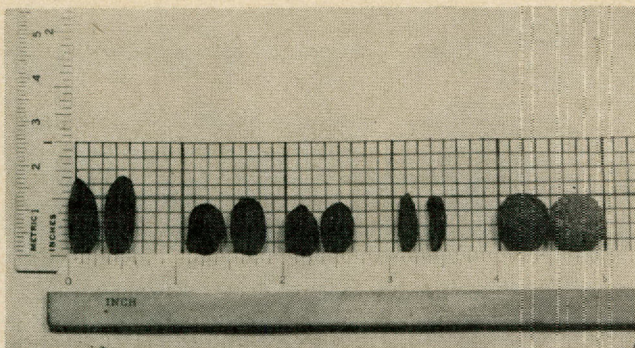
• Continued on page 21



The sex of the Texas white-tailed deer cannot be positively and consistently identified by its track alone. Each has characteristics expected of both sexes. Shown are (1) a doe's front foot; (2) buck's front foot; (3) doe's hind foot; and (4) buck's hind foot.

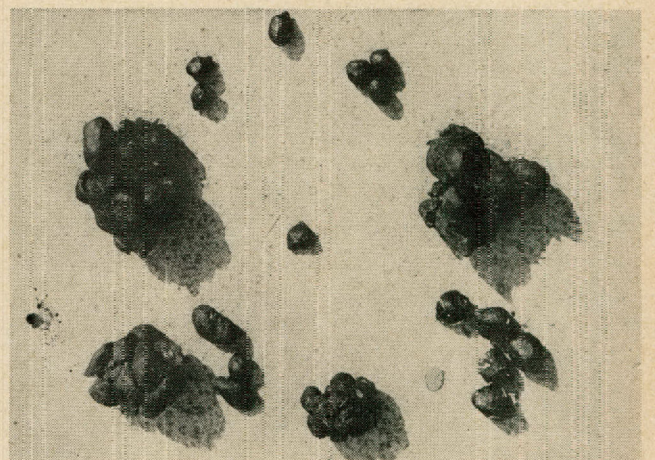


Progressive wear on a buck's front feet are shown by tracks of (1) a buck 1½ to 2½ years old; (2) a buck in the 2½ to 3½-year-old class; (3) a buck 4½ to 5½ years old; (4) an old mossback beyond the 5½-year class.



Deer dung must not be confused with droppings of other animals using the range. Similar droppings, left to right, above, are those of a deer, goat, sheep, rat and rabbit.

Deer dung is often not in the form of uniform pellets. Green diets tend to make them confluent. Other factors produce odd shapes and sizes. The droppings at right were made by four bucks.





# Let's Get Acquainted!

**First in a series of articles designed to take you inside your Game and Fish Commission—to show you how the department is organized and how it functions.**

This Month:  
**AN INTRODUCTORY  
SUMMARY**

**Installment I—By ED H. FERGUSON, Jr.  
Staff Writer**

A quarter of a century ago this September, there was a drastic change in the administrative set-up of the State Game, Fish and Oyster Commission in Texas. At that time the office of the Game, Fish and Oyster Commissioner, who acted as administrative and policy-making head of the department, was abolished by the 41st Legislature. To replace the office it had abolished, the Legislature created the Game, Fish and Oyster Commission.

The new nonsalaried Commission was to be composed of six commissioners appointed by the Governor for six-year terms. The terms of office were set up so as to expire in alternate years, leaving experienced members on the Commission at all times.

One of the six commissioners appointed by the Governor was designated as chairman. He remained as chairman for his full six-year term of office. The Commission was directed to hold regular quarterly meetings in April, July, October and January. In addition, it was authorized to hold special meetings at such times and places as it deemed necessary.

The duties of the Commission included the formulation of operational plans for the Game, Fish and Oyster Department based on laws passed by the State Legislature. It also appointed an Executive Secretary and an Assistant Executive Secretary, both of whom served at the will of the Commission.

The Executive Secretary, as chief executive officer, was given a free hand to carry out the policy laid down by the Commission. He was given the responsibility for the employment of division heads, game and fish wardens, and other employes, and they served at his will.

The new set-up provided a more stabilized form of administration. Prior to 1929, during the 37-year period from 1895 to 1929, there had been twelve dif-

ferent Game, Fish and Oyster Commissioners, and each of these Commissioners had installed his own particular rules and regulations for the operation of the Commission. The term of office averaged out slightly over three years for each of these administrations. With each changing administration, a new and inexperienced man took over the many problems that the vacating commissioner had barely learned to cope with.

Since 1929, the administrative head of the Commission has changed only twice. The Commission has benefited by the experience gained by the Executive Secretary in his longer tenure in office. Further, the administrative head has been subjected to less control by political factions and could operate more efficiently.

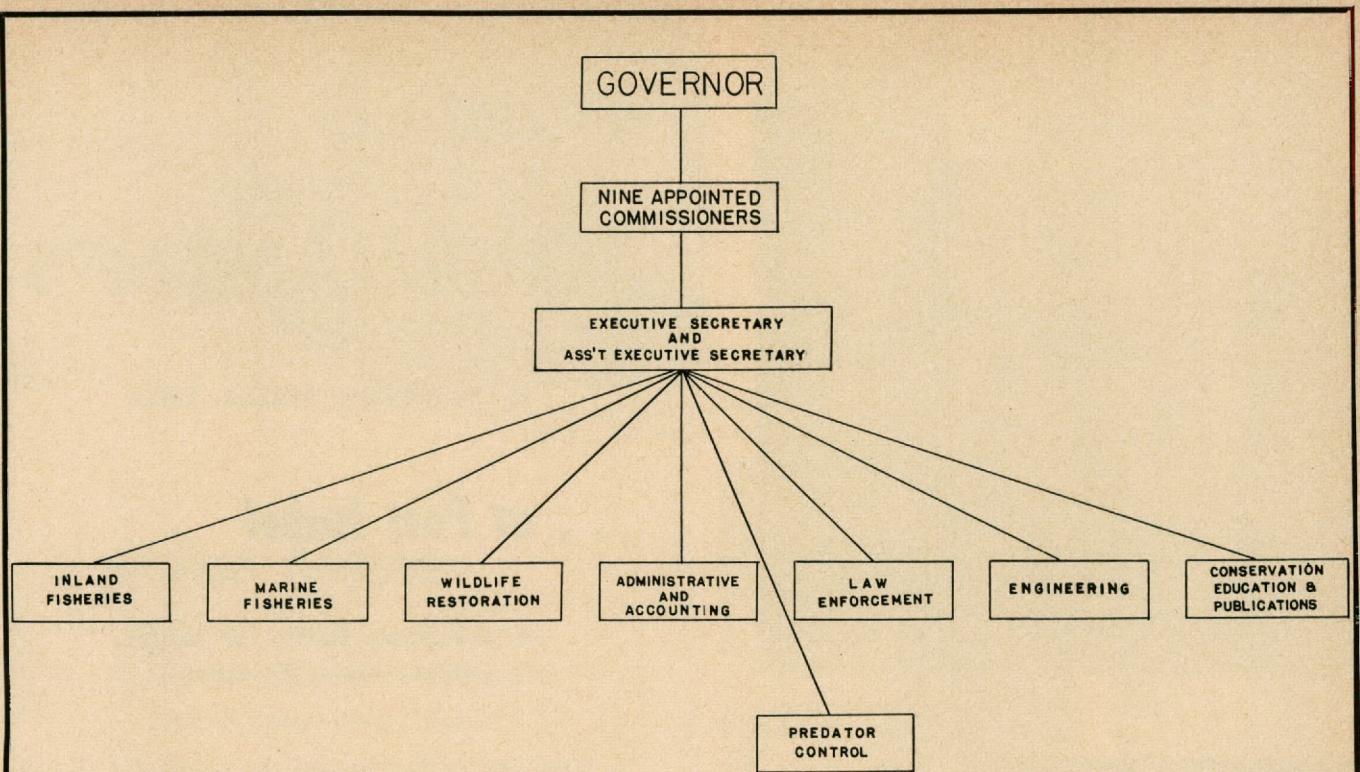
Other and more recent changes in the administrative organization include the addition of three members to the Commission, to bring the total number of Commissioners appointed by the Governor to nine. This change was accomplished by the 52nd Legislature in 1951.

The 52nd Legislature also deleted the term "Oyster" from the Commission name, stating that the name should be the "Texas Game and Fish Commission." The change was made for the sake of convenience, and to eliminate double usage of the term "Oyster" since the oyster is a shellfish.

In addition, the 52nd Legislature changed the status of the Commission chairman by making the office elective by the nine appointed Commissioners rather than appointive by the Governor.

The administrative organization of the Commission includes seven divisions that are responsible for the administrative and technical functions it must handle. These seven divisions include: (1) Inland Fisheries; (2) Marine Fisheries; (3) Wildlife Restoration; (4)





## Administration of the Texas Game and Fish Commission

The Governor appoints nine Commissioners, who serve without pay. They determine basic policies and appoint an Executive Secretary, the full-time paid head of the department, and an Assistant Executive Secretary. The work of the department is divided into seven major divisions, plus a predator control section. Heads of these divisions, and other employes in them, are hired by the Executive Secretary and are responsible to him. Most game and fish laws are set by the State Legislature.

Administrative and Accounting; (5) Law Enforcement; (6) Engineering; (7) Conservation.

Headquarters for each of these divisions are in Austin, with the exception that the Marine Division has its headquarters at Rockport. The Executive Secretary appoints the division heads, who are, in turn, responsible to the Executive Secretary for the operation of their respective divisions. These seven divisions, their history, function, and personnel will be discussed in future articles in this series.

In addition to the seven divisions of the Commission, there is a Predator Control Section. The supervisor of this section is appointed by, and is responsible to, the Executive Secretary.

The Predator Control Section is not responsible solely for the destruction of predatory animals. Actually, the function of the section is to maintain a favorable balance between the predatory and the game animals, since the elimination of all predatory animals might lead to disastrous results. For instance, if all the coyotes in a given area were eliminated there would, in all probability, be a terrific increase in that area in the number of kangaroo rats and other rodents that feed primarily on grass seeds and grains. This

would cause considerable loss to the rancher and farmer. In addition, it would cause a reduction in the supply of native foods for quails, doves and other game. The present supervisor of the Predator Control Section is Game Warden Bob Snow of Kerrville, under whose supervision more than three score trappers operate in the South Texas area.

A total of 418 persons are currently employed by the Texas Game and Fish Commission. In addition, there are 408 nonsalaried game wardens who hold commissions from the department. These nonsalaried wardens render valuable service to the department and aid materially in the promotion of the State's conservation program.

The total expenditures of the Game and Fish Commission for operational expenses during the fiscal year 1952-53 was over \$2½ million. The Texas Legislature does not appropriate money from the General Fund to the Texas Game and Fish Commission for these operational expenses. Unlike many state agencies, the Commission is self-supporting. The revenue to cover all work comes from a special Game and Fish fund that is received primarily from the sale of hunting and fishing licenses and the sale of sand, shell and gravel.





At the end of a long, hard day this tarpon provided the most excitement.

# FISHING TOURNAMENTS

By TOWNSEND MILLER, Editor

## ... at Port Isabel

A last-minute battle for tarpon honors stole the show.

A seven-foot sailfish topped the catch of J. R. McElwrath, Harlingen farmer, to give him the Grand Championship of the 15-year-old Texas International Fishing Tournament at Port Isabel in August.

Sam Cashiola, who commutes the 350-some miles to Port Isabel from his Houston home almost weekly, took his third consecutive title in the bay-surf division with 236 pounds of redfish and speckled trout in three days. And Mrs. Ardell Thomas, perennial Corpus Christi tournament competitor, claimed a new world's record for women with a winning 53-pound ling (cobia) taken on 27-pound test line.

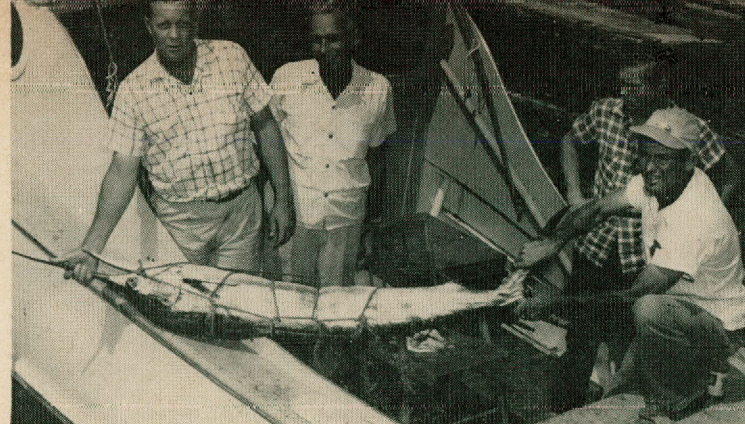
But the most excitement was caused by a lanky 19-year-old fresh-water fisherman from La Junta, Colorado. Using spinning tackle, six-pound test line, and a borrowed lure, Airman Second Class Jack Bartholo-

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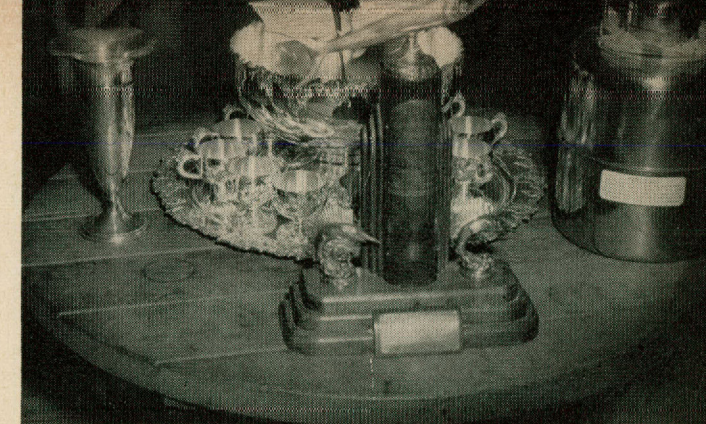


Sam Cashiola, right, won the bay surf division crown for the third straight time. He and his fishing partner, Sid Scalise, had an 11-pound redfish and an 8½-pound trout, both winners, in this one-day catch.

Mr. and Mrs. Lester Brusse, below left, found fun at the tournament even when they brought home only their untouched bait. Mrs. Ardell Thomas, center, claimed a new world record for her winning ling. This highly-prized 13-pound snook was one of several caught by G. L. Palmer, right.



Dr. L. D. Bounds, far left, brings in the first of two sailfish he caught the second day. They gave him the offshore division championship and the glittering prizes shown at right.



## ... at Port Aransas

Sailfish and crab races outshone the historic silver kings.

Sailfish continued, as in the past several years, to attract more interest than Port Aransas' time-honored tarpon in the 1954 July Deep Sea Roundup. Two sailfish landed the second day of competition gave Dr. L. D. Bounds, Corpus Christi, the grand championship.

