

# Texas Game and Fish

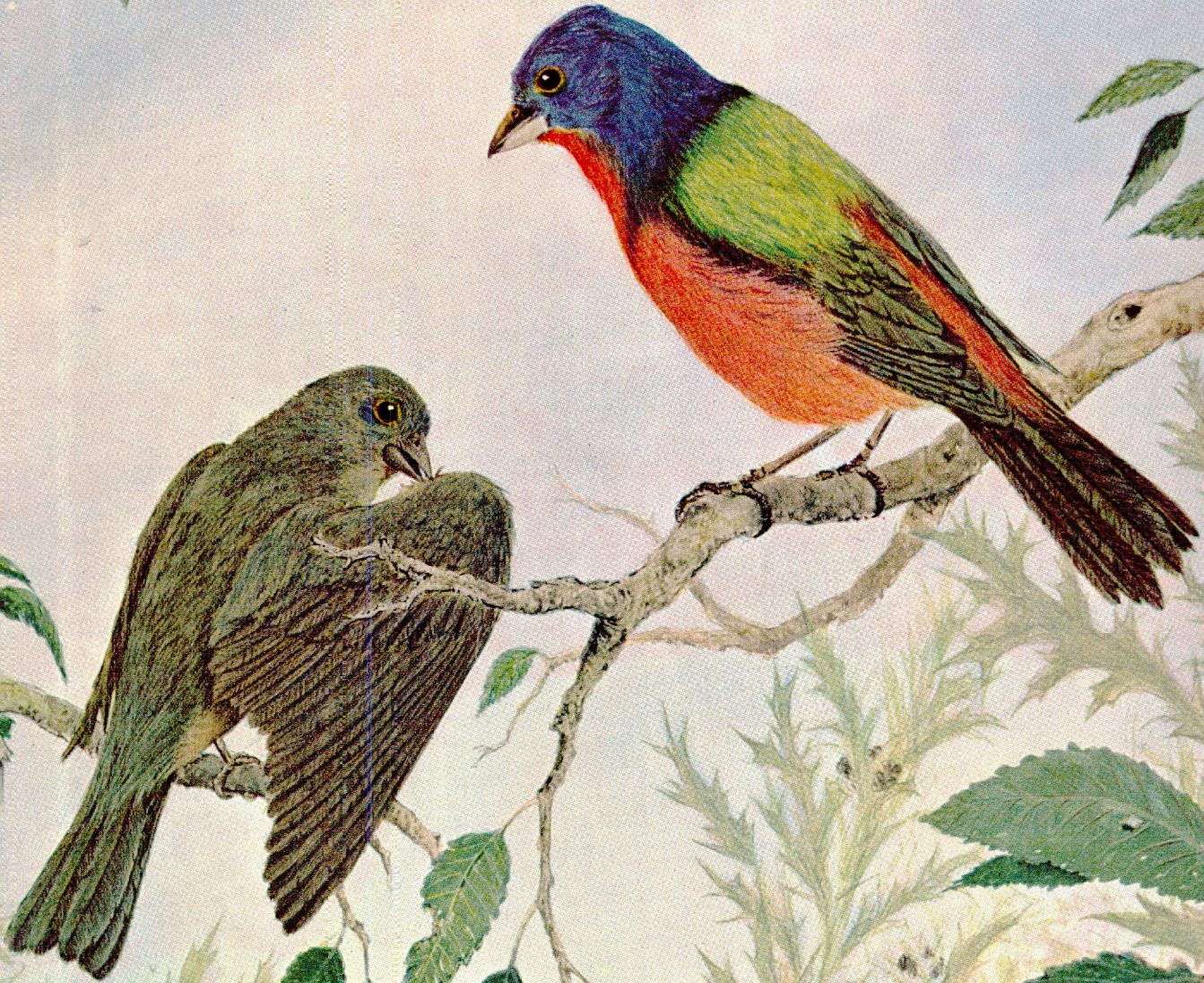
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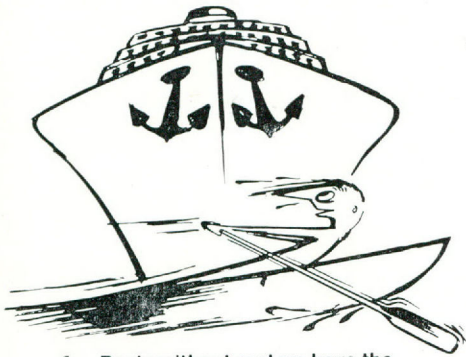
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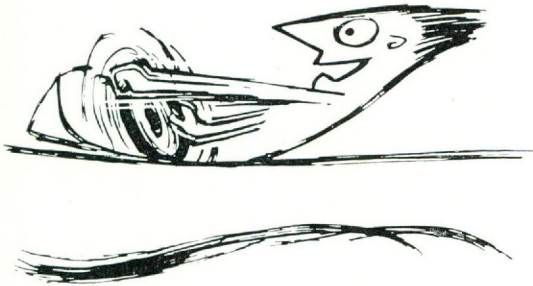
# Rules of the Road



1. Boats without motors have the right of way over boats with motors.



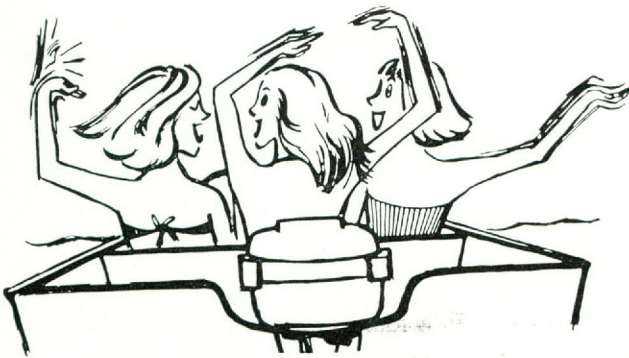
2. Keep right in channels.



3. When you meet another boat head on, swing to the right.



4. When two boats are approaching each other at an angle the boat on the right has the right of way.



5. A boat being overtaken always has the right of way.



6. Do everything possible to avoid a collision in an emergency.

# Texas Game and Fish

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



May, 1957

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## ★ In This Issue ★

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## The Cover

The Painted Bunting is considered the most gaudily colored of all our birds. The male is a patchwork of bright red, green, indigo, and other colors of the spectrum. Of striking contrast is the female, which is a drab olive green above, fading to a lemon-green below. Painted buntings are found in nearly all parts of Texas. (Original cover painting by Don Hague.)

# Salt Water Fishing License Under Study

Since World War II there has been a growing interest in the possibility of licensing salt water sport fishermen.

Increasing population densities and a new national program of highway construction may be expected to increase fishing pressure in coastal marine waters in the next few decades. Even now many inland anglers are turning to salt water fishing.

Tennessee, for example, contributed 41,000 fishermen to the 1955 total of salt water anglers. The coastal states are almost wholly unprepared for such an onslaught.

Dr. Daniel Merriman, Director, Bingham Oceanographic Laboratory, made a statement four years ago in which he said we know almost nothing about the life patterns of most of the oceanic game fish. He also stated that without this knowledge there could be no real basis for intelligent fish utilization and conservation.