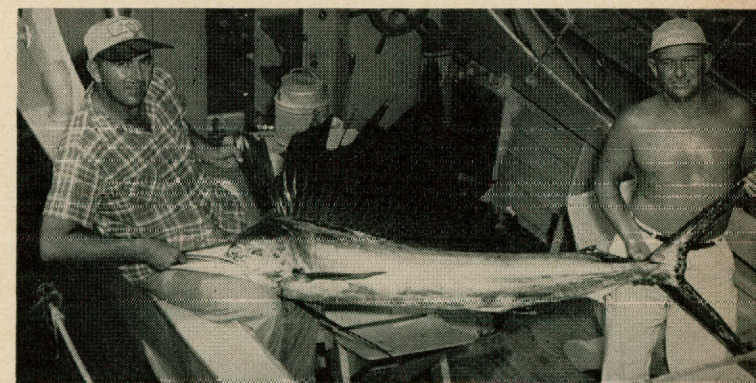
A total of 26 sailfish were caught during the three days, comparable to the average in recent tourneys, except for the astonishing 1952 catch, when over 60 were landed.

E. D. Coward landed the first on opening morning to start the parade. But initial day's lead went to Martha Morgan and Wilson Southwell, both of Corpus Christi. They each caught sailfish on 20-pound class line and released them. This year's Roundup for the first time gave extra points for release of large game

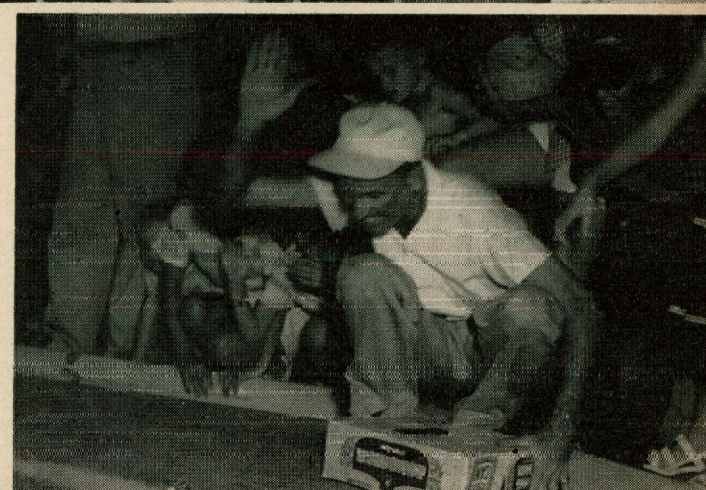
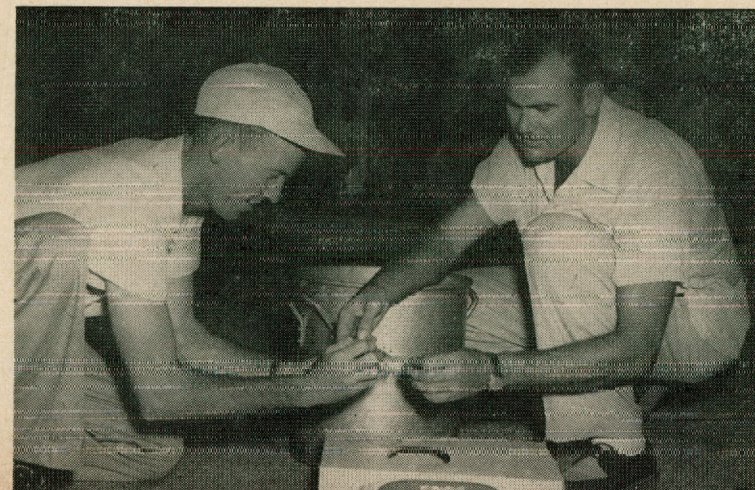
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Norman Binz, left, landed two sailfish and enough kingfish to give him runner-up spot for the grand championship and first in the kingfish division. At right, an offshore oil rig attracted fish and R. M. Kleberg, Jr., who tries for a ling.



Right, buttermilk salesman Bill Ross, left, won a trip to the tournament and with Guide DeWitt Cartwright took a sailfish. Below, Jack Shanklin, publicity chairman, and Bruce Ponton, tournament chairman, prepare a sand crab for races held at night. Below right, Shanklin flags a winner across the finish line to the cheers of onlookers.





# SUNRISE and SUNSET

Legal shooting hours are regulated by the sun.  
These tables are good until 1960.

Sunrise and sunset tables, provided last fall by Hoyo Dunham, Austin meteorologist, proved so popular for Texas hunters that they here are being repeated again this fall.

Duck, goose and dove hunters seem to be the main ones to benefit, although, of course, the time tables apply to almost all species, and to the legal daylight hours. Game wardens also will be guided by this official compilation.

Nine Texas Weather Bureau Stations prepared the data and funneled it to the Game and Fish Commission through Meteorologist Dunham. And there is a great spread in sunrise and sunset times in the far-flung Texas areas.

For example, sunrise at El Paso on October 1 was precisely 6 a.m. The same day, sunrise at Amarillo, in the Panhandle, was 6:41. El Paso's time is one hour earlier since it is in the Mountain Standard Time zone, whereas Amarillo is in the Central zone.

All tables are Central Standard times except El Paso, which is Mountain Standard.

## AMARILLO

DAY	OCTOBER		NOVEMBER		DECEMBER	
	RISE	SET	RISE	SET	RISE	SET
1.....	6:41	6:31	7:08	5:53	7:37	5:35
2.....	6:42	6:30	7:09	5:52	7:37	5:35
3.....	6:43	6:29	7:10	5:51	7:38	5:35
4.....	6:44	6:27	7:11	5:50	7:39	5:35
5.....	6:45	6:26	7:12	5:49	7:40	5:35
6.....	6:45	6:25	7:13	5:49	7:41	5:35
7.....	6:46	6:23	7:13	5:48	7:42	5:35
8.....	6:47	6:22	7:14	5:47	7:42	5:35
9.....	6:48	6:20	7:15	5:46	7:43	5:35
10.....	6:49	6:19	7:16	5:45	7:45	5:35
11.....	6:49	6:18	7:17	5:44	7:46	5:35
12.....	6:50	6:16	7:18	5:44	7:46	5:35
13.....	6:51	6:15	7:19	5:43	7:47	5:36
14.....	6:52	6:14	7:20	5:42	7:48	5:36
15.....	6:53	6:13	7:21	5:42	7:48	5:36
16.....	6:54	6:11	7:22	5:41	7:48	5:36
17.....	6:54	6:10	7:24	5:40	7:49	5:37
18.....	6:55	6:09	7:24	5:40	7:49	5:37
19.....	6:56	6:08	7:25	5:39	7:50	5:38
20.....	6:57	6:06	7:26	5:39	7:51	5:38
21.....	6:58	6:05	7:27	5:38	7:52	5:38
22.....	6:59	6:04	7:28	5:38	7:52	5:38
23.....	7:00	6:03	7:30	5:37	7:53	5:39
24.....	7:00	6:02	7:30	5:37	7:54	5:40
25.....	7:01	6:01	7:31	5:37	7:54	5:41
26.....	7:02	5:59	7:33	5:36	7:54	5:41
27.....	7:03	5:58	7:33	5:36	7:55	5:42
28.....	7:04	5:57	7:34	5:36	7:55	5:43
29.....	7:05	5:56	7:36	5:35	7:55	5:43
30.....	7:06	5:55	7:37	5:35	7:56	5:44
31.....	7:07	5:54			7:55	5:45

## AUSTIN

DAY	OCTOBER		NOVEMBER		DECEMBER	
	RISE	SET	RISE	SET	RISE	SET
1.....	6:24	6:17	6:45	5:44	7:10	5:30
2.....	6:25	6:16	6:45	5:43	7:11	5:30
3.....	6:25	6:14	6:47	5:42	7:12	5:30
4.....	6:26	6:13	6:48	5:41	7:12	5:30
5.....	6:26	6:12	6:48	5:41	7:13	5:30
6.....	6:27	6:11	6:50	5:40	7:14	5:30
7.....	6:28	6:10	6:50	5:39	7:15	5:30
8.....	6:28	6:09	6:50	5:39	7:15	5:30
9.....	6:29	6:07	6:52	5:38	7:16	5:30
10.....	6:30	6:06	6:53	5:37	7:17	5:31
11.....	6:30	6:05	6:53	5:37	7:18	5:31
12.....	6:31	6:04	6:54	5:36	7:18	5:31
13.....	6:31	6:03	6:55	5:35	7:19	5:31
14.....	6:32	6:02	6:56	5:35	7:20	5:32
15.....	6:33	6:01	6:57	5:34	7:20	5:32
16.....	6:33	6:00	6:58	5:34	7:21	5:32
17.....	6:34	5:59	6:59	5:33	7:21	5:32
18.....	6:35	5:57	6:59	5:33	7:22	5:33
19.....	6:35	5:56	6:59	5:33	7:23	5:34
20.....	6:36	5:55	7:01	5:32	7:23	5:34
21.....	6:37	5:54	7:02	5:32	7:24	5:34
22.....	6:37	5:53	7:03	5:31	7:24	5:34
23.....	6:38	5:52	7:04	5:31	7:25	5:36
24.....	6:39	5:51	7:04	5:31	7:25	5:36
25.....	6:39	5:50	7:05	5:31	7:26	5:37
26.....	6:41	5:49	7:06	5:30	7:26	5:37
27.....	6:42	5:48	7:07	5:30	7:26	5:38
28.....	6:43	5:47	7:08	5:30	7:27	5:39
29.....	6:43	5:46	7:08	5:30	7:27	5:39
30.....	6:43	5:46	7:09	5:30	7:27	5:40
31.....	6:44	5:45			7:27	5:40

## BEAUMONT

DAY	OCTOBER		NOVEMBER		DECEMBER	
	RISE	SET	RISE	SET	RISE	SET
1.....	6:09	6:02	6:30	5:29	6:54	5:16
2.....	6:10	6:01	6:30	5:28	6:55	5:16
3.....	6:10	5:59	6:31	5:28	6:56	5:16
4.....	6:11	5:58	6:32	5:27	6:56	5:16
5.....	6:11	5:57	6:33	5:26	6:57	5:16
6.....	6:12	5:56	6:34	5:26	6:58	5:16
7.....	6:13	5:55	6:34	5:25	6:59	5:16
8.....	6:13	5:54	6:35	5:24	6:59	5:16
9.....	6:14	5:52	6:36	5:24	7:00	5:16
10.....	6:15	5:51	6:37	5:23	7:01	5:17
11.....	6:15	5:50	6:38	5:22	7:02	5:17
12.....	6:16	5:49	6:38	5:22	7:02	5:17
13.....	6:16	5:48	6:39	5:21	7:03	5:17
14.....	6:17	5:47	6:40	5:21	7:04	5:18
15.....	6:18	5:46	6:41	5:20	7:04	5:18
16.....	6:18	5:45	6:42	5:20	7:05	5:18
17.....	6:19	5:44	6:43	5:19	7:06	5:19
18.....	6:20	5:42	6:43	5:19	7:06	5:19
19.....	6:20	5:41	6:44	5:18	7:07	5:20
20.....	6:21	5:40	6:45	5:18	7:07	5:20
21.....	6:22	5:39	6:46	5:18	7:08	5:20
22.....	6:22	5:38	6:47	5:17	7:08	5:20
23.....	6:23	5:37	6:48	5:17	7:09	5:22
24.....	6:24	5:36	6:48	5:17	7:09	5:22
25.....	6:24	5:35	6:49	5:17	7:10	5:23
26.....	6:25	5:35	6:50	5:16	7:10	5:23
27.....	6:26	5:34	6:51	5:16	7:10	5:24
28.....	6:27	5:33	6:52	5:16	7:11	5:25
29.....	6:27	5:32	6:52	5:16	7:11	5:25
30.....	6:28	5:31	6:53	5:16	7:11	5:26
31.....	6:29	5:30			7:12	5:27



## BROWNSVILLE

DAY	OCTOBER		NOVEMBER		DECEMBER	
	RISE	SET	RISE	SET	RISE	SET
1	6:22	6:17	6:39	5:48	7:00	5:38
2	6:23	6:16	6:39	5:48	7:01	5:38
3	6:23	6:15	6:40	5:47	7:01	5:38
4	6:23	6:14	6:40	5:47	7:02	5:38
5	6:24	6:13	6:41	5:46	7:03	5:39
6	6:24	6:12	6:42	5:45	7:03	5:39
7	6:25	6:11	6:42	5:45	7:04	5:39
8	6:25	6:10	6:43	5:44	7:05	5:39
9	6:26	6:08	6:44	5:44	7:05	5:39
10	6:26	6:08	6:45	5:43	7:06	5:39
11	6:27	6:07	6:45	5:43	7:07	5:40
12	6:27	6:06	6:46	5:42	7:07	5:40
13	6:28	6:05	6:47	5:42	7:08	5:40
14	6:28	6:04	6:47	5:41	7:09	5:41
15	6:29	6:03	6:48	5:41	7:09	5:41
16	6:29	6:02	6:49	5:41	7:10	5:41
17	6:30	6:01	6:50	5:40	7:11	5:42
18	6:30	6:00	6:50	5:40	7:11	5:42
19	6:31	5:59	6:51	5:40	7:12	5:43
20	6:31	5:58	6:52	5:39	7:12	5:43
21	6:32	5:57	6:52	5:39	7:13	5:43
22	6:33	5:56	6:53	5:39	7:13	5:43
23	6:33	5:55	6:54	5:39	7:14	5:44
24	6:34	5:55	6:55	5:39	7:14	5:45
25	6:34	5:54	6:55	5:38	7:15	5:46
26	6:35	5:53	6:56	5:38	7:15	5:46
27	6:35	5:52	6:57	5:38	7:16	5:47
28	6:36	5:51	6:58	5:38	7:16	5:47
29	6:37	5:51	6:58	5:38	7:16	5:48
30	6:37	5:50	6:59	5:38	7:17	5:49
31	6:38	5:49			7:17	5:49

## DALLAS

DAY	OCTOBER		NOVEMBER		DECEMBER	
	RISE	SET	RISE	SET	RISE	SET
1	6:21	6:12	6:44	5:36	7:12	5:20
2	6:21	6:11	6:46	5:35	7:12	5:20
3	6:23	6:10	6:47	5:34	7:13	5:20
4	6:23	6:08	6:48	5:33	7:14	5:20
5	6:23	6:07	6:48	5:33	7:15	5:20
6	6:25	6:05	6:49	5:32	7:15	5:20
7	6:26	6:04	6:51	5:31	7:16	5:21
8	6:26	6:03	6:51	5:30	7:17	5:21
9	6:26	6:02	6:51	5:30	7:18	5:21
10	6:28	6:00	6:53	5:29	7:19	5:21
11	6:28	5:59	6:54	5:28	7:19	5:21
12	6:29	5:58	6:55	5:27	7:20	5:21
13	6:29	5:57	6:56	5:27	7:21	5:22
14	6:31	5:55	6:57	5:26	7:21	5:22
15	6:31	5:54	6:58	5:26	7:22	5:22
16	6:32	5:53	6:58	5:25	7:23	5:23
17	6:33	5:52	6:58	5:25	7:23	5:23
18	6:33	5:51	7:00	5:24	7:23	5:23
19	6:34	5:50	7:01	5:24	7:24	5:24
20	6:35	5:48	7:02	5:23	7:25	5:24
21	6:36	5:47	7:03	5:23	7:25	5:24
22	6:37	5:46	7:04	5:22	7:25	5:24
23	6:37	5:45	7:05	5:22	7:27	5:26
24	6:38	5:44	7:05	5:22	7:27	5:26
25	6:39	5:43	7:06	5:22	7:27	5:27
26	6:40	5:42	7:07	5:21	7:27	5:27
27	6:40	5:41	7:08	5:21	7:28	5:28
28	6:41	5:40	7:09	5:21	7:28	5:29
29	6:42	5:39	7:10	5:21	7:28	5:29
30	6:43	5:38	7:11	5:21	7:29	5:30
31	6:44	5:37			7:29	5:31

## DEL RIO

DAY	OCTOBER		NOVEMBER		DECEMBER	
	RISE	SET	RISE	SET	RISE	SET
1	06:37	18:30	06:57	17:58	07:21	17:45
2	06:38	18:29	06:58	17:57	07:22	17:45
3	06:38	18:28	06:58	17:57	07:23	17:45
4	06:39	18:27	06:59	17:56	07:23	17:45
5	06:39	18:25	07:00	17:55	07:24	17:45
6	06:40	18:24	07:00	17:55	07:25	17:45
7	06:40	18:23	07:01	17:54	07:26	17:45
8	06:41	18:22	07:02	17:53	07:26	17:45
9	06:41	18:21	07:03	17:53	07:27	17:46
10	06:42	18:20	07:04	17:52	07:28	17:46
11	06:43	18:19	07:05	17:51	07:28	17:46
12	06:43	18:18	07:05	17:51	07:29	17:46
13	06:44	18:17	07:06	17:50	07:30	17:47
14	06:44	18:15	07:07	17:50	07:30	17:47
15	06:45	18:14	07:08	17:49	07:31	17:47
16	06:46	18:13	07:08	17:49	07:32	17:48
17	06:46	18:12	07:10	17:48	07:32	17:48
18	06:47	18:11	07:11	17:48	07:32	17:48
19	06:48	18:10	07:11	17:47	07:33	17:49
20	06:48	18:09	07:12	17:47	07:34	17:49
21	06:49	18:08	07:13	17:47	07:34	17:49
22	06:49	18:07	07:14	17:46	07:34	17:49
23	06:50	18:06	07:15	17:46	07:35	17:51
24	06:51	18:05	07:15	17:46	07:35	17:51
25	06:52	18:04	07:16	17:46	07:36	17:52
26	06:52	18:04	07:17	17:45	07:37	17:53
27	06:53	18:03	07:18	17:45	07:37	17:53
28	06:54	18:02	07:19	17:45	07:37	17:54
29	06:54	18:01	07:19	17:45	07:37	17:54
30	06:55	18:00	07:20	17:45	07:38	17:55
31	06:56	17:59			07:38	17:56

## EL PASO

DAY	OCTOBER		NOVEMBER		DECEMBER	
	RISE	SET	RISE	SET	RISE	SET
1	6:00	5:51	6:22	5:16	6:48	5:02
2	6:00	5:50	6:23	5:16	6:49	5:02
3	6:01	5:49	6:24	5:15	6:50	5:02
4	6:02	5:47	6:25	5:14	6:51	5:02
5	6:02	5:46	6:26	5:13	6:51	5:02
6	6:03	5:45	6:27	5:12	6:52	5:02
7	6:04	5:44	6:28	5:12	6:53	5:02
8	6:04	5:42	6:28	5:11	6:54	5:02
9	6:05	5:41	6:29	5:10	6:54	5:02
10	6:06	5:40	6:30	5:10	6:55	5:02
11	6:06	5:39	6:31	5:09	6:56	5:03
12	6:07	5:38	6:32	5:08	6:57	5:03
13	6:08	5:36	6:33	5:08	6:57	5:03
14	6:09	5:35	6:34	5:07	6:58	5:03
15	6:09	5:34	6:35	5:07	6:59	5:04
16	6:10	5:33	6:35	5:06	6:59	5:04
17	6:11	5:32	6:36	5:05	7:00	5:04
18	6:11	5:31	6:37	5:05	7:00	5:04
19	6:12	5:30	6:38	5:05	7:01	5:05
20	6:13	5:28	6:39	5:04	7:01	5:05
21	6:14	5:27	6:40	5:04	7:02	5:06
22	6:15	5:26	6:41	5:03	7:02	5:06
23	6:15	5:25	6:42	5:03	7:03	5:07
24	6:16	5:24	6:42	5:03	7:04	5:08
25	6:17	5:23	6:43	5:03	7:04	5:08
26	6:18	5:22	6:44	5:02	7:04	5:08
27	6:18	5:21	6:45	5:02	7:05	5:09
28	6:19	5:20	6:46	5:02	7:05	5:10
29	6:20	5:19	6:47	5:02	7:05	5:10
30	6:21	5:18	6:47	5:02	7:06	5:11
31	6:22	5:17			7:06	5:12



## TEXARKANA

DAY	OCTOBER		NOVEMBER		DECEMBER	
	RISE	SET	RISE	SET	RISE	SET
1.....	6:10	6:01	6:34	5:25	7:02	5:08
2.....	6:11	6:00	6:35	5:24	7:03	5:08
3.....	6:11	5:58	6:36	5:23	7:03	5:08
4.....	6:12	5:57	6:36	5:22	7:04	5:08
5.....	6:13	5:56	6:38	5:21	7:05	5:08
6.....	6:13	5:54	6:39	5:20	7:06	5:08
7.....	6:14	5:53	6:40	5:19	7:07	5:08
8.....	6:15	5:52	6:40	5:19	7:07	5:08
9.....	6:16	5:51	6:42	5:18	7:08	5:08
10.....	6:16	5:49	6:43	5:17	7:09	5:09
11.....	6:17	5:48	6:44	5:16	7:10	5:09
12.....	6:18	5:47	6:44	5:16	7:10	5:09
13.....	6:19	5:46	6:46	5:15	7:11	5:09
14.....	6:19	5:44	6:46	5:14	7:12	5:10
15.....	6:20	5:43	6:47	5:14	7:12	5:10
16.....	6:21	5:42	6:48	5:13	7:13	5:10
17.....	6:22	5:41	6:49	5:13	7:14	5:11
18.....	6:22	5:40	6:50	5:12	7:14	5:11
19.....	6:23	5:39	6:51	5:12	7:15	5:11
20.....	6:24	5:37	6:52	5:11	7:15	5:12
21.....	6:25	5:36	6:53	5:11	7:16	5:12
22.....	6:26	5:35	6:54	5:10	7:16	5:12
23.....	6:26	5:34	6:55	5:10	7:17	5:13
24.....	6:27	5:33	6:56	5:10	7:17	5:14
25.....	6:28	5:32	6:56	5:09	7:18	5:14
26.....	6:29	5:31	6:57	5:09	7:18	5:15
27.....	6:30	5:30	6:58	5:09	7:19	5:16
28.....	6:31	5:29	6:59	5:09	7:19	5:16
29.....	6:31	5:28	7:00	5:08	7:19	5:17
30.....	6:32	5:27	7:01	5:08	7:20	5:18
31.....	6:33	5:26			7:20	5:18

## WICHITA FALLS

DAY	OCTOBER		NOVEMBER		DECEMBER	
	RISE	SET	RISE	SET	RISE	SET
1.....	6:28	6:19	6:53	5:42	7:21	5:25
2.....	6:29	6:17	6:54	5:41	7:22	5:25
3.....	6:30	6:16	6:55	5:40	7:23	5:25
4.....	6:30	6:15	6:56	5:39	7:24	5:25
5.....	6:31	6:13	6:57	5:38	7:24	5:25
6.....	6:32	6:12	6:58	5:37	7:25	5:25
7.....	6:33	6:11	6:59	5:36	7:26	5:25
8.....	6:33	6:09	7:00	5:36	7:27	5:25
9.....	6:34	6:08	7:01	5:35	7:28	5:25
10.....	6:35	6:07	7:02	5:34	7:28	5:25
11.....	6:36	6:05	7:03	5:33	7:29	5:25
12.....	6:37	6:04	7:03	5:33	7:30	5:26
13.....	6:37	6:03	7:04	5:32	7:31	5:26
14.....	6:38	6:02	7:05	5:31	7:31	5:26
15.....	6:39	6:00	7:06	5:31	7:32	5:26
16.....	6:40	5:59	7:07	5:30	7:33	5:27
17.....	6:41	5:58	7:08	5:30	7:33	5:27
18.....	6:41	5:57	7:09	5:29	7:34	5:27
19.....	6:42	5:56	7:10	5:29	7:34	5:28
20.....	6:43	5:54	7:11	5:28	7:35	5:28
21.....	6:44	5:53	7:12	5:28	7:35	5:28
22.....	6:45	5:52	7:13	5:27	7:35	5:28
23.....	6:45	5:51	7:14	5:27	7:36	5:30
24.....	6:46	5:50	7:15	5:26	7:37	5:30
25.....	6:47	5:49	7:16	5:26	7:37	5:31
26.....	6:48	5:48	7:17	5:26	7:38	5:31
27.....	6:49	5:47	7:18	5:26	7:38	5:32
28.....	6:50	5:46	7:18	5:25	7:38	5:33
29.....	6:51	5:45	7:19	5:25	7:39	5:33
30.....	6:52	5:44	7:20	5:25	7:39	5:34
31.....	6:52	5:43			7:39	5:35

# Little Change Noted in Waterfowl Nesting

Waterfowl production in the prairie provinces has been sufficient to maintain populations at the high level of 1953, according to Ducks Unlimited's September nesting report from Canada.

Ample rainfall in all three provinces has kept streams running and sloughs, potholes and impoundments at or near full supply level. A majority of the hatch is now on the wing, although two to three weeks later than usual. New broods have appeared throughout August, but there is no shortage of surface water and, given reasonably favorable weather in September and October, most of them should make the grade. A rough estimate of this August hatch is 12 to 15 percent of the total. The brood average, which was running below the long-term average of six up to the middle of July, has been brought up by the broods hatched since that time, and will be

at or close to average.

The aerial survey completed September 3 over the northern area of each province shows a below normal duck population in the great concentration areas of The Pas marshes (Manitoba) and the Athabaska delta (Alberta). This may be due to the generally delayed season which has deferred the concentrations, or most of the breeding stock remained south on the well-watered prairies and parklands. Probably both factors have affected the comparison with other years.

The overall picture indicates that there will be an ample supply of birds, particularly from Alberta and Saskatchewan into the Pacific and Central flyways and a somewhat reduced flight from Manitoba into the Mississippi flyway. Canvasbacks, Redheads and Lesser Scaup have had a good season. The West's contribu-

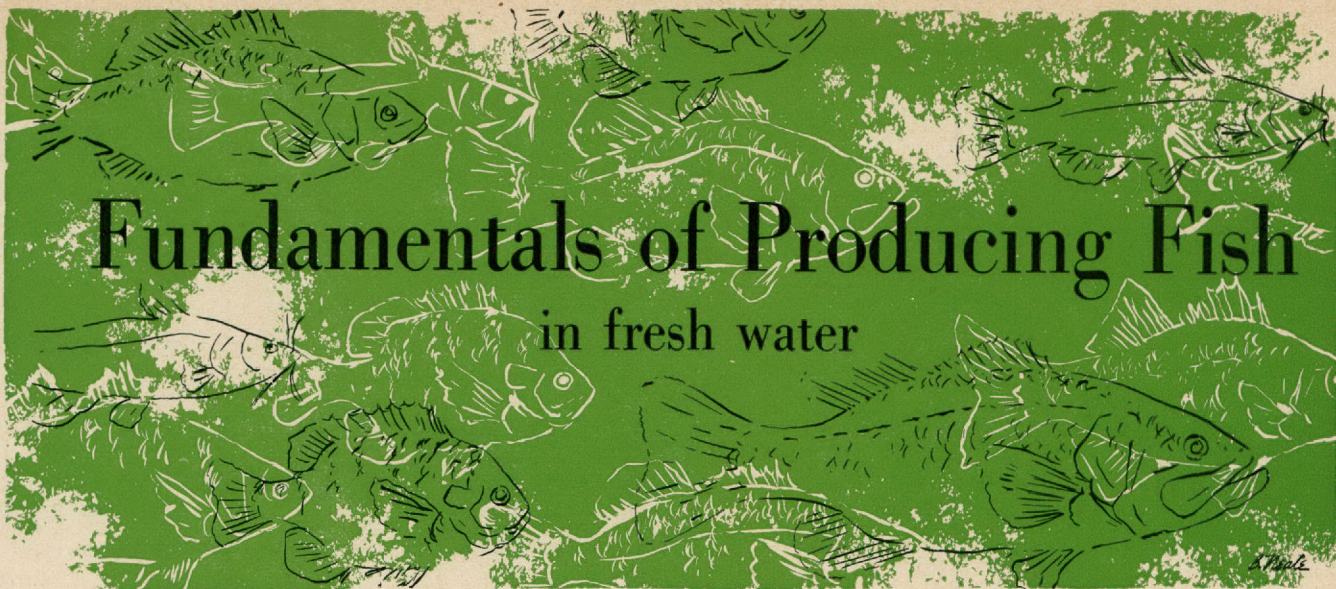
tion to the Atlantic flyway should be as good or better than last year.

## Paintings Offered

Sporting goods dealers are now being supplied full-color reproductions of two oil paintings of hunting scenes by a famous contemporary artist for distribution to their customers, free of charge.

Jack Boone, sales manager of the Arms and Ammunition Division of Olin Mathieson Chemical Corporation, announced that the two paintings by James Dwyer have been reproduced by Western-Winchester for sportsmen who want to decorate hunting lodges, gun rooms, clubs and dens. Dealers now receiving counter displays of the paintings are invited to forward requests for the reproductions to Western-Winchester in New Haven.





# Fundamentals of Producing Fish

## in fresh water

**Beginning an important new series by the executive head of the nonprofit Sports Fishing Institute.**

### Part I

By R. W. ESCHMEYER

**F**ISH CONSERVATION has had an interesting development. Here are some of the major points in its evolution, shorn of the many qualifying statements which would normally be made if space permitted. The evolution is interesting partly because of its uneven development; in some states it has progressed much farther than in others.

In pioneer days, fish were abundant. The land had been only sparsely settled by Indians, and their methods of taking fish were crude and inefficient enough to prevent depletion. So, in the early days there were plenty of fish to serve as a major supply of fresh meat for the settlers. There were no conservation measures. None were needed.

In time, there was local evidence of depletion, especially where easily-caught, spawning runs were harvested extensively. Locally, some regulation of the fishery seemed desirable. Emphasis was on allowing brood stock to spawn. It was felt that there should be closed seasons at spawning time and that the fish should not be taken until they were big enough to have spawned once. There was a tendency, too, to limit the individual catch. The regulations, therefore, involved closed seasons, size limits, and catch limits. The emphasis was strictly on regulation. The laws were imposed by the legal bodies—generally by state legislatures.