*Already, Some Four Million or More Americans Fish in Salt Waters*, according to a national survey of fishing and hunting conducted in 1956.

There are 21 coastal states. Louisiana and Mississippi license the salt water anglers of their waters who use rod and reel; Oregon has a special short-term license for non-resident salmon angling which applies to salt water as well as to fresh water; yet, only California licenses most of its salt water anglers. California received nearly 2 million dollars from the sale of approximately one-half million salt water fishing licenses in 1955. This revenue was used to finance research and other vital activities which serve to protect, develop, and enhance sport fishing possibilities.

*The Purpose of a Salt Water Angling License* is to raise funds with which to serve sport fishing interests. Funds are needed for developmental work, which may be based on present knowledge, and research.

From research findings we accu-

mulate the knowledge needed to guide us in determining what laws and new yield-producing developments are necessary. Research on fishing pressures and resources inventories are needed to lay the groundwork for better management.

Management, which takes money, is needed now!

Many conservationists and conservation agencies recognize the pressing need for funds to study and develop marine sport fisheries and have urged the adoption of fund-raising licenses for salt water angling. Many different types of licenses have been proposed in the past.

*A Study of the Feasibility of a Salt Water Sport Fishing License* was undertaken by the National Wildlife Federation in collaboration with the Sport Fishing Institute.

A questionnaire was sent to official governmental conservation agencies and sportsmen's groups in the 21 coastal states. In all, 54 agencies and groups were sent questionnaires.

Eight replies came from sportsmen's leaders representing 22 such groups contacted. Twenty-four replies, representing 20 states, were received from the 32 questionnaires sent to governmental agencies, and eight were returned from non-governmental agencies.

*Only Three Replies Indicated Flat Opposition To Any Kind of License* for sport fishing in marine coastal waters. Two state agencies thought the proposal would be opposed by sportsmen. The sportsmen's leaders who replied, however, expressed general approval and recognition of a need for the license.

Twenty-one opinions, suggesting charges for a resident salt water fishing license, were received. Suggestions ranged from \$1 to \$5 per year. A \$2 annual fee was the most commonly suggested amount.

One of the questions sought opinion of the feasibility of a federal license to apply to all coastal states, with receipts earmarked for dispersal to the states under a formula

similar to Dingell-Johnson. Only four of the 29 replies favored such a proposal.

*Some Kind of Survey of Salt-Water Recreational Fishing* has been completed in nine states, and surveys are underway in five. The Crossley, S-D Survey of 1956 revealed that 4,557,000 anglers spent \$488,939,000 for salt water fishing in 1955. The average expenditure for the West Coast angler was \$156 compared with the average of \$91 spent by the 3,420,000 Gulf Coast and East Coast anglers.

*Results of the NWF-SFI Survey Seem To Point The Way*. We believe the idea for a Federal license should be discarded in favor of the conventional state licensing pattern. Interstate compacts should probably be worked out when and where possible.

The states in enacting licenses, separately, should strive to impose uniform license fees. It appears that a \$2 license is the most acceptable at this time.

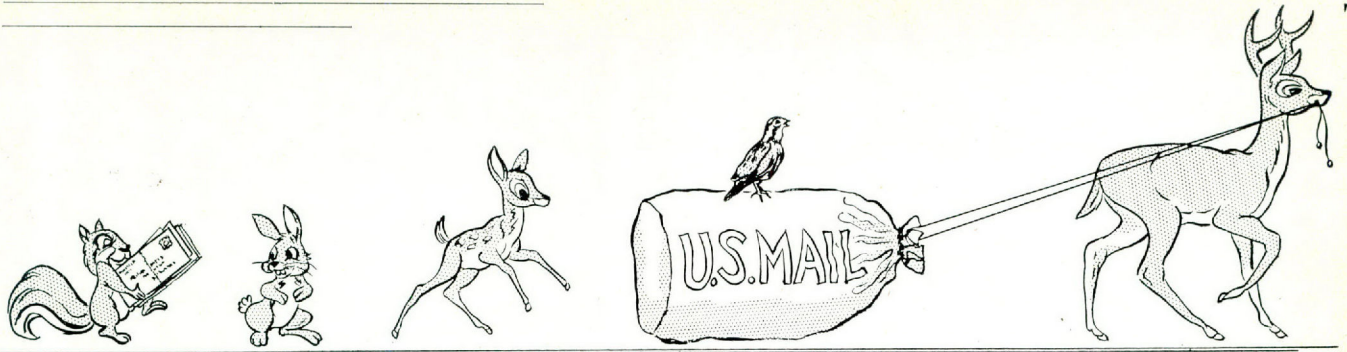
Although a \$3 fee may be more realistic in the long run, we recommend a \$2 fee, which would not be burdensome, in all current legislative proposals.

The idea of reciprocal fishing privileges has merit but seems to be too novel and too controversial at the present. It might be reconsidered at some later stage.

*The Time For Concerted Action Is Now!* Don't wait for some other state to start it. We urge all the coastal states to initiate legislation simultaneously this year to establish State salt-water angling licenses at fees of \$2 per year.

The revenues to be derived will serve to permit development and long-term maintenance of the sport fishing resources. Only then can tourist councils, chambers of commerce, and state legislators be assured of a sound base to support the enormously important tourist business for decades to come in their states. \*\*

Adapted from *Fish Conservation Highlights of 1956*—Sport Fishing Institute.



## Stinging Snakes?

Editor:

In your September 1956 issue it was stated that there is no such thing as a stinging snake. I was reared in Neshoba County, Mississippi, and am now eighty-nine years of age. I have killed quite a number of stinging snakes in my youth. They were unusual inasmuch as they coiled up on their head with their tail lashing out in every direction, with the stinger thereon. They were black on their backs, red underneath and very difficult to kill. I never saw one attempt to run. They were usually about three feet in length.

M. B. Tally  
1505 E. Constitution St.  
Victoria

(Mr. Tally's description of the stinging snakes as he saw them in Mississippi is the same as that of the western mud snake. The western mud snake is known locally in that portion of the country as the "stinging snake.")

This snake has a horn or horn-like spine on the tip of its abruptly tapering tail. It lives in the swampy lowlands of the South, burrowing in muddy banks, under logs and other material, and is not often seen. Local people greatly fear it because of its supposedly "deadly" sting. If the snake is picked up it will often push against the hand, holding it with the horn tip of the tail. The true use of the horn tipped tail is not known; however, it is believed to be used in burrowing.

Biologists, science teachers and others have examined tails of the so called "stinging snake" both inside and out for many years. None have ever been found to contain a sting or to be even the slightest bit poisonous.—W. S. Jennings, Wildlife Biologist)

## Census Helpful

Editor:

I've especially enjoyed and watched the progress of the Inks Lake program and this last issue clinched it. We are going down to pick a site for a fishing and loafing lodge this next weekend.

The charts of the many statistics as you presented them in the Creel Census article were very informative. They helped us immeasurably in the selection of the best lake, in our opin-

ion. Our favorite type of fishing is for channel cat, as well as any other kind of catfish by trotline and rod and reel, and L.M. black bass. By all means, keep up the fine work and we'll be indebted to you for your commendable efforts to continue to improve fishing.