Enforcement called for a special set-up, usually consisting of a chief warden and field wardens. These individuals were political appointees. The warden jobs were a welcome addition to those politicians who needed to find a pay check for their faithful campaigners.

Gradually, more and more laws were imposed and more wardens were hired. Since there were no fact-finding programs, the regulations were made more or less arbitrarily.

**I**N TIME there was a new development. It was found that fish could be produced in hatcheries and rearing ponds. The artificial hatching and stocking of fish fry became a craze. The federal government and the states built more and more hatcheries.

Since fish spawned successfully if given an opportunity, producing fry in rearing ponds was a simple matter. The discovery that trout eggs could be stripped out and artificially fertilized led to a simple procedure for producing trout fry. After a very little experience, political appointees could handle the hatcheries. Here, then, were more jobs for the faithful.

The expanded "fish conservation" program called for the spending of considerable sums of money. To pay for the costs of the state programs, anglers were required to purchase licenses. Here the taxation was directly on the "consumer." The income from licenses was generally turned over to the general fund. The legislatures then decided on how it was to be used. Necessarily, due consideration was given to the political values.

Conservation became a simple routine. If sportsmen in a locality became dissatisfied, a load of hatchery fish fry usually lulled them back to complacency. If this wasn't enough, there might be given a few additional cans of fish, or a few new restrictive laws would be imposed. If the anglers were especially hard to please, they might be given an added warden, or a replacement for the warden already on the job! These were the peaceful days of fish conservation. The political appointees had only one major problem — to please the voters. For quite some time they had a simple means to that end—more fish fry, more regulations, more wardens.

There was only one thing wrong with the "fish

• Continued on page 24



## Fish Reports Field Data

# Texas Tracks

By JAY VESSELS

### BOUQUET FOR TEXAS

The official *Bulletin* of the Sports Fishing Institute, which covers the national field, recently noted Texas' concerted training program for the state's new wardens. It cited particularly the college training program which all Texas wardens must take. In contrast, the *Bulletin* noted that "... in perhaps two states a nod by the county political chairman is still the major need for a man who wants to be a warden."

### THAT MAN AGAIN!

Remember Van Spinks, the man who wanted to sell his Lake Austin home even after landing a championship black bass? Well, he's at it again. Got himself a new split bamboo outfit and tested the Gulf coast. First time, fishing out of Corpus Christi, he stopped the show by hooking and boating a giant ray that tried to swamp the launch. Next time, he tangled with a 25-pound drum and brought it in amid the huzzahs of the other anglers. And after that sharp light tackle display, the skipper of the boat just told Van to come on back and fish on the house any old time. He was such a terrific crowd pleaser.

### NEW VARMINT GUN

New micro-groove rifling has been perfected for the Marlin 89-C semi-automatic clip-fed rifle, called the .322 Varminter, to enhance accuracy. The new barrel design also increases bullet velocity.

### ELDERLY PELICAN

Game Warden Pug Mullineaux of Rockport said one brown pelican in the San Antonio zoo is at least 25 years old. He reported the big bird, which inhabits the Texas coast, is the only survivor of several trapped and taken to the zoo years ago.

### MIGHTY QUOTES

Boiled-down facts on the bobwhite quail crisis in Texas are contained in the quarterly report of the Pittman-Robertson federal agency which spearheads restoration projects. "Under the dual effects of drouth and overstocking with cattle, quail ranges continued to deteriorate. Transects on which quail counts were made with dogs showed an 80 per cent drop in quail numbers since the fall of 1950." Many folks know this and are working feverishly on the habitat program to crush the anti-bobwhite trend. This reminder is for those who are wondering what happened. Of course, late field reports agree that quail already are on the upsurge again.

### NEW ABC'S

Gus T. McMammal notes the strategy of the conservation education forces to capitalize on the tragedy of the historic drouth to clinch the case of everyday conservation of natural resources. Naturally, the schools are the key unit in teaching the need for sparing our soil, water, trees, minerals and wildlife and stressing the relation each has to the other. Gus deduced the ABC's for this could be Assimilating Basic Conservationism, wot?

### ANOTHER TEXAS FIRST

Bill Jennings, Assistant Director of Wildlife Restoration for the Game and Fish Commission, says Texas has one of the largest concentrations of wintering mourning doves each year. The area is about 120 miles deep and about 80 miles wide, extending roughly from Alice to Edinburg in Deep South Texas. Jennings says the late-arriving doves gather in this semi-tropical area by the thousands. The bulk of the mourning doves that nest in Texas, as well as the bulk of others migrating from the north, spend the winter in Mexico, or farther south in Central America.

### BASS BY THE TON

The *Rockdale Reporter* figured that the 3,561 fishermen angling the first 15 days that the new lake, Alcoa, was opened, boated about two and two-thirds tons of fish. During that period, 3,578 black bass, by actual count, were caught. They averaged one and a half pounds.

### TAKE 'EM FISHIN'

The *Breckenridge American* carried a UP Washington item telling about the D. C. radio disc jockey's efforts in behalf of kids and fishing. The man's name is Art Brown. He and his wife, Bertha, do not have children of their own, so they try to fill the void by helping other youngsters. Here's Brown's philosophy: "Get a boy interested, and you keep him on a straight line. They're all good boys, but it is important for them to acquire a hobby early in



## Press Views Game Notes

life. Get 'em to learn to love the outdoors."

### JUST GOOD FOLKS

Gus T. McMammal caught the headline—CARLSON CONSERVATION PLAN PAYS FAMILY BIG REWARDS—in the *Austin American* and went on to read the fine print. Just what he needed to start off the day right, because the article described the sort of sound farm affairs that would find the Animal Kingdom on the sideline cheering. The piece was about the Emory Carlson farm near Georgetown. It told how Emory and his wife, Ruth, have been officially recognized for restoring the soil by legumes and crop rotation and terracing to avoid erosion. They also are modernizing the 50-year-old farm house. Gus observed that it's going to take a veritable landslide of such restorative efforts to save the land and the creatures that inhabit it, but he's naive enough to believe it can happen here.

### BACK SAVER

A Texan, H. A. Overton, got tired of wearily lifting his boat upon a trailer every time he went fishing, which was often. So he invented a gadget which automatically lifts the bow of the boat over the rear of the trailer and on up on the carrier. He not only took care of his own personal problem, but made the cover of *Cormil Inventor*, a monthly magazine devoted to science and invention which is published in Austin. Better still, the magazine treatment of Overton's device brought him sale of the idea for marketing purposes.

### BIG CAT GOOFS

A timid shoreline fisherman put the big, brave, bold trotline anglers to shame out on Lake Austin, according to Charlie Robinson, who operated Charlie's Lakeside Camp. The small operator got a lift from a big yellow cat that should have known better. The fisherman put out a two-hook dropline which he hung from an overhanging tree limb. Came night, and a two-pound blue cat came along and impaled itself on one of the minnow-baited hooks. Later, the big yellow, foraging along the shore, gulped down the blue. When he realized his mistake, the big fellow tried to disgorge the bait, but could not, because the blue's fins had lodged in his throat. The timid soul weighed his prize in at 33 pounds.

### DEEP-SEA STUFF

Bill Jennings, Assistant Director of Wildlife Restoration for the Game and Fish Commission, said he wished his wartime service had been in the submarine service instead of as a P-38 pilot—he wished that, at least, when he was caught in a flash flood in the Big Bend country. He was inspecting the Black Gap Game Management Area when a sudden squall marooned their vehicle. In fording a swollen creek, Jennings had to jump and came up minus an expensive telescopic lens. Bill got across and then went back for the gadget, but got waterlogged. Next day, they found it in the gulch—dry by that time.

### REFUGE EXPANSION

Roy Swann, outdoor editor of the *Corpus Christi Caller-Times*, picked up a Washington report of great interest to Texans. It describes the efforts of the U. S. Fish and Wildlife Service to finance an additional four million acres of marshlands to provide refuges for waterfowl. Action was described as vital since "lands suitable for refuges are rapidly being taken over for other uses."

### MEOW-W-W-W-W!

Bill Cunningham, writing in his outdoors column for the San Antonio *Evening News*, rapped careless persons for permitting unwanted house cats to run wild, "invade the wilds and indulge their tastes in young quail and other game." Bill gave particular treatment to "some rather cruel people that sack up a litter of young cats and toss them out of a car on a country road to fend for themselves."

### HOMEMADE BUCKTAIL

Bill Thompson, sports editor of the *Paris News*, writes enviously of Mike Langley, veteran fisherman, who made his own bucktail bass lure when he couldn't find one on the market that satisfied him. It worked so well, reports Bill, that Langley has turned bait manufacturer and has his product — The Skippy — on sale throughout the South and Southwest.

### A BREAK FOR A BOY

Gus T. McMammal insists the best magazine article he ever read was by Hart Stilwell describing the abusive father on a fishing trip who curbed his boy so ruthlessly that the day was spoiled. The article told how the other man in the party later took the boy fishing and patiently coached him the way his own father disdained.

The incident was revived in Gus' mind a while back when a couple and two children were vacationing on a lake. They borrowed a boat for sight-seeing.

"How about your tackle?" asked Gus.

"Oh, I don't like to fish, and the wife has to look after the baby."

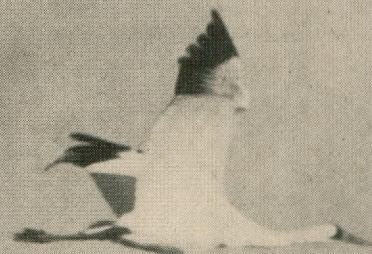
"How about Junior (a boy of six)?" pressed Gus.

"Oh, he won't have time to fish," replied his father. The lad's expression reflected the crushing impact.

"He went one time," conceded the parent, "and got a little fish on the line and just about went crazy."

Brother, can you spare a fishhook!





# Whoopers Face Another Test

The whooping cranes soon will be returning to Texas, where the only remaining specimens spend the winter. Here is the latest information about them.

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## About the Photo

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The unusual picture above was made by Fred Lahrman of the Museum staff of the Department of Natural Resources, Regina, Sask., Canada.

Mr. Lahrman and Museum Director Fred Bard found the cranes—three of the 24 known extant—near Francis Lake, 125 miles southwest of Regina, while taking movies of the birds feeding at quarter-mile distance.

The naturalists were lying in a ditch, trying to work out a plan of approach, when the cranes took to the air and flew overhead at a height of 150 feet.

Using an Exakta camera with a 300 mm. telephoto lens, Mr. Lahrman snapped the birds at 1-500 of a second at F6.3 without a filter. His photo showed the birds in full flight, one leading a pair flying side by side.

While Mr. Lahrman was doing this, Mr. Bard was busy with a movie camera, using color film, and was successful in procuring excellent moving pictures of the birds as they passed.

By ROBERT P. ALLEN\*  
National Audubon Society

Another dramatic test awaits the world's last remaining flock of whooping cranes when they leave their far northern breeding grounds early this fall and head for winter quarters in Texas. How many will return?

Last April all 24 birds, three more than the year before, made the long journey to the Canadian wilds and disappeared beyond the 60th parallel. So far as we know, all arrived safely. In early July, officials of the Canadian Wildlife Service reported that four of the birds were sighted, presumably on their long-sought nesting grounds. For obvious reasons, the exact location has not been revealed.

Now the short Arctic summer is drawing to a close and already any young cranes that have been reared in the Far North are exercising their

wings in preparation for the hazardous flight to the distant Gulf of Mexico. Although the natural dangers encountered will be considerable, the greatest threat will be from men and boys along the route who might shoot these birds despite their protection by federal law.

In view of the disastrous losses that occurred during the migratory flights of 1950, 1951 and 1952 (when a total of 24 whoopers, equivalent to the number that survive today, failed to return), the National Audubon Society, U. S. Fish and Wildlife Service, Canadian Wildlife Service, state and provincial conservation agencies, and various civic, youth, and con-

• Continued on page 21

\*Mr. Allen is the world's leading authority on the whooping crane. He is the author of a 250-page research report on the crane, published in 1952 by the National Audubon Society.



# GUNS

and

# SHOOTING

By JOHN A. MASTERS

Now that dove season has come and gone in our zone, and duck and quail season are yet to come, it seems appropriate to get around to deer rifles.

I doubt that any creature has succumbed to a wider variety of lethal weapons than the whitetail deer. Everything from the lowly 22 up through the 375 Magnum has dispatched the gamester, and not a few have fallen to shotguns loaded with buckshot and rifled slugs. Personally, I feel very strongly that this aristocrat of game animals deserves a better shake at the hands of his executioner than he has received in the past.

First, let's condemn the 22 in strong terms as a deer weapon. I am fully aware that this will not prevent some from using it, but nevertheless, the 22 rim-fire in all its forms is absolutely inadequate. Everyone knows someone who has killed a deer with the 22, and not a few people will argue that nothing more is required. Regardless of all this, anyone who hunts deer with a 22 is guilty of a crime against the out-of-doors. Eventually, it will be outlawed, and until it is, people will continue to hunt, wound and lose deer because someone has been lucky enough to hit a vital area and kill a deer with a 22.

One year, I camped out hunting deer, and was asked by a warden to help in trying to save a doe that had been shot in the ham with a 22. The wound was infected, and the doe was sick enough that without help she couldn't stand. All our efforts were fruitless, and eventually, it became necessary to destroy the helpless, starving creature. I had a 22 in camp, and the warden borrowed it

to finish the doe off. From a distance of about ten feet, he shot her seven times squarely between the eyes, and four times behind the shoulder, and still she struggled to get up. I finally administered the coup de grace with a 250-3000.

Shotguns make fairly good deer-slayers with buckshot. Such a weapon is necessarily limited in range. All the stories about shotguns that will put all the buckshot pellets into a small circle at fifty yards just aren't true. Inside of fifty yards, buckshot are lethal. Beyond that, they are criminal. It is much better to use rifled slugs. Rifled slugs are not, however, particularly accurate, and almost any rifle powerful enough for deer will prove a better weapon.

Coming now to rifles, one finds a huge variety to choose from. I do not regard the 22 high velocity rifles as good choices for deer hunting because the factory ammunition usually is loaded with light thin-jacketed varmint bullets, and may fail to penetrate. They are also notoriously poor choices for brush hunting. Last year, I killed a ten-point buck at a bit over 200 yards using a 22-250. Let me hasten to add, however, that I was using hand-loaded ammunition with special heavy-jacketed, hand-made bullets. The gun was equipped with an eight-power scope, and I had a perfect shot from a very steady sitting position. I had shot the rifle enough to know that I could put the bullet just where I wanted it, and when it went in just behind the shoulder, the buck went down. From about 50 yards out, he made one attempt to get up, and I shot him again. Perhaps it was unnecessary, but if I had been using a heavier caliber, it would undoubtedly have

been unnecessary.

There are a variety of good 25-caliber deer rifles. The 250-3000, the 257 Roberts, and the 25-35 and its rimless counterpart, the 25 Remington, all are acceptable deer calibers. The last two are a bit on the low side in power, but will take deer with well-placed shots. The 250-3000 is one of my favorite deer cartridges, and the 257 Roberts is completely adequate.