We're also in favor of the license increase to enable you to expand and continue your studies. It will mean better fishing all over Texas for everyone.

Clarence Givens, Jr.  
1101 Andrews Highway  
Midland



## Good Catch

Editor:

These white perch were caught in Taylor's Bayou near Port Arthur. Mr. Albert O. Morton was the lucky fisherman. The largest fish weighed 2½ pounds and they all were caught with live bait.

Mrs. P. E. Thomas  
2220 Avenue H  
Nederland

## Answers

Editor:

I have all 12 issues of the 1956 *Game and Fish Magazine*. They sure help me answer a lot of questions asked by fishermen who stop at our place of business. They seem to think since I sell licenses that I should know all the answers. And *Texas Game and Fish Magazine* has helped answer the many questions asked.

Mrs. Weldon Baker  
(Licensed Deputy)  
Nemo



## Big Cat

Editor:

This is a photo of a large yellow cat which weighed 72 pounds and was four feet long. The fish was caught in Brownwood Lake by H. P. White and Richard L. White on a trotline, baited with rather small perch. It was caught in the 36th Division State Park part of the lake.

H. P. White and Richard  
Route 1  
Burkett

## Turtle Soup

Editor:

I read the following statement in the May 1956 issue of *Texas Game and Fish*: "Then the huge softshell turtle, weight twenty pounds, which provided a dish to delight any gourmet."

I shall be most grateful if you will furnish me instructions for preparing and cooking this turtle. I hope to be catching some of these, and I'd like to know how to prepare them.

James B. Williams  
1111 North 3rd St.  
Robstown

(The smaller turtles can be fried exactly like chicken. Larger turtles are tougher, so it is better to use them in either a stew or soup. The only difference in the recipe is that turtle meat is substituted for beef. Or at least that is what Joe Livesay of Austin, claims.)



S. A. Grimes, National Audubon Society

A female painted bunting brings an insect to her young. Later, as adult birds, they will eat seeds, primarily.

# pajaro

The bird of seven colors . . .  
the Spanish name for the  
beautiful, varicolored  
painted bunting

**I**N THE TROPICAL PARTS of Mexico and Central America are many brilliantly plumaged birds. Among these are green parrots, red tanagers, orange orioles, yellow finches, and blue honey-creepers. One small species seems to have borrowed patches of feathers from all the others. Latin Americans who see this bird in grass, weeds, and bushes beside their corn fields, banana patches, and cow pastures often call him *el pájaro de siete colores* (the bird of seven colors). Uncle Sam's tourists who have taken the trouble to consult Roger Tory Peterson's *A Field Guide to the Birds* should recognize the *siete colores* as a painted bunting; a few old-timers among them perhaps recall that the bird was called Nonpareil (a French word meaning non-can-equal) back in the days when it was lawful in the United States to keep his kind in cages without a permit.

Spanish, English, and French names all indicate that the painted bunting is no ordinary dickey bird. The adult male's head is indigo, violet, or purplish blue; his back is yellow-green; and the mid-throat, breast, and belly are vermillion or scarlet-red. Elsewhere he is purplish red (rump), parrot green, reddish purple and purplish blue (small feathers on wings), and dusky with edgings of purplish and green (flight feathers). A few individuals have some yellow or orange mixed into the red underparts. Thus it is pos-

sible to find all the colors of the spectrum on a little bird only five and a half inches long!

When spring comes the *siete colores* migrates from all-year tropics to summertime tropics in the southern United States from New Mexico to the Gulf and the Atlantic. As a bird of passage, and later as a nester, the species pretty well covers Texas from Brownsville to Amarillo and from El Paso to Orange. Last year (1956) members of the Texas Ornithological Society, a state-wide organization of "birders," observed the first migrants at Seguin on April 20, at Cove (Chambers County) on April 14, at Friday Mountain (Hays County) on April 18, at Austin on April 22, at Tyler on April 17, at Fort Worth on April 22, and in Denton on April 28. These arrival dates for widely separated localities are close together, thus indicating that buntings push north at a fast clip in spring.

Sometimes migrants will reduce their speed if they find a rich supply of food even in an otherwise unattractive environment. My notes read that on the night of April 20-21, 1952, was a cloudy, showery one in Austin. On this night migrants were flying low. Of the songbirds that came to the 27-story University of Texas Tower, a few individuals smashed into the building; more fluttered about near the lighted shaft something like moths before a flame. By daylight most of the flutterers had subsided to a shelf which sup-

# de siete colores

By EDGAR KINCAID

ports tower floodlights and catches some of the bodies of birds that have dropped down from higher up. Aside from one yellow-breasted chat the only dead and dying bodies on the ledge that April 21 were moths—many hundreds of them piled around the floodlamps. Alternately feeding on moths and resting beside one of the lights were three adult male painted buntings, three orchard orioles (one female, one young male and one adult male), two dickcissels, and a Lincoln sparrow. The chestnut and black male orchard oriole sang loudly and the dickcissels sometimes tried to utter a whispery version of their names, but the other birds were silent. Some members of the group stayed all through April 22. The glut of moth meat had temporarily overcome their tremendous drive to move on to their nesting territory, holding them two whole days on a barren, plantless ledge.

Like other songbirds, the male painted bunting stops when he gets to a plot, often the same one he occupied the year before, that instinct urges is the place for him. Right away he claims his nesting territory by fighting off other males of his species and by singing. *Pew-eata, pew-eata, I eaty you too*, he sings, according to George Finlay Simmons, who had a good ear for bird phrases. Song, most modern bird students will tell you, is primarily to warn rival males to keep off the nesting plot. The territorial system reduces crowding and competition for food. Female painted buntings apparently come north about a week or ten days after the males, but their exact arrival time is difficult to determine because their colors—olive green above and greenish yellow below—blend with the vegetation they inhabit. In addition, the females are largely silent; most reports of singing female painted buntings can probably be attributed to immature males, which are colored like the females.

Because of the quietness of this and other species of female birds, breeding bird census takers for the National Audubon Society and the U. S. Fish and Wildlife Service don't even try to count them. Instead they count the singing territorial males. In the spring of 1953, which was a somewhat average season, a group of Austin bird students found the painted bunting population to be approximately four territorial males per hundred acres in a cedar-oak area between west Austin and the Colorado River; the same season I computed that there were about 23 males per hundred

acres of prime weed-grass-bush habitat in western Bastrop County.

One nest in the Bastrop County census plot was in *tasajillo* (pencil cactus). Another in Uvalde County was in a Dorothy Perkins rose which climbed over a trellis in front of the Bar A ranch house. Almost any kind of bush, vine, or tree affords a suitable nest site. Sometimes this bird will even build in a streamer of Spanish moss, which is neither bush, vine, nor tree. The actual nest is a fairly neat cup usually only a few feet above the ground. It is constructed of soft bark, dead leaves, bits of paper, weed stems, grass stems, and almost anything else that the bird can weave together. The lining is of fine material, such as slender grass or horsehair. After she has built a nest, the female painted bunting lays from three to five whitish or faintly bluish eggs, which are spotted with brown and sometimes also with lilac. If these escape wind, hail, rain, fire, excessive heat and dryness, being stepped on too hard by the nesting bird, ants, snakes, cowbirds, cows, dogs, weasels, skunks, mice, rats, cats, goats, pigs, people, and other agents of destruction, they may hatch. The nestlings are very delicate at first and must be almost constantly brooded and fed.

Painted bunting parents make no records of the development of their offspring, but sometimes foster parents do. Mrs. John R. Whitaker, Norman, Oklahoma, who holds a permit to keep wild birds in cages, has been notably successful in rearing infant birds to middle age and beyond. Her painted bunting is near its sixth hatchday—an age few small songbirds reach in the wild because of food deficiencies, bad weather, predators, accidents, diseases, etc. Mrs. Whitaker has kept many data on her pet at various ages. In its younger days it would often ride her typewriter carriage while she was typing such notes as: "Painted bunting investigates everything. It rides typewriter carriage, pecks at keys, and tries to pick hands off my wrist watch."

In July, 1951, Mrs. Whitaker greeted with an especially friendly smile all visitors to the University of Oklahoma Biological Station on Lake Texoma; she needed people to help her catch grasshoppers for her young bunting. Her pet was eating with gusto then, but it hadn't back on June 30 when she rescued the 12-day-old nestling from a puppy. Mrs. Whitaker's

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Strings of fish like these are not unusual around Possum Kingdom.

By **BYRON B. SCOTT**  
as told to **NORMAN SPRAY**

Photos by **Byron Scott**



The biologist's thermocline reports for the day paid off for these fishermen.

*There's fishing news at . . .  
Possum Kingdom Lake  
now that sportsmen are . . .*



# Fishing the Thermocline

*Adapted from OUTDOOR LIFE*

**T**HERE'S SOMETHING AKIN TO MAGIC about the name of Possum Kingdom Lake, a beautiful blue-water impoundment about 70 miles west of Fort Worth, and this something is present on the lake itself. Formed by a build-up of Brazos River waters, the lake fills a vast valley cut off from cities and highways by high hills on either side. Possum Kingdom seems to carry you back a century or so from the noise and progress of today's hustling world.

I've had the thrill of seeing a seven-pound bass smack my plug, break water, then unreel 40 feet of 10-pound line before I dared snub him. And I've hauled in more crappie and channel cats than you could stack in a refrigerated truck. But I've also come home empty-handed.

Recently, my good days have outnumbered my bad ones, because the Possum Kingdom Association has come up with an aid that helps me and thousands of other fishermen catch more fish.

A mysterious-sounding word, thermocline, and similarly mysterious facts about water—its chemical content, stratification, and temperatures—are keys to the secret of how Possum Kingdom has increased its fish yield by an estimated 25 per cent. The system could possibly increase the yield on almost any major lake in this country.

Let me start from the beginning. For more than 40 years I've been an early-morning fisherman. Accordingly, 4:30 a.m. one August day in 1954 I backed out of my drive at Weatherford, accompanied by my two sons, and turned west toward Possum Kingdom. We were within a couple of miles of the lake when I got an early sports broadcast on my car radio.

"Here is the latest thermocline information from Possum Kingdom Lake. The minor temperature break is at nine feet and the major is at 36 feet." The announcer said the information was supplied by the Possum Kingdom Association's Thermocline Station and added that anglers should fish from the surface to eight feet of depth for bass and at 17 feet for crappies. I dismissed the story as a promotion stunt.





Hambric, above, analyzes water samples from various depths while Rogers, right, records the temperature every two feet down to the



bottom. Biologists are continuing their research to determine the full effectiveness of the thermocline in relation to fishing success.

As it happened, I was going for crappie that day and had already planned my attack. There was little wind and a pretty heavy flight of insects which I calculated would lure the crappies near the surface. By fishing minnows about six feet below the surface, I felt sure I'd fill my stringer before the day was well under way.

I was wrong. We sat in our boat until 10 a.m. with only two fish, both embarrassingly small. I decided they just weren't biting.

I had docked my boat at Rock Creek Camp and was loading the car when a fellow came in with one of the most beautiful strings of crappie I've seen.

"What did you take those with?" I asked.

"Minnows," he said.

Now, I'm too proud a fisherman to admit point-blank to a man with a good string that I'd just run into a brick wall, but I did manage to get his story.

"I never go out without temperature information from the thermocline station," he said. "I don't know what they do or how or why it works—but it does. They told me the fish would be at 17 feet—and they were."

My curiosity now aroused, I questioned him and learned that the station was located at Cedar Crest Camp, under the care of Bob Rogers, the camp's manager and then president of the Possum Kingdom Association.

He was pleased to see me when I drove into his camp, and it didn't take me long to get to the point. "What's this business about a thermocline station?" I asked.

Bob pointed to a floating buoy about 250 yards off his dock be-

tween Cedar Crest Camp and Constello Island. "That's it," he said. He completed the story at lunch.

Because our conversation was broken by many utterances of disbelief on my part, I'll paraphrase what he had to say. Possum Kingdom Association's experiment grew out of a need. Commercial camp operators and the members of the Chambers of Commerce at Mineral Wells, Breckenridge, Graham, and Jacksboro, which make up the association, had been worried. They had noted a distinct decline in visitors.

This problem wasn't peculiar to Possum Kingdom. In fact, it's a major "reverse English" conservation problem throughout the Southwest. Fishermen take only an estimated 50 per cent of the fish which Southwestern lakes give up each year. The other half simply die of old age.

In February, 1954, the Possum Kingdom Association

• Continued on page 25

Anglers converge on Possum Kingdom when reports say bass are near shore.



After a year in the Pecos,  
Redfish seem to like it

# Fresh Water REDS

By TERRANCE LEARY, Marine Biologist

West Texas anglers who like to fish for the wary redfish are finding that it is no longer necessary to travel the distance to the Gulf Coast to snag one of these tackle-busting fighters. To date the salty Pecos River has yielded about 50 of these desirable sport fishes.

The reason for this unusual harvest began in the spring of 1956 after the young reds (*Sciaenops ocellatus*) which had hatched in the

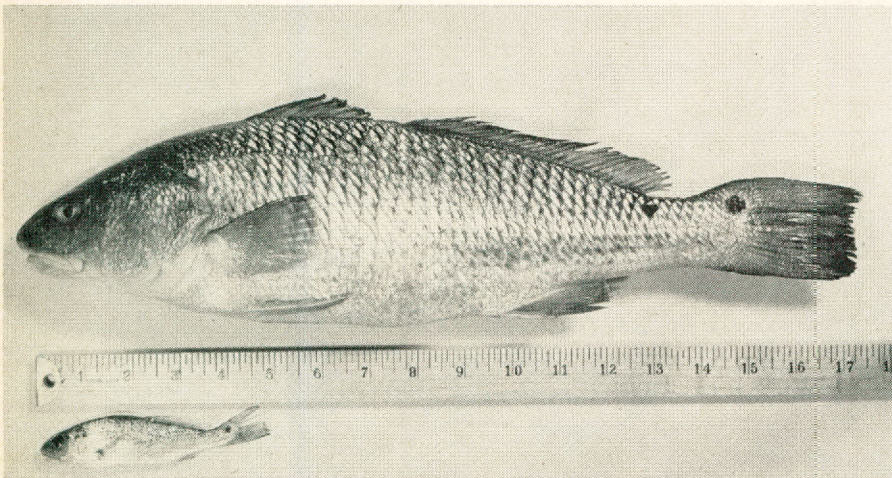
Gulf surf the fall before, had found their way into the bay nursery grounds. It is in the shallow waters of the bays that the young redfish begin their rapid growth which finds them about thirteen inches long at the end of their first year. But at the tender age of six and one-half months (length about five inches) destiny in the form of the Game and Fish Commission radically changed the future of a number of

these fingerlings. From their natural habitat in the upper Laguna Madre they were transported via hatchery truck to selected areas throughout the state.