There are several good 25 wildcats. Heading the list is the fine 25-06 Improved. This little gem is practically ideal for long-range deer and antelope. It can be used with complete confidence on whitetail deer with any of the good 25-caliber bullets, and with Vernon Speer's long, mean, 120-grain bullet, it is deadly on the larger species. The 257 Improved is good, but is really not much better than its country cousin, the 257 Roberts. Roy Weatherby's 257 Magnum is a good deer killer, but a bit more soup than one needs for whitetails.

The 270 is a fine deer killer, and not a few deer of all species have succumbed to its smashing power. I like the 130 grain bullet for the 270 when hunting deer, although the 150 grain is perhaps better for brush shooting. The 270 is a fine long-range deer killer, and is a good choice for a hunter who will eventually hunt bigger game.

There are a number of fine 30 caliber deer cartridges. From the venerable 30-30 through the fine old 30-06, one can depend on the smashing wallop of the heavy 30-caliber bullets. Other excellent 30 calibers are the 300 Savage, 30 Remington, and the 30-40 Krag—any of these make good deer killers in the brush.

● Continued on Page 20



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## Shootin' Shorts

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The Norman Ford Texan scopes mentioned in an earlier article are mighty fine medium-priced glasses. I have given them a pretty good shakedown, and I can say without reservation that they are entirely adequate for the needs of most shooters. The scopes have positive reticle adjustments, and are clear and bright. I personally would like to have a bit finer cross hair in the 6X but this is, of course, simply a matter of preference.

The scopes are well-made, rugged instruments, with steel tubes and dural end bells. The reticle adjustment screws are covered with threaded discs which serve in the manner of a coin to make the adjustments. Both glasses take 1-inch rings, and can be used with any mount. The

eye relief is not critical, and is sufficient to permit using the scopes on the most powerful rifles.

Another good medium-priced scope line is the Bushnell Scopemaster series. These fine Japanese-made scopes are available in any power from 2½ through 10. There are nice, light, beautifully-made instruments, and compare favorably with American-made scopes in the same price range. Reticle adjustments are positive and uniform, and the scopes are mechanically quite strong. One 6X Scopemaster withstood 2000 rounds of firing on a medium recoil rifle without trouble during some barrel wear tests I recently had a hand in.

These scopes have a very pleasing streamlined appearance, and take all standard 1-inch mounts.

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## Disastrous Flood Averted

Proof that an upstream conservation program can do much to avert flood catastrophes was demonstrated recently. In early May, the cloud-burst that struck the top part of Oklahoma's Washita valley presented a flood potential unequalled since 1934. The rainfall that year, 14 inches in a single day, is classed

as being of the "100-year variety," according to the Wildlife Management Institute.

At Cheyenne, Oklahoma, L. L. Males, former president of the Oklahoma Bankers Association and ardent soil conservation leader, said that the drainages in which soil conservation practices had been followed "performed 100 per cent." "It worked wonderfully," Males said. "If it had not been for the Sandstone, Kiowa Creek, and Beaver Dam Creek program, the flood downstream toward Clinton probably would have been worse than the disastrous flood of 1934, because the storm covered twice as much territory as that of 1934."

Many point to this successful demonstration as continuing proof of the advisability of upstream soil and moisture conservation. They were among those wildlife and natural resource conservation groups which urged the approval by Congress recently of H. R. 6788, regarded as a long step toward the adoption of a workable nation-wide watershed conservation program.



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## Guns and Shooting

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• Continued from page 19

I feel that the 308 Winchester is just about the same as the 300 Savage and is, as such, a good deer cartridge.

I have never shot a 7MM rifle enough to pass an opinion based on experience, but it apparently is a nice, light-recoil deer cartridge. Certainly the power is there and it has an excellent reputation for accuracy.

The 8MM is a good deer cartridge, and for a long while, it has been possible to buy German military rifles chambered for this cartridge for a good price. It has been called the poor man's 30-06, and certainly when hand-loaded, the 30-06 has very little on it. An interesting wildcat in this caliber is the so-called 8MM-06, which is nothing more than the 30-06 case necked up to take the slightly larger bullet.

Cartridges that are wholly inadequate are the 25 rim-fires, the 32 rim-fires, and several other low-power center-fire cartridges, such as the 25-20, the 32-20 and other of the old black-powder cartridges.

The 35 Remington, for which several excellent hunting rifles are built, is a fine medium-range deer load. It is primarily useful in brush, and lacks the flatness of trajectory that is desirable for a long-range cartridge.

Cartridges like the 300 H & H, and the 375 H & H, and the several wildcat versions thereof, are altogether too powerful for deer. They can, of course, be used, but at the risk of much meat spoilage.

Whatever cartridge used will be no better than the hunter's aim. Sight your rifle in carefully before hunting, and shoot it a bit before the season. Also, sight it in with the same weight bullet you plan to hunt with. A 30-30 sighted in at 100 yards with a 170-grain bullet can be as much as a foot high at the range with a 150-grain bullet.

Take only those shots that have a chance of landing. Know the limits of your rifle, and stay within them. Follow your wounded animal until you put him down for keeps or darkness overtakes you.

The whitetail is a worthy opponent in hunting, and he deserves your respect and consideration.



## Deer Signs

• Continued from page 7

bucks, he must get smarter himself by learning more about the game he seeks, and more about woodcraft. This is not difficult to do since characteristics of the white-tailed deer are known factors. His characteristics include his movements, and he can't move without leaving visible evidence in the brush. The hunter, then, who learns a few facts about deer characteristics and brush evidence will have more than luck on his side.

Briefly he should know the white-tailed buck possesses uncanny senses of smell, hearing and seeing, and an art of remaining motionless. He readily detects quick motion, but is less skilled in seeing slow moving objects and thus will not see a motionless hunter. These skills he learned in the first year of his life.

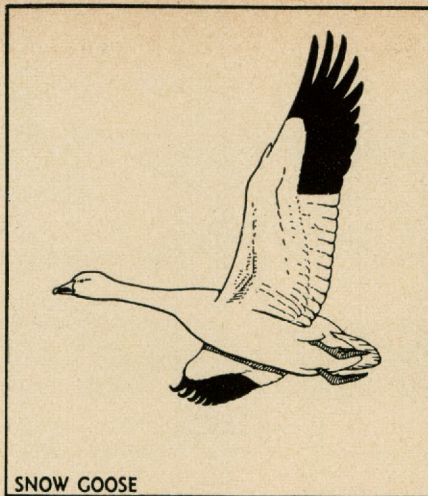
He occupies a block of range, which he also learned in his first year of life, by following his mother over trails between water, feeding areas, and bedding places. He will not stray from this range.

He is a browser who would rather eat such things as nuts, berries, mast, leaves and twigs of evergreen brush than grass, but he adapts himself to the cycle of plant life. He prefers to be a dawn and dusk feeder.

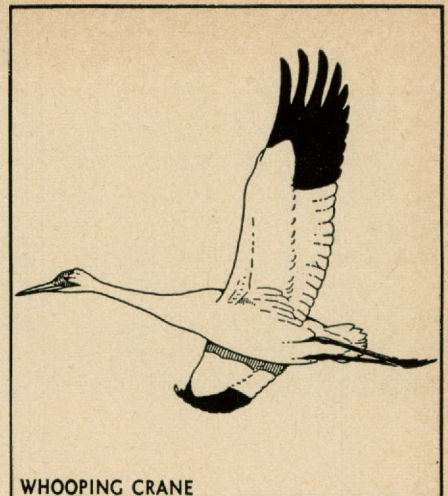
He requires water and will not go without it. During the hunting season, in the Hill Country, he is most likely to go to water in the period between sundown and darkness, but in the lower country, he is more likely to water around noon.

The white-tailed buck habitually beds down during the day, leaves his bedding area for food and water, and returns to it. His routine will be altered by climatic conditions, seasonal changes, availability of food and water, his mating season, and the activities of man. He has three distinct periods of movement during daylight hours: from daylight until 8 or 9 a.m., around noon, and the last hour before darkness. His period of greatest activity is in the last hour before darkness.

• Continued on page 22



SNOW GOOSE



WHOOPING CRANE

Texas, in their efforts to spot migrating whooping cranes, most often mistake them for snow geese. Note here the difference in neck and head and in length of the legs.

## Whoopers Face Another Test

• Continued from page 18

ervation organizations made a special appeal to residents of states and provinces along the migratory route. In news releases, articles, nationwide and local radio and TV public service announcements, and through other mediums, those living in the critical areas were asked to help by making the whooping crane's plight known to all friends and acquaintances who are hunters and outdoorsmen.

The effectiveness of this campaign was demonstrated by the safe return of all 21 birds that had flown north the previous spring, plus an encouraging dividend of three new youngsters, raised during the summer. This was the first season since 1949 that the whoopers made the long, two-way migration without a single loss, and much credit for this accomplishment must go to those individuals and organizations along the route who helped by bringing the need for protection to the attention of hunters and outdoorsmen in their neighborhoods.

Once again there is urgent need for all friends of the whooping cranes to come to their aid. There are those who view the slim ranks of this species with fear and headshakings. Some have even claimed that it is "too late" to do anything for them. The record belies this attitude. The whooping crane is once more doing better than average, the mortality rate of the wild birds is remarkably low, and as of last spring,

there were six more whoopers in the Texas-Canadian flock than 15 years ago, when intensive protection began.

It is believed by those who are working closely with these matters that if the public will continue its fine spirit of cooperation and help these great birds to journey across the country unmolested, the whooping crane has better than a fighting chance for survival.

If you live within the critical migration area (especially in Alberta, Saskatchewan, Manitoba, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma and Texas), then you can help by speaking to your friends and neighbors. Ask them not to shoot at any large white bird. Do it now! The cranes start to leave Canada late in September; the migration continues throughout October; and by early November, the last stragglers usually have reached the Aransas Wildlife Refuge in Texas.

The National Audubon Society believes that it was your help that protected these birds last year, and urges you to come to their defense again. Let's save the whooping crane today, for Americans of tomorrow!

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The new bridge in the Velasco-Freeport area provides a 76-foot clearance high above the intracoastal canal and easy access for visitors to Surfside Beach.

## New Beach Bridge Open at Velasco-Freeport

Surfside Bridge, new gateway to Surfside Beach in Freeport which, since 1939, has been on the dormant list of state parks, is now open to the public.

Until recently, an antiquated pontoon bridge provided the only access to the beach which affords some of the best surf fishing along the Gulf. Pleasure seekers stranded on the island when the contraption went out of commission were reluctant to return for another visit.

Under such conditions, private and public enterprise were slow to

invest in developments necessary to make the beach a resort worthy of its natural advantages. Now that the bottleneck has been broken, concessions are being opened, individuals are building summer cabins, and feelers are out for investors interested in building resort hotels.

Meantime, the natural splendor of the magnificent beach is easily accessible to all who care to take a short spin coastward.

Surfside Bridge is the only fixed span over the Intracoastal Canal between Florida and Mexico. It reaches

for 2,416 feet across sand dunes and salt water, rising to a vertical clearance of 76 feet at mean high tide over the coastal waterway. The arched center span stretches for 250 feet between the piers on opposite banks of the canal.

Most of the bridge's cost was paid by the Texas Highway Department, but both private and local public agencies had a part. Sponsoring the opening celebration as the culmination of a long and arduous campaign were the Brazoria County and Brazosport Chambers of Commerce.

### Deer Signs

• Continued from page 21

Like all creatures, he habitually moves in a set pattern. Trails are his travelways, and he makes or uses existing ones for specific purposes like going to feed or water, or for escape. As he moves, he is likewise habitually on guard. He uses his seeing skill to watch downwind and his backtrack, but depends on his nose and his ears to warn him of danger from other directions.

These, in the briefest form, are the deer characteristics which the deer hunter should know. This knowledge will do him little good, however, unless he learns something about woodcraft, including recognizing and interpreting brush evidence.

Deer can not exist in the brush without leaving evidence of their presence. That evidence is known to the hunter as deer "sign." By recognizing that sign and applying it to known deer characteristics for inter-

pretation, the hunter can locate a buck's range.

The first sign the hunter should seek is a bedding area, which is easy to find since it is likely to be the highest point of brushy ground around, the thickest thicket, or the most inaccessible place in the pasture, where a buck can exploit prevailing winds and brushy cover to use his protective skills of sight, hearing and smell. It will have covered routes of ingress with openings sufficient to permit the buck to observe a portion of his backtrack. A bedding area can be identified by pressed out areas in the vegetation or soil where the animal has lain down. Nearby will be numerous piles of dung of varying ages. A concentration of flies is likely to be present, if weather permits.

Dung droppings are essential clues. They will verify that the bedding area is used by deer, lead to

and help follow tracks, and indicate how much time has elapsed since the other signs were made. Fresh deer pellets have a bronze to light varnished appearance and mash easily, while old ones have lost their lustre and are hard to mash. They must not be confused with the droppings of other animals using the range. Sheep, goats, rabbits, and rats have similar droppings. Deer pellets vary in length on both sides of one-half inch. They are elongated with the diameter measuring slightly less than half the length. A rabbit's is more round, a rat's more elongated, and those of sheep and goats are shorter with a greater ratio of diameter to length. Rabbit deposits are not as profuse as deer, a rat's is much less, but sheep and goats traveling in herds leave profuse deposits.

Deer dung, however, is often not in pellet form. Succulent diets tend to make it cowlike and confluent,



but formed. Other unknown factors at times produce pellets of odd shapes and varied sizes.

From the bedding area, the feeding range can be found by following fresh tracks, as can the watering hole. A study of vegetation along this trail will reveal cropped off twigs, nibbled prickly pear, or other evidence of what and where the animal has eaten. The trail will also lead to the watering point.

However, other deer will be using the same range and leaving signs. The evidence discussed so far will not provide the hunter with proof that he is on the trail of a buck. Being larger, though, bucks will reach higher for browse and leave bigger tracks, but neither will give positive identification.

It is the belief of many that they can look at a deer track and identify the sex of the maker. This is not a fact. No man can positively and consistently identify the sex of the Texas white-tailed deer by its track alone, although there are characteristics by which the tracks of does and bucks can be differentiated under certain conditions. There are simply too many variable factors which prevent establishing a foolproof pattern which can be applied to deer tracks for sex identification.

In the first place, the shape and size of deer feet are individually influenced by the soils on which the individual deer exists, its food, age, health, size, weight, and by heredity. The tracks left will be altered by the soil the animal moves on and whether it is wet or dry, hard or soft, rocky or loamy, and whether the animal was walking, trotting, or running.