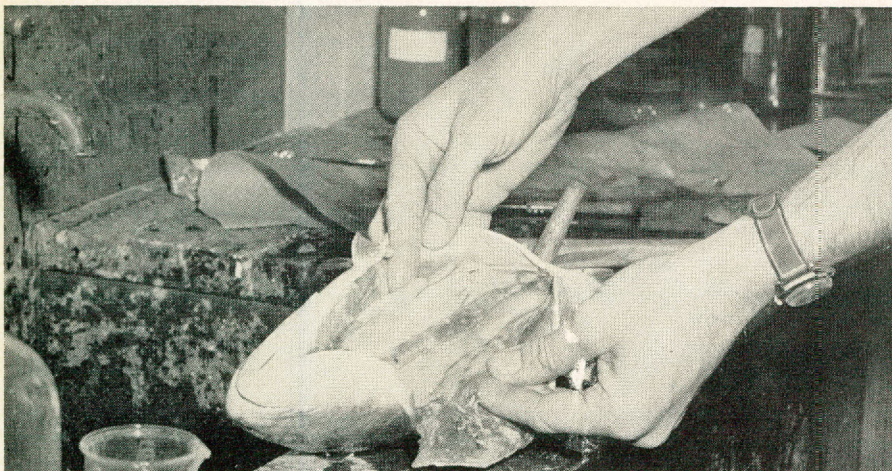
This experimental project was initiated for several reasons. One is to see if these fish will survive in some of the brackish rivers where fresh-water fish cannot; thus providing recreation where it was previously unavailable. Another reason is to see if this is a good forage fish to prey on the over populations of the smaller, undesirable species without itself overpopulating the area; for it is not believed that the redfish will reproduce in fresh water. The other reason that these fish were stocked was to see if they can reproduce in the fresh water.

One of the test areas selected for this study was the Pecos River in the vicinity of Imperial (about halfway between Monahans and Fort Stockton). At this point in the river, where the salt content of the water is about 22% of that of seawater, 400 young redfish and about 25 speckled trout (*Cynoscion nebulosus*) were released in mid-April of 1956. Within a year about 50 of the redfish have been caught in the river from seven miles upstream to fifteen miles downstream from the point of introduction. According to Captain A. R. Williams, Game Warden Supervisor in the area, these fish ranged up to 23 inches in length, and most of the fishermen returned their catch to the Pecos. During the winter of 1956 Captain Williams reports seeing schools of

● Continued on page 22



When introduced into the Pecos River, the larger, eighteen month old redfish, above, was the size of the smaller, six month old specimen. In the dissection, below, these two strips of fat were found, further proof the redfish were doing well.



Photos by Patricia Pew

*Texas A. & M. offers courses in the use of  
Self Contained Underwater Breathing Apparatus*

# SCUBA

By **PETER B. KELLY**

Diving Administrator, Texas A. & M. College

**T**HE diving program at Texas A. & M. started in the spring of 1954 when authorization was granted for the purchase of two lungs for use in scientific work. In the spring of 1955 Ray McAllister, a diver trained at Scripps Institution of Oceanography, University of California, undertook the training of other members of the department. From these beginnings a corps of 13 qualified divers in the department and a semi-annual SCUBA diving course have been formed.

This course, although set up primarily for the purpose of teaching scientific personnel, later was opened to any resident of Texas interested in lung diving. Some of the scientific staff who have taken or are enrolled in the course include oceanographers, biologists, chemists, biochemists, geologists and even meteorologists. This is in line with the whole oceanographic program. Oceanography is a composite science made up of biologists, geologists, chemists, physicists, and meteorologists applying their broad training to the specific study of the oceans. It is, of course, a very valuable help to a biologist who might be studying bottom worms to be able to watch and photograph them in their native environment. Also the eyes of the geologist can tell him far more about bottom configuration, type, and composition than the best of fathometers.

The diving program is sponsored by the Short Course Office and presented by the Department of Oceanography and Meteorology. It is held in the spring and fall of each year on the Texas A. & M. campus. There are four lecture and seven training sessions of two hours duration and the usual time is from 7 to 9 p.m. one evening per week.

Although the program of scientific diving within the Department of Oceanography and Meteorology is still in its formative stages, many interesting dives and observations have been made. Department divers have made dives thus far in the Atlantic and Pacific Oceans as well as in the Gulf of Mexico. In the Gulf most of the diving has been on Heald, Sabine and

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A diver-trainee pauses at the bottom of the pool to clear his face mask.

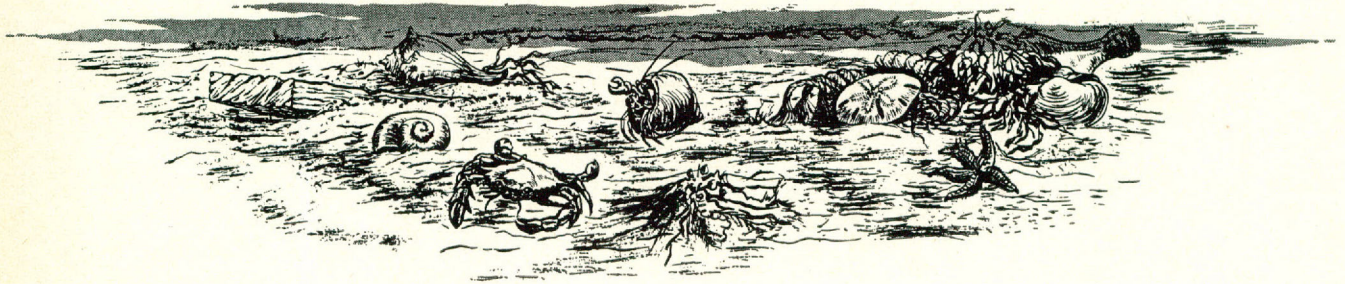


Various equipment is used as shown here by two divers emerging in cold-water dress from a winter dive in Lake Travis.



Students prepare for a summer dive on Heald Bank in the Gulf of Mexico. Diving safety is stressed in the course.