However, a buck's front feet are generally longer and more pointed before he mates for the first time. As he gets ready to mate, he paws the ground making his scrapes. When he ruts and runs does, he paws at them. Both activities cause wear on his front feet. Likewise he carries more weight on his front feet than a doe has to carry because he has the increased weight of antlers and a swollen neck during the rutting sea-

● Continued on Page 28

## Summary of Seasons

### FISH — GAME — FURBEARERS

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

#### GAME ANIMALS AND BIRDS

- Mourning Doves**—North Zone opens 12 o'clock noon Sept. 1, closes sunset Oct. 10. South Zone opens 12 o'clock noon Oct. 1, closes Nov. 9 at sunset. Shooting hours 12 o'clock noon to sunset. Limits, 10 mourning doves per day, 10 in possession.
- Gallinules and Rails (except Coot)**—Season opens Sept. 1, closes sunset Oct. 30. Shooting hours, one-half hour before sunrise to sunset. Limits: 25 Sora per day or in possession; 15 in the aggregate of all other kinds per day or in possession.
- Brant, Coot, Ducks and Geese**—Opens 12 o'clock noon on Nov. 5, closes at sunset on Jan. 3. Shooting hours, one-half hour before sunrise to sunset. Season closed on black-bellied tree duck. Limits: 10 coots per day or in possession; 5 ducks per day, 10 in possession, including not more than one wood duck and one hooded merganser, and excepting American and red-breasted mergansers, for which bag limit is 25 per day with no possession limit after first day; geese and brant, 5 per day or in possession, including not more than 2 Canada geese or subspecies, or 2 white-fronted geese, or one of each.
- Squirrel**—general open season October, November, December, May, June and July. Limit: 10 per day, 20 in possession. Panhandle season, October 1 to December 1, and May 1 to July 1, both days inclusive; limit, five per day or in possession. West of Pecos, season closed. Many Texas counties have special laws.
- Bear, Deer, Javelina and Turkey**—general open season November 16 through December 31. Limits per season: 1 bear, 2 buck deer with pronged horns, 2 javelina, 3 turkey gobblers. Panhandle season open on deer and turkey November 12 to November 24, both days inclusive; season open all year on javelina; season closed on bear. Panhandle limits, 1 buck deer with pronged horns, 2 turkey gobblers, per season; no limit on javelina. West of Pecos, season Nov. 20 to Nov. 25, both days inclusive on deer and bear; javelina season Nov. 1 to Dec. 31, both days inclusive; turkey season closed. West of Pecos limits for season: 1 black bear, 1 buck deer with at least one pronged horn, 2 javelina. Note—javelina season open all year in many counties; no bag limit (see Game and Fish Law Digest).
- Chachalaca and Quail**—General season open Dec. 1 to Jan 16, both days inclusive. Limits: 5 chachalaca per day, 10 per week or in possession; 12 quail per day, 36 per week or in possession. Panhandle quail season Dec. 1 to Jan. 16, both days inclusive; limit 6 per day, 12 in possession; season closed on chachalaca. West of Pecos quail season Dec. 1 to Dec. 31, both days inclusive; Mearns quail and chachalaca season closed; limits: 12 per day, 24 in possession.
- Wilson Snipe or Jacksnipe**—Season open one-half hour before sunrise December 20 to sunset on Jan. 3. Limit 8 per day or in possession.

#### FURBEARERS

- All furbearers except Muskrat—December and January.  
Muskrat—November 15 to March 15.

#### GAME FISH

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



### PHEASANT—BOB WHITE QUAIL—CHUKAR PARTRIDGE

For

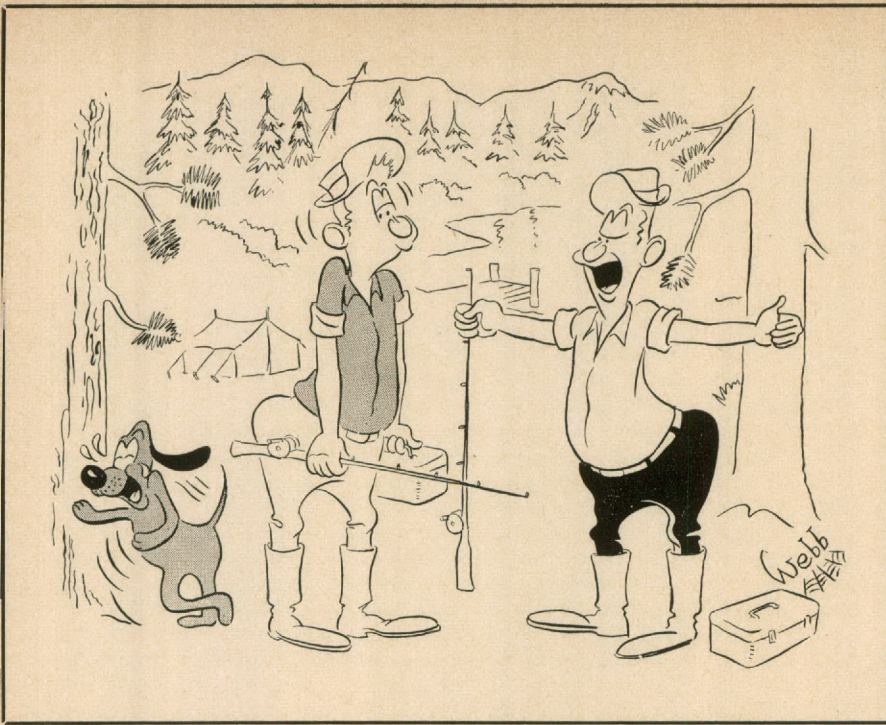
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## Fundamentals of Producing Fish \_\_\_\_\_ • Continued from page 15

conservation" program — it didn't help fishing! There were harder days ahead. . . .

Sportsmen, dissatisfied after a few poor days afield, turned to other panaceas. Some felt that there was too much inbreeding, and asked for new stocks. Some blamed the predators, with predator control pro-

grams resulting. Almost invariably the anglers wanted any species introduced which were not already present; a program of introducing all sorts of species into all sorts of waters followed. There was argument over which laws should be imposed, leading to the passing of innumerable local laws, imposed by the legislature to please local groups. The regulations became highly complicated.

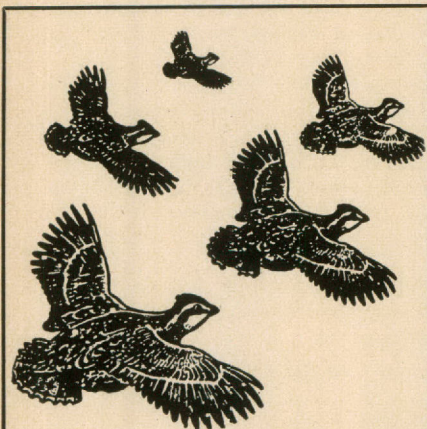
The political appointees were having more and more difficulty in their one major job—keeping the anglers contented.

Finally, and perhaps in desperation, they employed biologists, usu-

ally biology professors who had time to spare from their teaching during the summer months. The biologists served a worthwhile purpose from the start, as trouble-shooters. The administrator could restore contentment, momentarily, by sending the biologist to trouble areas, and by indicating to the public that "we are studying the problem."

But, the biologists weren't content with the "trouble-shooter" role. Typical of their breed, they were conscientious people who wanted to find the answers. In time, they found some. The answers, though, were embarrassing to the administrators. They tended to demonstrate that the methods of "fish conservation" which were in vogue were ineffective. They discovered, more and more, that the medicines in use did not cure the ailment. But, they failed to come up with new remedies. It was an embarrassing period for both the biologist and the administrator, as well as for the hatchery man and warden whose products or services were now subject to question.

Meanwhile, the public was inclined more and more to rely on specialists—on doctors, lawyers, engineers, agricultural experts. So, naturally, the public was beginning to place reliance on the trained fishery experts. This led to internal difficulties. The politically appointed administrators, wardens, and hatchery men, who originally considered the biologists with their big words and their devotion to their jobs to be an interesting novelty, now began to think of these specialists as potential competitors for their jobs. The biologists were openly ridiculed. But, they stuck to their knitting. In some instances the ridicule was deserved; many biologists failed to recognize the human angle. Some were impractical. Some were obviously deficient in "bedside manner."



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Most important was the observation that a lake or stream is really a pasture, with extremely prolific "livestock," and with the rate of growth depending on the amount of food available. It was found that fish needed more than just water; that other conditions needed to be favorable, too. It was discovered that a small fish wasn't necessarily a young fish—he might be an underfed old-timer! The technical fellows learned about food chains; a bass eating small fish which eat insects which subsist on microscopic food isn't equivalent to a sheep eating grass. It's equivalent to a super-predator eating wolves which eat sheep which eat grass. This explained quite clearly why our lakes and streams couldn't be "half fish and half water!" The biologists gradually learned many things even though they couldn't find a simple answer to the question of how to give "ideal" fishing to all anglers.

Meanwhile, the internal feuding led to interesting developments. In some states the political administrators were replaced by other people. Hatchery men were given the top fishery jobs in some states, wardens in others, and biologists in still others. In every instance, some individuals developed a broad viewpoint and did a good job. Others retarded conservation in their states. Today, we have administrators in all these categories.

The political appointee doesn't object to good conservation, but he also tends not to promote it. His main interest is in keeping the voter happy and in hanging on to his job. Since conservation education might lead the public to suspect that he isn't competent, he generally is opposed to public enlightenment.

The one-time warden, as an administrator, may tend to over-stress enforcement. Often, he tends

to object to fact-finding, to education, or to change. He doesn't want to change the "status quo."

The fishery administrators who came up the hatchery ladder naturally tend to favor stocking. Some do everything possible to retard progress; others are doing a good job in the administrative capacity. In several states these men have definitely opposed fact-finding. They may have one or a few

trained men on the staff, because of public demand, but the men are held down and some of their findings are kept from the public. These hatchery men spend most of

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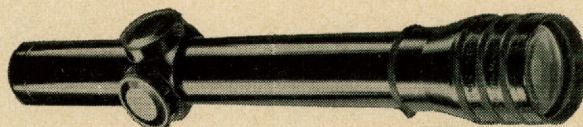
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the funds on more and more stocking. A few even go in for put-and-take warm-water fish stocking, without letting the public know that the cost of raising bass to catchable size in hatcheries is exorbitant. These "administrators" usually have very limited fish conservation education programs. They don't want an enlightened public for obvious reasons. Where they have been in power for years, the public is usually poorly informed, and even the commissioners may not

know that their fishery program is an unenlightened one. The states tend to be backward in fish conservation. As indicated above, in some states the hatchery men, after being made top fishery administrators, keep up with the times and have progressive set-ups.

The tendency is, more and more, to put formally trained fish men in charge of the state fishery programs. These men, trained as biologists, may have trouble in public relations, but in general the programs which they advocate are the most progressive.

In the interesting evolution of fish conservation the need for formally trained fish men is now generally accepted—following the same evolution as we have had in medicine, engineering, and other specialized fields.

As for the current fish conservation picture, enough is known now to present it rather graphically. Here it is:

1. We have more and more anglers. Fishing pressure increases constantly.

2. A lake or stream will produce only a limited amount of "live-stock." The average acre of water in the United States probably supports only about 100 pounds of fish.

3. Of these fish, only a portion are of the size or species wanted by the angler. In many waters the desired fish are in a minority.

• Continued on page 29



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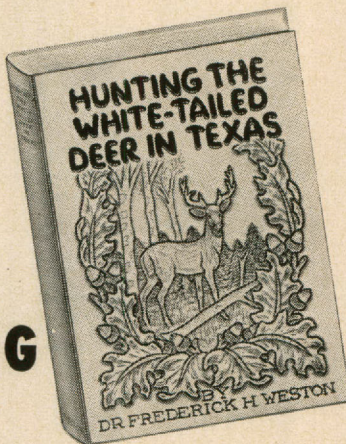
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## DOUBLE TROUBLE FOR FALL FISH

In the fall when hunting season is just around the corner, the fisherman would do well to tear a page from the hunter's notebook, says Heddon's research department.

For instance, many old-time hunters used to carry a double-barrel shotgun with the comforting thought that they would have a second shot at their target in case the first one misses. There are a number of old-time plug casters who use a double-barreled attack in their fall fishing with equally good results, and here's how it's done . . . .

In the fall, as most anglers know, fishing is a hit or miss proposition, but there are three certainties. (1) They are hitting on topwater lures. (2) They are hitting underwater lures. (3) They aren't hitting, *period!*

To quickly find exactly where they are hitting, try this double-barreled attack. Set up two rods; one with a chugger surface lure and the other rod with an underwater river runt.

Cast the chugger near weeds or lily pads, take the slack out of your line and lay the rod across your lap. Pick up the other rod and cast the river runt near cover in another direction, then retrieve it while you keep your eye on that chugger.

After the river runt is retrieved, pick up the rod in your lap, slowly take up the slack line, and gently work the chugger a few times. Then, look out! This is when you're likely to have your hair stood on end by a strike that sounds like a flat rock dropped from a tall cliff.

## Confusion for Fish, Fishermen

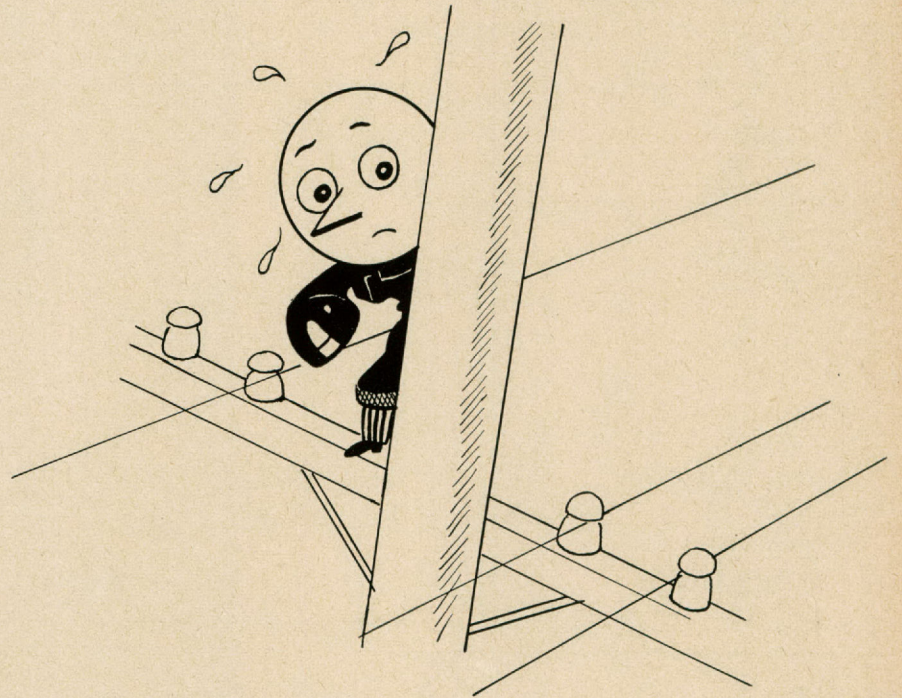
Gulf coast fishermen, always on the alert for unusual catches, have been in somewhat of a quandary recently as the result of two reports: one concerning redfish being caught on Seebre banks in 18 fathoms (108 feet) of water; the other of a 12-inch red snapper, deep-sea variety, caught in the shallows of Laguna Madre. Both catches were in the Port Isabel area.

The redfish, topped by two 30-pounders, were included in a catch of Woody Zachry of Waco, who was fishing from Jean Brand's boat, the

*Marian*, 20 miles from shore. Mrs. E. A. Nail of Denton caught the red snapper while fishing with her husband from the *Dorothy L*, with J. H. Schmidt as skipper.