# the art of BEACHCOMBING



By PATRICIA PEW, Marine Biologist

**T**HE COMPLEXITIES OF MODERN CIVILIZATION and the terrific pace at which modern society moves has sent harried citizens in increasing numbers to river, lake, and bay shores. More and more physicians and psychiatrists are prescribing weekend fishing trips as remedies for their patients' ulcers, then cancelling their appointments for the rest of the day and following their own prescriptions. A recent survey showed that one out of every four men and one out of eleven women fished, and that they spent two billion dollars doing it. Every weekend there is a mass exodus from the cities. The highways are clogged with autos loaded with tackle and boat trailers. The lakes, rivers and bays are becoming overcrowded. The din of outboards, popping corks, whirring of lines and clicking of reels is rivaling the noise of the city traffic.



These glass net floats, washed from foreign shores, are a rare find. "Sandblasted" by a long journey across the ocean and discolored by long sun exposure, they are highly prized by collectors.

If you are one, like myself, who has left the city for relaxation but has found that a long trip in a car loaded with rods, lines, hooks, smelly fishing clothes, and rusty tackle boxes to a shore or pier where you elbow your way to the water then get popped in the eye with a dead shrimp . . . if you have found that this no longer seems relaxing, that, in fact, your ulcer seems to be getting worse instead of better . . . then I prescribe beachcombing.

You'll need no tackle. No bait. No license. No special clothing, in fact very little clothing at all most of the year. There are no open and closed seasons. No size limits. No closed areas. No crowds. No tangled lines, no hooked fingers.

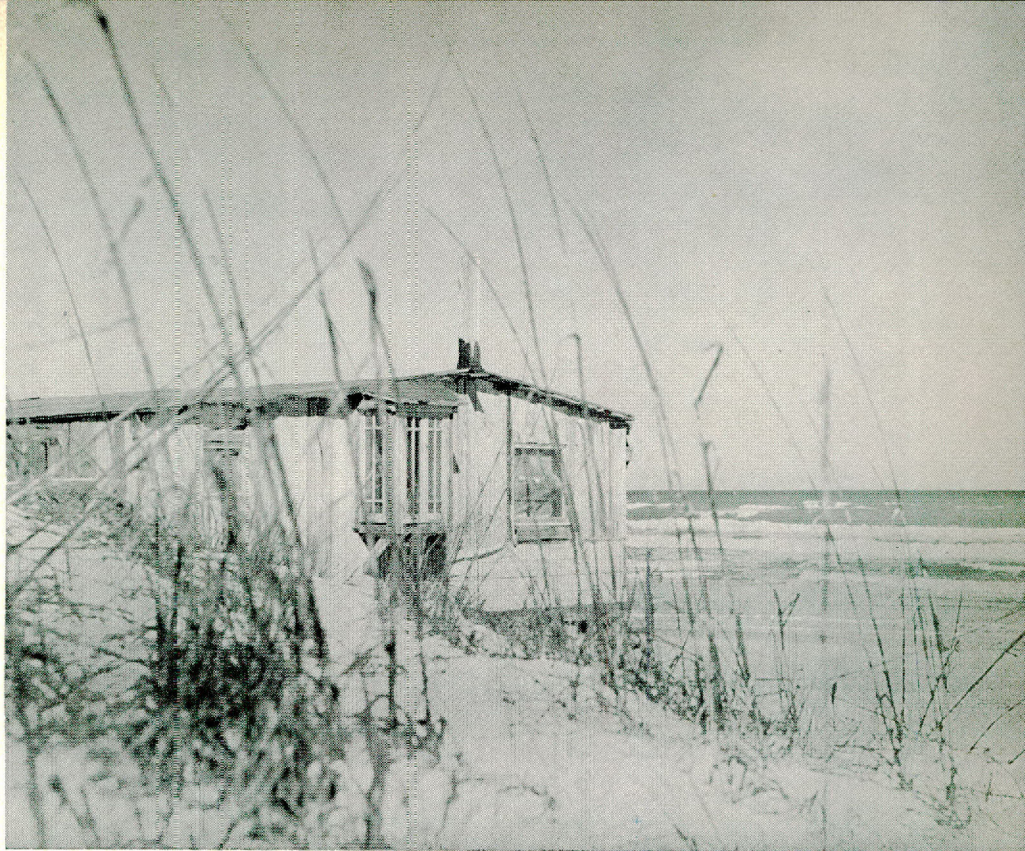
You can go in for beachcombing to several degrees of seriousness. I, myself, am the spasmodic, lazy-type beachcomber. I make occasional trips to the beach, usually have a picnic, go for a swim, dry off in the sun, then mosey along the water's edge enjoying the sky, sun, sand, and waves, and occasionally pick up a shell or piece of coral which is later thrown away by the gasoline station attendant when he washes the car and sweeps out the sand.

There are serious beachcombers, though; in fact, there is even what is known as the professional beachcomber. This type devotes much time and study to the perfection of beachcombing as a science or vocation. He travels great distances to unexploited beaches where there are no tourists or amateurs to spoil the pickings. He works immediately after storms, high tides, and strong southeast winds. One professional beachcomber I know has built a house out of driftwood and parts of wrecked ships. The curtains are of fish and shrimp net; shells serve as dishes. It is painted with ship paint which was washed up on the beach in sealed cans. Another serious beachcomber has built a restaurant out of material collected from the beach and from wrecked ships, and appropriately calls it



## Photos by Author

A professional beachcomber's house on Padre Island, built entirely from beachcombing.



"Driftwood Inn." Each year he takes a two or three-week vacation and makes an excursion up the beach to get material for enlarging his establishment, which is continually growing in popularity.

The material found on beaches may be divided into several classes:

1. Living organisms, such as crabs, mollusks, recently washed up seaweed containing small seahorses, sargassum fish, and other marine animals.
2. Hard remains of once-living organisms such as shells, starfish skeletons, coral "skeletons," driftwood logs and bamboo.
3. Man-made articles washed from local and for-

ign shores, such as Portuguese and Japanese net floats (these look pretty hung in clusters in windows or on walls), weathered and suncolored bottles, debris from wrecked ships.

4. Ancient Indian, pirate, or Spanish remains, such as gold coins (there are buried treasures reported on Padre and St. Joseph Islands), arrow heads, parts of muskets, hatchets, and knives.

You may specialize in any of these classes and be (1) a naturalist beachcomber, carrying your prizes home alive in an aquarium, (2) a shell collector, placing your collections on display in a cabinet in the parlor, (3) a historian-beachcomber, hanging your

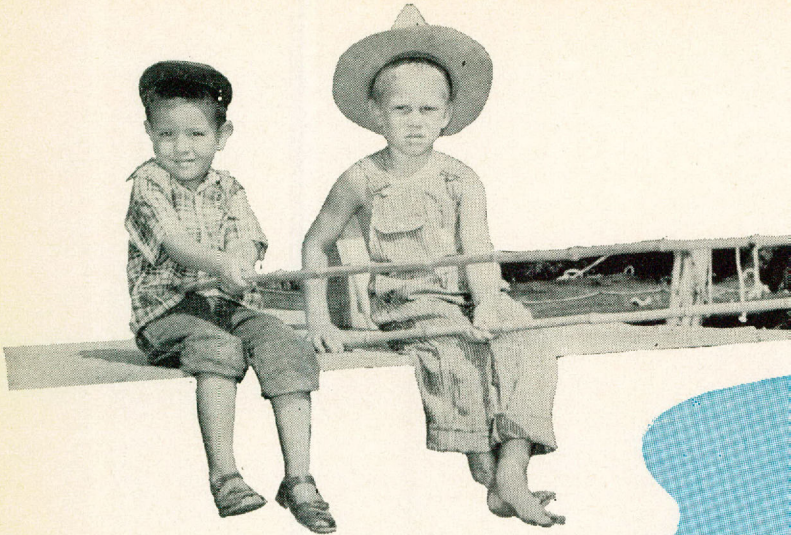
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Starfish skeletons, hundreds of varieties of shells, objects from wrecked ships, and even ancient pirate or Spanish remains such as

coins and knives are among the items sought by beachcombers. There are reports of buried treasure on Padre Island.



The old swimming hole  
is again a reality.



# farm ponds

By CHARLES A. DAVIS

**N**OT TOO LONG AGO, a Texas farm was pretty sure to be a cotton farm, a rice farm, or a wheat farm. The word "ranch" meant just one thing—a *cattle* ranch. Along with this, the farm and ranch pond was generally thought of as a single-purpose project. It supplied water for the livestock that the landowner raised, and furnished irrigation water in some parts of the State.

Today, many of the intensified, or single-purpose, farms have been replaced by diversified (multi-purpose) farms that produce several kinds of crops and several classes of livestock, each on a large enough scale to be a money-maker in its own right. Many ranches that formerly supported only cattle now grow not only cattle but also both sheep and goats.

This period of transition from single-purpose to multi-purpose rural enterprise, which began in the early thirties, has also seen a large increase in the number of farm and ranch ponds over the State.

Modern farm and ranch ponds are not limited to supplying livestock water. They may also produce a sustained annual crop of fish that provides both sport and food for the landowner and his family. Even irrigation ponds with widely fluctuating water levels may, in some cases, be managed to produce a crop of fish. And it goes without saying that a clean farm or ranch pond makes a good swimming hole for the youngsters.

Ponds that are well-landscaped provide excellent

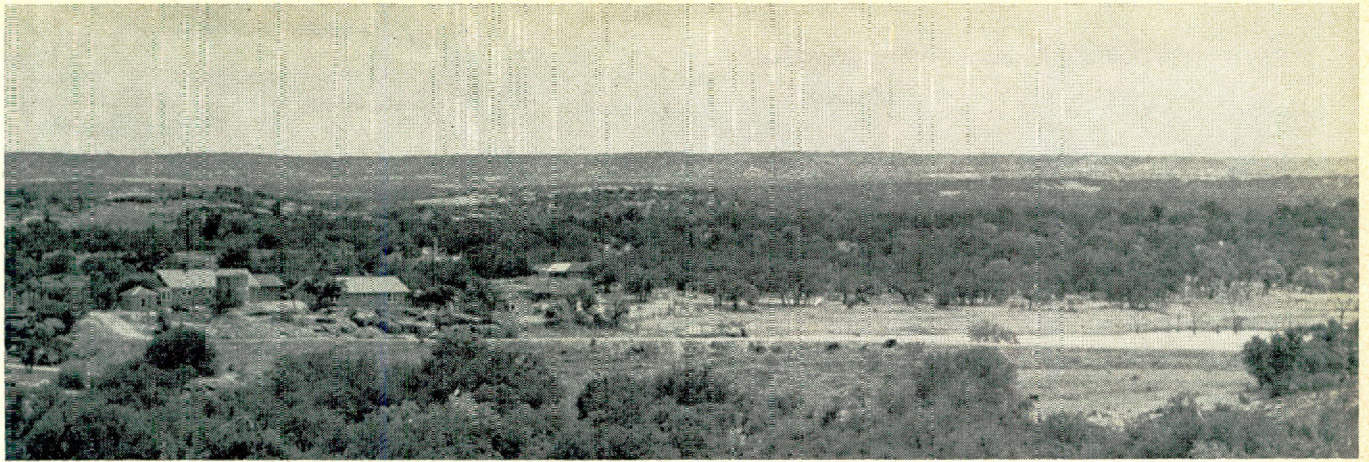
wildlife habitat around their borders. Properly placed ponds can provide erosion control and place watering facilities in pastures that formerly could not be utilized by livestock because of the long distance to water. Ponds may also be used as a source of water for spraying orchards, gardens, and livestock.

Management for stock water and fishing go together. It has surprised some landowners to learn that the type of management that insures that his pond will maintain a yearlong supply of clean stock water is consistent with management for fish production. Control of waterweeds, for example, along with deepening shallow edges, insures a more constant and permanent water supply for livestock. It also makes fishing easier and keeps too many small fish from hiding from the bass.

Keeping livestock out of the pond is good business. It cuts down the possibility of cattle becoming infected with liver flukes, hookworms, blackleg, anthrax and other diseases that thrive in muddy pond banks. Keeping stock out of the pond also prevents fouling and trampling of marginal vegetation desirable in good fishpond management practices.

Stock water should be piped into a watering trough a few yards behind the dam. A drainpipe, actually required by law in some states, is desirable for any pond. The pipe to the watering trough may be connected to the drainpipe.

To be completely economical, a stock pond should



Ranchers have found that well planned ponds attract game birds and animals, furnish resting and feeding places for migratory water-

fowl and birds, in addition to making possible better grazing land. Soil conservation officials may assist landowners in planning ponds.

be permanent. It should be surrounded by a border of natural vegetation to prevent silt from washing in. The same fence that keeps the livestock out of the pond will protect this natural border of grass, shrubs and trees which provides both food and shelter for numerous species of wildlife. In Texas, bobwhite quail, cottontail rabbits, and squirrels find cover near man-made ponds. Quail and doves feed on the seeds of weeds that grow on dams, where the subsoil is exposed.

Farm and ranch ponds furnish resting and feeding stops for ducks, geese, and shorebirds during their annual migrations. Other migrants such as blackbirds, starlings, and robins are often found near these man-made ponds. Local populations of opossums, raccoons, skunks, minks, muskrats, armadillos, and other small mammals frequent these ponds, as do deer and turkey. Nests of ducks, blackbirds, and doves may be found near farm ponds.