In addition to not knowing how to account for the phenomenon, fishermen are puzzled as to whether to fish for trout and red at the snapper banks, or for red snapper in the bay. Armchair experts blamed the hurricane "Alice" or, the heat.

Who knows, maybe next time, there will be sailfish in the turning basin.



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son. This causes more spreading and wear on his front feet than a doe experiences, and is likely to cause his tracks to have deeper toe imprints, imprints of dewclaws, and drag marks. Thus each year he carries a heavier rack and a swollen neck the more obvious becomes this wear, deeper toe imprints, imprints of dewclaws, and drag marks.

Generally speaking, therefore, larger and older bucks have a wider and more round front foot than does and leave tracks described as full heart-shaped. In contrast, the track of a doe's front foot is expected to be elongated, but both bucks and does leave smaller and more elongated tracks with their hind feet. The tracks of the front feet, therefore,

should be used in any attempt to identify the sex of the maker.

These expected characteristics can not be depended on because does can leave tracks bearing all that is expected of a buck's, and bucks can leave tracks bearing all that is expected of a doe's. Like the preceding signs tracks, therefore, do not provide the hunter with positive proof that he is on a buck's trail.

There are signs, however, which will give him positive proof bucks are around. They are "rubs" and "scrapes" which will also help him identify a buck's track.

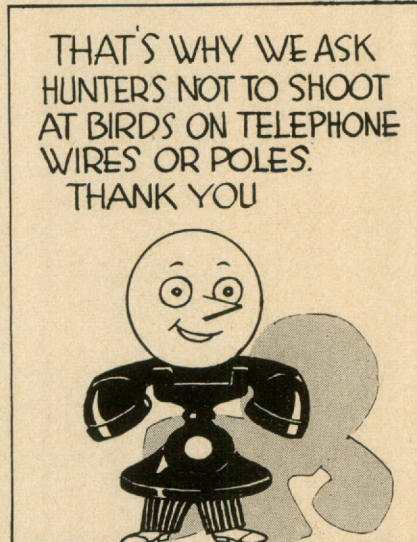
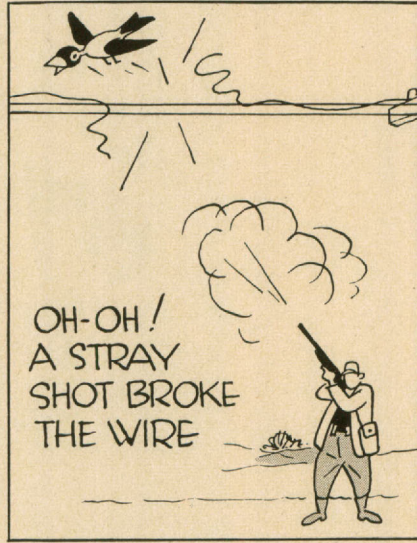
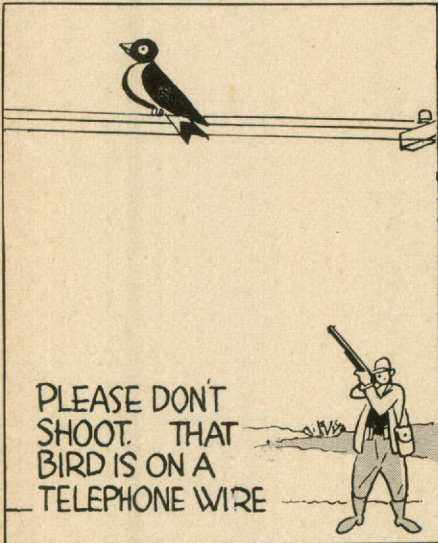
Rubs are easily seen as bared areas on saplings where the bark has been rubbed off by deer antlers. Complete antler growth on Texas whitetails is

usually achieved by late August. Bucks assist in the removal of the velvet covering on their antlers by rubbing them on saplings. Thereafter, they continue rubbing to condition antlers to be weapons for the rutting season, and to strengthen and enlarge neck muscles to wield them. Rubbing may be continued into the season, but most rubs are abandoned by the time the rutting season starts.

Scrapes are pawed out areas on the ground usually found on the edges of openings in the brush adjacent to trails habitually used by deer. They are located under overhanging branches which the buck can just reach with his antlers and with his mouth. The branches will be battered and twigs broken off by threshing antlers and chewing and tugging by mouth. They usually appear after the first cold spell and signify the beginning of the rutting season. Each buck establishes a system of scrapes as an invitation for a mate. Does in heat visit them and deposit urine to leave a scented trail. Bucks make the rounds of their system of scrapes, and when such an acceptance is found, they take off on the doe's trail oblivious to man, beast, or the elements. They are easy prey for hunters at this time.

When scrapes first appear and the weather is right, bucks will come readily to rattling horns, brush being threshed, or any other sound which resembles bucks fighting or getting ready to fight.

Knowing these things, the hunter can plan a hunt with intelligence on a known buck's range. Thereafter he should place himself where he can view a shootable portion of the known range without letting the prevailing winds nullify his advantage, be there when the peak movements occur, be quiet, move only in slow motion, be observant, and be ready. Although there are not enough bucks in Texas to provide limits for everyone, he will be surprised at the number of bucks there are in his pasture.



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## Fundamentals of Producing Fish \_\_\_\_\_ • Continued from page 26

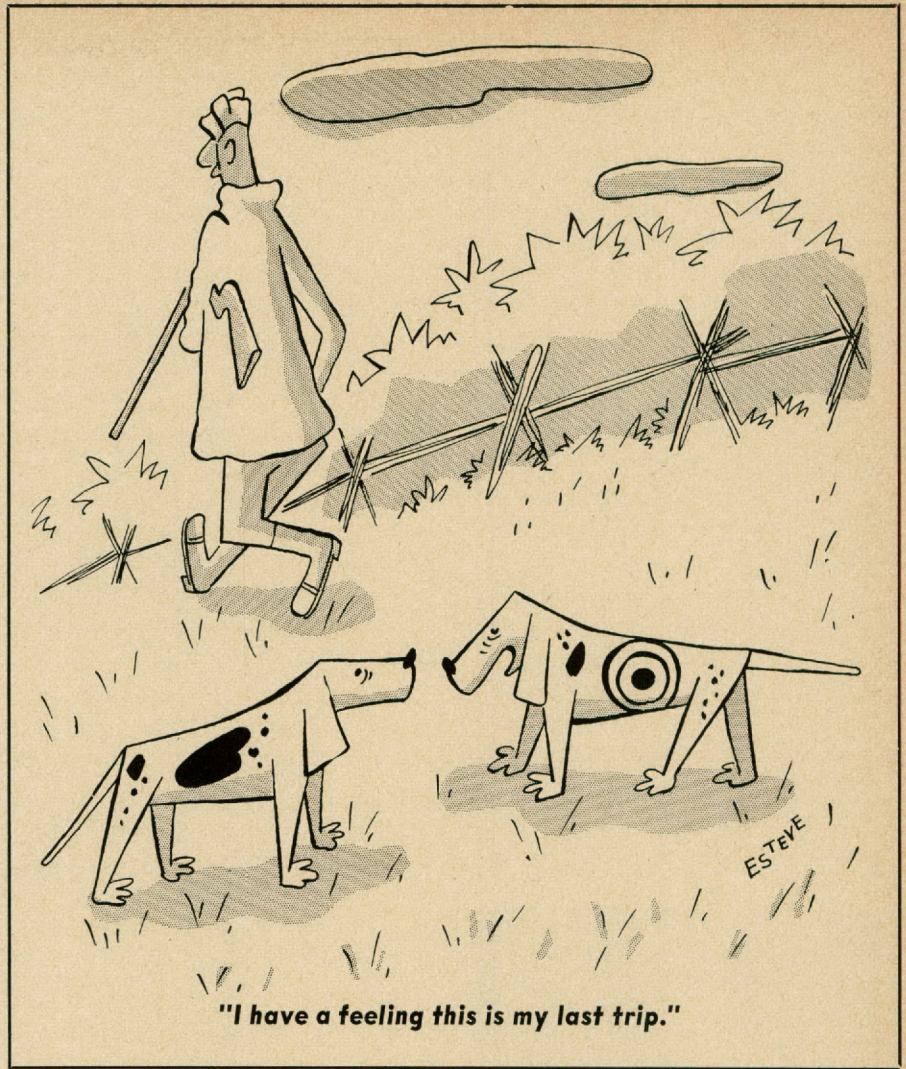
4. Of the available supply, only a fraction can be caught. The hook and line is inefficient. This point will be easily appreciated if you try "fishing" for rabbits—baiting your hook with a piece of carrot and waiting (hidden) for a rabbit to take it! On many of our big waters the catch is only a small fraction of the available supply.

5. Because of siltation and pollution, many waters can no longer support as big crops of fish as they once did.

In view of the above observations it's easy to see why the average catch gradually dropped with increased fishing pressure. It dropped to where the average catch was less than one fish per hour, and the average fish was less than ten inches long.

Now, we have growing evidence that fishing is improving. The trained fishery fellows are learning, more and more, how to manage our waters. They are becoming more efficient in handling our fish management tools: (1) stocking, (2) regulation, (3) environmental improvement, (4) controlling fish populations, and (5) creating more fishing waters.

To use the tools still more effectively we need more fact-finding



and a more enlightened public. Consequently, in those states which are trying to progress rapidly the emphasis is on research and on conservation education. If your state isn't emphasizing these two items, it's not doing a good job.

There are still problems, many of them, but we're now optimistic about the future of fishing in some states. We're less optimistic about some others because they have not

yet moved far in their fish conservation "evolution."

In future issues, we'll discuss the fish conservation "tools," one at a time.

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mew provided the tournament with one of the saltiest finishes in its history.

At sunrise on the third and final day, Bartholomew appeared at the office of Tournament Director Bob Meade and asked if he could enter for one day only. Tarpon fishermen, competing for one of the tourney's major titles, had been blanked by a murky surf the first two days. Bartholomew announced he intended to take his threadline spinning rig to the end of the jetties to take a crack at the tarpon rolling there.

With his rig and a pocketful of plugs, he headed for the jetties guarding the gulf entrance to the Port Isabel-Brownsville ship channel and scrambled over the huge granite boulders until he reached the end, 3,600 feet out in the Gulf.

All day long he tossed his plugs at rolling tarpon. He got strikes. By

noon a combination of rocks and fighting tarpon had robbed him of half a dozen plugs. Through the afternoon, in the broiling sun and without drinking water, the determined youth continued his lonely battle. At 5 o'clock, an hour before the tournament ended, a tarpon snapped his slender line and stole the last of his 15 lures.

A helpful stranger lent him a MirrOlure, and moments later Bartholomew hooked another silver king, a 12-pounder. With a day of experience behind him to learn the difference between trout fishing in Colorado and tarpon fishing on the Texas Coast, he won this battle and rushed away to the weighing station.

At 5:30 p.m. Batholomew weighed in the only tarpon yet caught. At 6 o'clock the tournament ended.

Then forty-five minutes later Mrs. Earl Hunter, a tournament veteran from Brownsville, brought in a magnificent 94-pounder, hooked at 5:20 and landed at 6:12. Tournament rules provided that any fish hooked before the deadline was eligible.

The excited crowd "unofficially" passed the tarpon title from Bartholomew to Mrs. Hunter. Tourney officials hurriedly huddled to compute the points under the official system which takes into account the size of line.

Mrs. Hunter's big tarpon, landed on 45-pound test line, netted 95 points. To Bartholomew, his ultralight spinning line, and smaller tarpon went 100 points and the tarpon championship.

Winners in the 1954 Texas Inter-

national Fishing Tournament were:

Texas Grand Champion Fisherman—J. R. McElwrath, Harlingen.

Men's Sailfish Division—J. R. McElwrath, Harlingen; Frank Evans, Corpus Christi; F. E. Knapp, Jr., Weslaco.

Women's Tarpon Division—Mrs. Earl Hunter, Brownsville.

Men's Tarpon Division—Airman 2/c Jack Bartholomew, Harlingen AFB.

Grand Champion Bay Fisherman—Sam Cashiola, Houston; Jo Bob Lawrence, Harlingen; E. A. Lewis, Harlingen.

Women's Bay Division—Mrs. Robert Monlux, Port Isabel; Mrs. G. L. Palmer.

Offshore Division—Arthur Brashear, Temple; Paul Anderson, Temple.

Winning Boatman, offshore — Bob Williams, Port Isabel; Aubrey Nelson, Port Aransas.

Junior Boy's Division—Mike Sullivan, San Benito; E. O. Matz, Jr.; Pat Maloan, Jr., Post Isabel.

Junior Division — D. Bordin, Jr., Rochester, Mich.; Steve Huebinger, Poth; Charles Sowatny, San Antonio.

Junior Girl's Division—Sharon Hensley, Harlingen.

Junior Offshore—Bob Johnson, Port Isabel; Bucky Ashcraft, Harlingen.

Largest Ling—Mrs. Ardell Thomas, Corpus Christi; Forrest Palmer, Fayetteville, Ark.

Largest Snook—Bobby Duffey; G. L. Palmer, Brownsville.

Largest Mackerel — Mrs. D. J. Schwarz, Mercedes.

Largest Trout—S. A. Scalist, Houston.

Most Spanish Mackerel—Mrs. John T. Hartman, Harlingen.

Largest Bonito—Ardell Thomas, Corpus Christi.

Fisherman Farthest Away—Marvin Wise, Maspeth, N. Y.

1st Day Daily Bay Prize—John Atchison, Harlingen.

2nd Day Daily Bay Prize—Forrest Peek, Harlingen.



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## Port Aransas Tournament

• Continued from page 11

fish and credited fishermen with a 7-foot, 6-inch sailfish or 5-foot, 6-inch tarpon, regardless of size.

On the second day Norman Binz, Houston, added a second sail to one caught the first day, but Dr. Bounds took the lead by landing two. No other contestants paired the third day, and the 2124 points Dr. Bounds collected on 20-pound class line stood up. Binz, with 30-pound class line, finished second and added the kingfish title to his award.

The addition of the tournament's 26 sailfish to the season's total equalled the top figure for previous years, with over a month of the season remaining, according to statistics kept by Hazel Smith for Henry Studeman's Del Mar Yacht Basin.

A new world record for ling (cobia) on 20-pound class line was claimed for Jimmy Sharp, Corpus Christi. Sharp won the ling division with a 57-pound, 12-ounce whopper, one of the many good-sized ling caught during the tourney.

Texas seems destined to claim a number of world records for ling. Several of over 60 pounds have been caught, but not officially recorded at Port Aransas this year, and the recognized standard is 41¾ pounds for line in the 12-pound class and 56 pounds for 20-pound class line. A 74-pounder caught at Port Aransas in 1949 is the world record in the 30-pound line class. All classes in the women's division were wide open at the beginning of the season.

Only a few tarpon, long Port Aransas' most sought-after game fish, were caught in this year's Deep Sea

Roundup. M. H. Spinks, Port Aransas, won the points title and prize for the largest with one just under 5 feet, 3 inches.

However, Port Aransas again threw the spotlight on the game fish that made it world famous with a special Tarpon Rodeo early this month.

A bay and surf division of the mid-summer Roundup served to focus attention on Port Aransas' fine fishing opportunities for the smaller game fish. It was won by T. V. Harper, Seguin.

### OFFSHORE DIVISION

Sailfish Division—Dr. L. D. Bounds, Corpus Christi, 2124 points; Norman Binz, Houston, 1860 points.

Largest Sailfish—W. B. Greet, San Antonio, 7 feet 7 inches; E. B. Coward, Refugio.

Kingfish Division — Norman Binz, Houston, 182½ points; J. F. Hartle, Corpus Christi, 166¼ points; Ted Sciabienski, Corpus Christi, 152½ points.

Largest Kingfish — Lester Brusse, Corpus Christi, 22½ pounds; Norman Binz, Houston, 18¼ pounds.

Mackerel Division—Bill Kuykendall, Tyler, 410 points.

Largest Mackerel—Bill Kuykendall, Tyler, 2½ pounds.

Ling Division—Jimmy Sharp, Corpus Christi, 577½ points; Ardell Thomas, Corpus Christi, 490 points; Harry Jersig, San Antonio, 480 points.

Largest Ling—Jimmy Sharp, Corpus Christi, 57¾ pounds.

Dolphin Division—Joe Henson, Mid-

land, 40 points; A. B. Stewart, Denver, Colo., 17½ points.

Largest Dolphin—Joe Henson, Midland, 4½ pounds.

Tarpon Division—M. H. Spinks, Port Aransas, 657 points.

Largest Tarpon—M. H. Spinks, 5 feet, 2¾ inches.

Bonita Division—Skipper Critz, Corpus Christi, 120 points.

Largest Bonito—Tom Moore, Corpus Christi, 10 pounds.

### BAY-SURF DIVISION

Trout Division—T. V. Harper, Seguin, 1760 points; Linda Hamel, Shreveport, La., 930 points; Mrs. Clarence Hamel, Shreveport, 630 points.

Largest Trout—Linda Hamel, Shreveport, 3 pounds.

Redfish Division—Kay Eoff, Alice, 190 points; Vernon Johns, Port Aransas, 37½ points.

Largest Redfish—Kay Eoff, Alice, 9 pounds.

Gafftop Division—T. V. Harper, Seguin, 140 points; E. L. Schroeder, Houston, 42½ points.

Largest Gafftop—T. V. Harper, 4½ pounds.

Pompano Division — Stinker Sims, Port Aransas, 16¼ points.

Largest Pompano—Stinker Sims, 1½ pounds.

Tarpon Division—Kay Eoff, Alice, 2484 points.

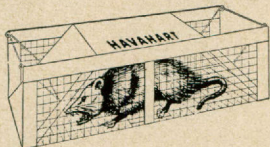
Largest Tarpon—Kay Eoff, 3 feet, 5 inches.

Mackerel Division — Jimmy Yarbrough, Midland, 125 points; Tres Kleburg, Kingsville, 106 points.

Largest Mackerel — Tres Kleburg, Kingsville, 3¾ pounds.

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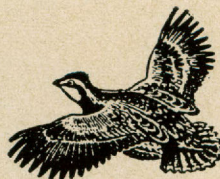


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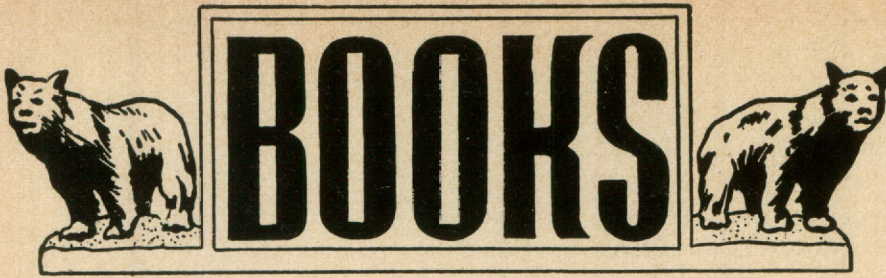
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# BOOKS

**WILD FLOWERS OF AMERICA** from paintings by Mary Vaux Walcott, with additional paintings by Dorothy Falcon Platt, introduction by H. W. Rickett. Published 1953 by Crown Publishers, Inc., 419 Fourth Avenue, New York 16, N. Y. \$10.

Seldom do the ordinary red and black covers of a single volume contain so many life-size paintings of one of America's most widely-cherished resources.

Yet the 400 flowers depicted in this book are only a few selected from thousands of flowering plants which grow wild on the North American continent.

Containing detailed descriptions and full information as to family, geographical range, environment, common names and their variations, this encyclopedic work is based on Mary Vaux Walcott's color plates, reproduced by permission from her famous portfolio by the Smithsonian Institute.

From the yaupon to the lonely prickly pear, the magnificent and completely accurate paintings have been supplemented by additional paintings by Dorothy Falcon Platt.

Common names and their variations, as well as standard botanical classifications and nomenclature, are given for all flowers. A Ready Identification

Chart lists the flowers by their distinctive features and facilitates identification of all the flowers represented and their related species. A detailed glossary provides a full explanation of botanical terms.

Two of the larger family groups are represented in this book—the conifers and the flowering plants. The brief descriptions which follow are intended to call attention to the principal features which distinguish a species from its relatives. Some idea is given of the "habitat" of each species.

Some plants are so widely distributed that it is difficult to say anything of their preference as to soil, moisture and shade. Publication of these paintings, however, should result in a greater appreciation of the wild flower and concern for its conservation, along with our native fish and game.

**GULF STREAM NORTH** by Earl Conrad. 253 pages in diary or daybook form. Published 1954 by Doubleday and Company, Inc., Garden City, N. Y. \$3.50.

In less voluminous form than the classic "Moby Dick," this mate's tale of action on a menhadener is the story of an industry whose men are at once

masters and slaves of an uncertain sea.

Bix, its big mate, tells the story of five days on the Moona Waa Togue during which the profit-sharing crew tensely awaited the captain's cry, "Po-o-o-g-g-y," to bring in a half-million quota of "pogy," as fish are known in menhaden waters.

Tension is followed by action, and near disaster by unprecedented success. The story should be of interest especially to Gulf-coast fishermen.

**SPEARFISHING** by Ivan S. Ivanovic, 79 pages with numerous photographic illustrations and line drawings. Distributed by A. S. Barnes and Co., 232 Madison Ave., New York 16, N. Y. \$1.50.

A fascinating sport, undertaken in a fantastic underwater atmosphere, is the subject of this inexpensive, authoritative handbook on spearfishing.

And few people know more about it than the book's own author. A pioneer in the sport, having practiced it in his native Yugoslavia for several years before the war, he has since aided its development in Spain, France, Bermuda and the Bahamas.

In the sport, especially suited to the British temperament, it is not necessary to be an experienced swimmer, says he. The swimmer merely tackles the fish in its own element, with the odds often against him, and wins. A direct descendant of the wartime frogman, it is fast becoming one of Britain's most popular holiday occupations.

**SPINNING IN AMERICA** by Ray Ovington. 205 pages with photographs. Published 1954 by The Stackpole Co., Harrisburg, Pa. \$5.

If you are a fisherman in the process of refining your equipment, this well-illustrated book offers new fields to conquer. For in it casting, effective lures, balanced tackle and the most effective techniques as applied to fresh and salt-water fishing are dealt with in detail.

The sport, born in America, has become well enough established to give the analytical angler opportunity to experiment widely in his application of spinning to different species in new environments.

Ray Ovington, a pioneer, brings the sport up to date in this, his latest work. Beginning with a brief history of the first spinfisherman and some interesting "tackle talk," the book contains both general and detailed instruction on the two most popular types of fishing. To make things even more interesting, his approach is the fresh and breezy one of a man who has long enjoyed spinning as a sport.

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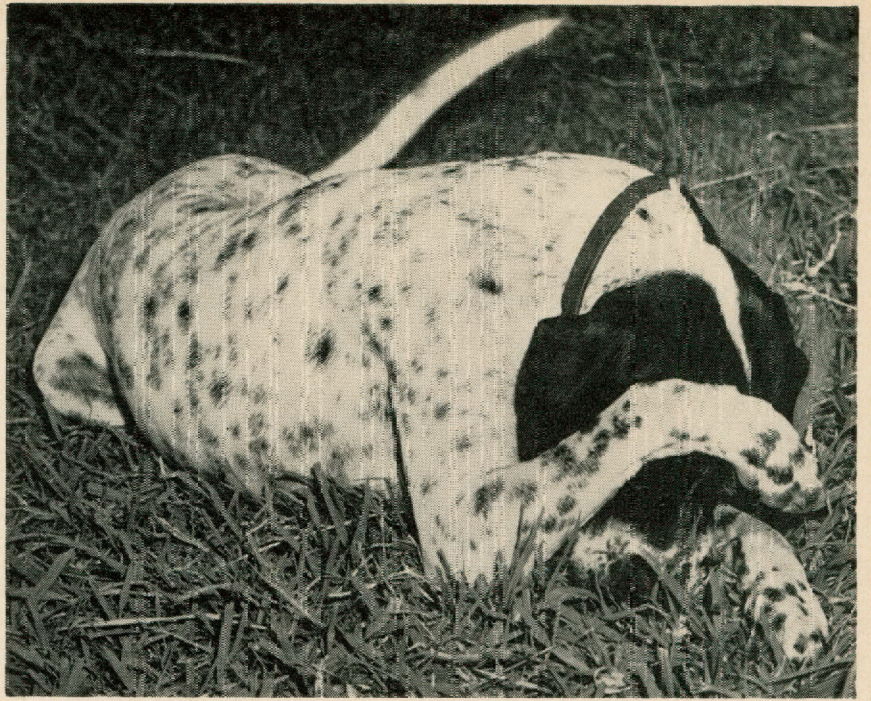


## Laws Tightened On Killing Hawks

Audubon magazine reports that Michigan has become the second state to give complete protection to all hawks and owls, with the recent passage of legislation with only one dissenting vote. Connecticut, in 1951, became the first state to furnish complete protection to such birds.

Hawks and owls are not protected under the Migratory Bird Treaties as are most other wild birds. Only nine states still do not protect any hawks or owls; most protect the majority of predacious birds, having enacted laws at the behest of nature groups and farm organizations which recognized their value in maintaining nature's balance.

In Missouri, all hawks and owls are protected with the exception of the goshawk, Cooper's hawk, sharp-shinned hawk and great horned owl. Farmers may also destroy other species of hawks on the rare occasions when they are doing actual damage to domestic stock.



### Bashful Bird Dog

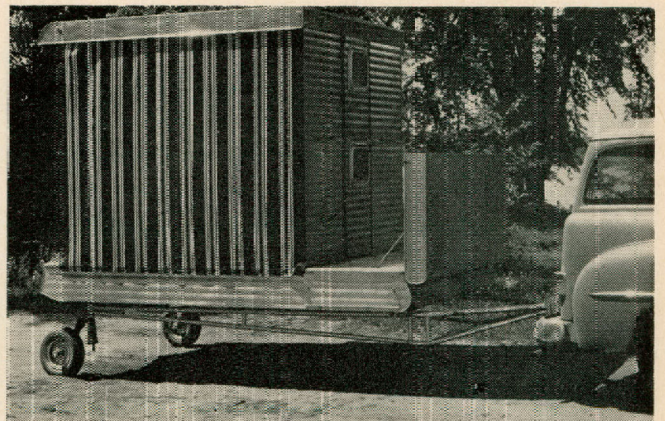
Outward appearances notwithstanding, the timid bird dog above is not ready for the psychiatrist. "He's very self-conscious," explains his owner, Frank A. Reeves of Dallas, "and he hides his face if you stare at him." But, aside from his bashfulness, he's a perfectly good dog and a prize pet of the family, he says.—(Photo courtesy Dallas Morning News)

## Portable Camp House Provides Bunks for Four

TEXAS GAME AND FISH Magazine a couple of years ago pointed up the demand for portable camping shelter with an article about some Texas outdoorsmen who converted an old passenger bus into a camp house on wheels. Now it seems that manufacturing ingenuity is meeting such demands and cutting cost with assembly line production.

One answer is this compact "mobile apartment home" made by New Moon Homes, Inc., of Alma, Michigan. It comes equipped with four bunks, which fold inside when the house is collapsed.

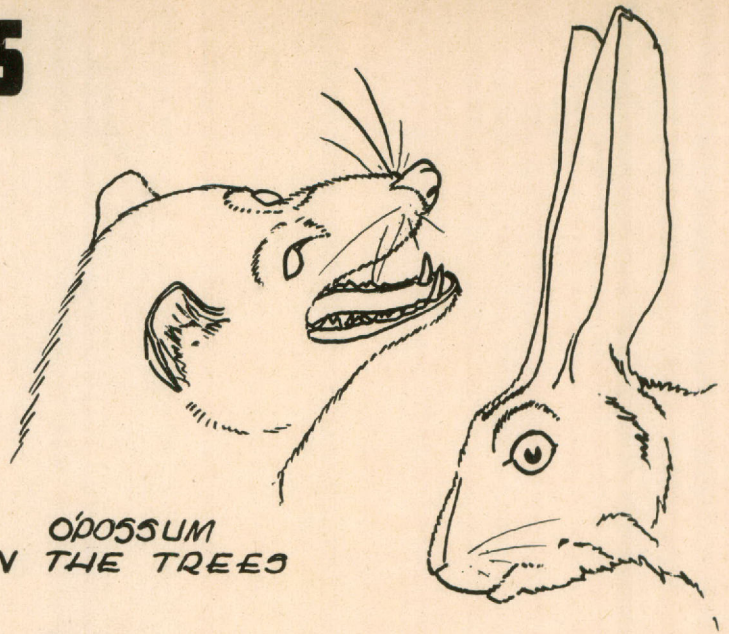
The New Moon Camper can be carried on top the car or on a light trailer and erected either way without detaching it. When not in use, the unit is only 16 inches high.—Jay Vessels.



This roomy portable camp house can be carried compactly atop the car, left, or on a trailer, right, where it is shown assembled.

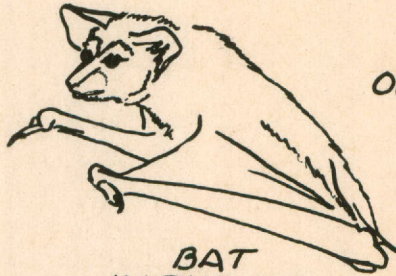


# VARIATIONS IN LIVING

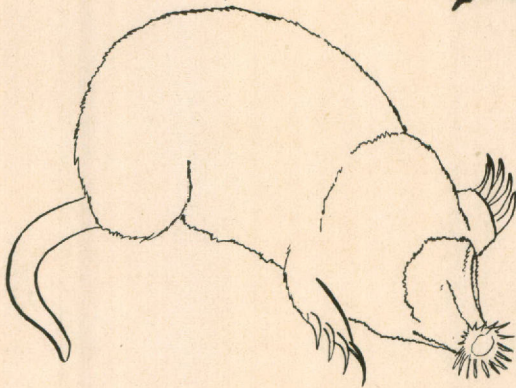


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