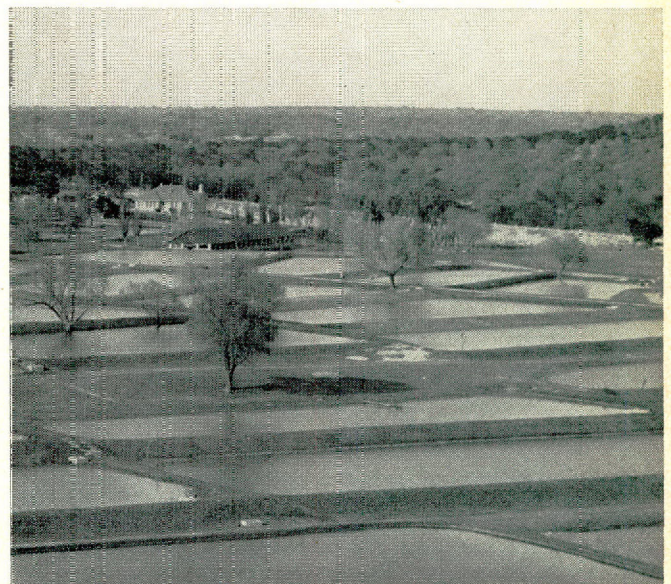
On a Sunday afternoon drive you can see countless retired fields, some of which are not being used as pastures. In many cases, these extra acres of pasture would not be usable for grazing if ponds were not constructed on them. Inadequate and randomly spaced stock watering facilities have been the cause of much improper utilization of rangeland in Texas and other western states. This has resulted in some areas of excellent potential forage production not being used at all, because of the absence of water. Areas near water are often completely stripped of desirable grasses and invaded by poisonous plants. The increasing number of ponds is making possible a better balance of grazing over the range.

The United States Department of Agriculture provides assistance in the form of both technical advice and actual cash payments for suitable ponds. Local Soil Conservation Service officials may assist landowners in locating and laying off ponds so they will qualify for Agricultural Stabilization and Conservation payments, which pay one-half the actual cost of construction. Actually, the payment is one-half the av-

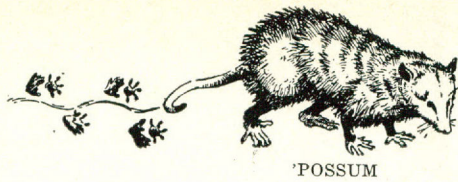
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Much land would be unsuitable for grazing, if ponds were not constructed on it. Inadequate stock watering facilities have been the cause of improper utilization of rangeland.



Farm ponds also make excellent fishin' holes. Fish for stocking ponds may be obtained from State fish hatcheries, such as the one shown above.



Telltale Tracks Help You  
Enjoy the Outdoors

# Reading the Sign

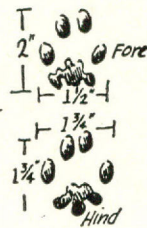
There's a lot more pleasure to be enjoyed in the great outdoors than just looking for something to shoot—if you learn how to read the sign!

Although I had spent most of my life hunting, I, like many hunters, had actually learned very little about woods and wildlife. I had just hunted, hoping something would jump up in front of me. Then I met Wayne Weems with his wild game call, and I started to learn something about wildlife.

In a very few minutes after Weems walks into a wooded area he can tell the kinds and almost the number of animals present. His method is actually very simple, but to the untrained eye, it is almost like magic. He notes the muddy bank of the river or the seepage around a spring where tracks of deer, 'coons, and ringtail cats are



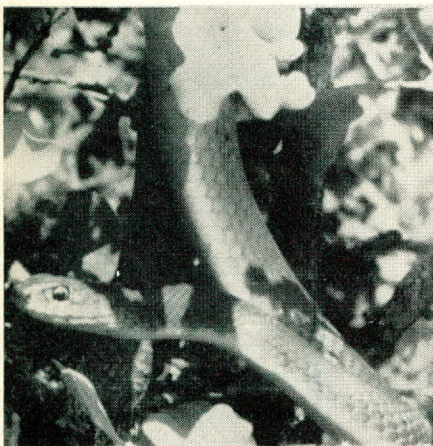
BOBCAT



clearly visible. Sandy patches reveal the comings and goings of bobcats, foxes, rabbits, wolves, and many other animals. The tracks of snakes, lizards, and birds are also observed. Marks on trees reveal where deer have been rubbing the velvet off their antlers, or claw marks will reveal where a bear has sharpened his claws. These and many other indications of animal life are like signposts to the trained observer.

Since I have been going hunting with Weems, most of my "shooting" has been done with a camera, and many of the ways of the inhabitants of the wooded area as well as the inhabitants themselves have been recorded on film. By learning to "read the sign" I have been able to observe and photograph many forms of wildlife seldom seen by the casual, untrained observer.

By WAYNE BROWN



Now curled around a limb, this snake probably left his pattern on the ground nearby.



A bobcat, investigating a hat, was lured into camera range by a game call.

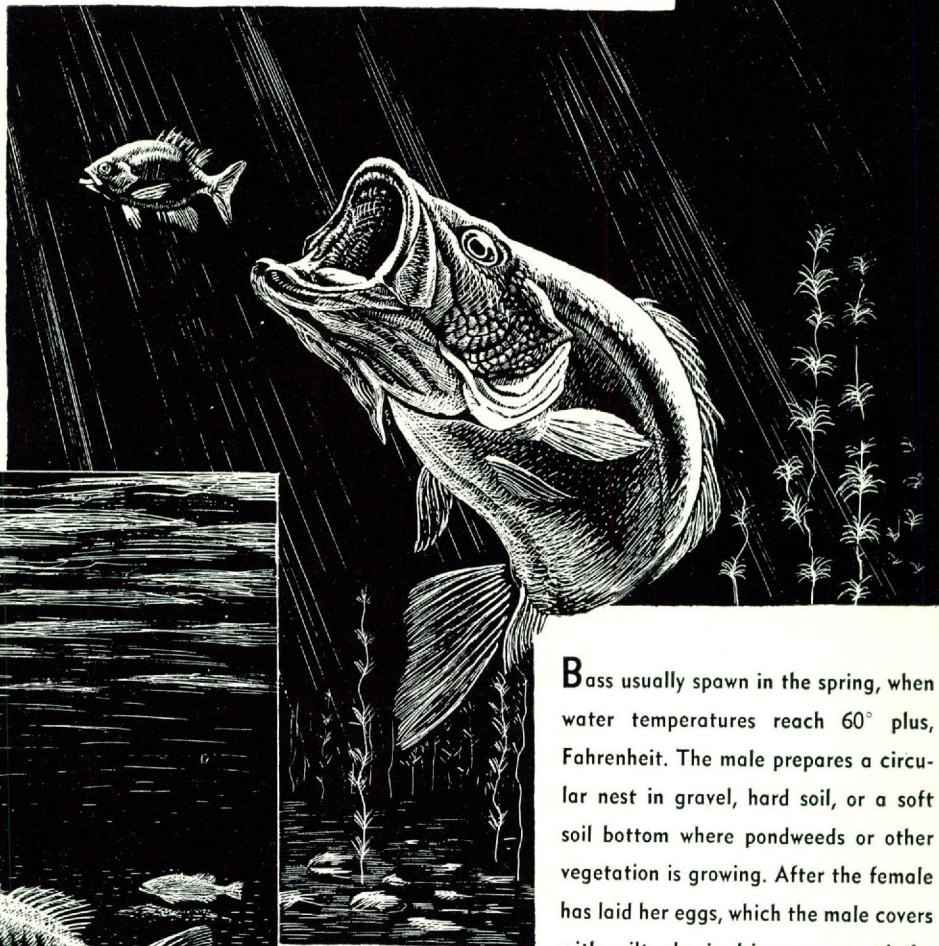


Either the scent of man or a noise caused the bobcat to flee from the scene.

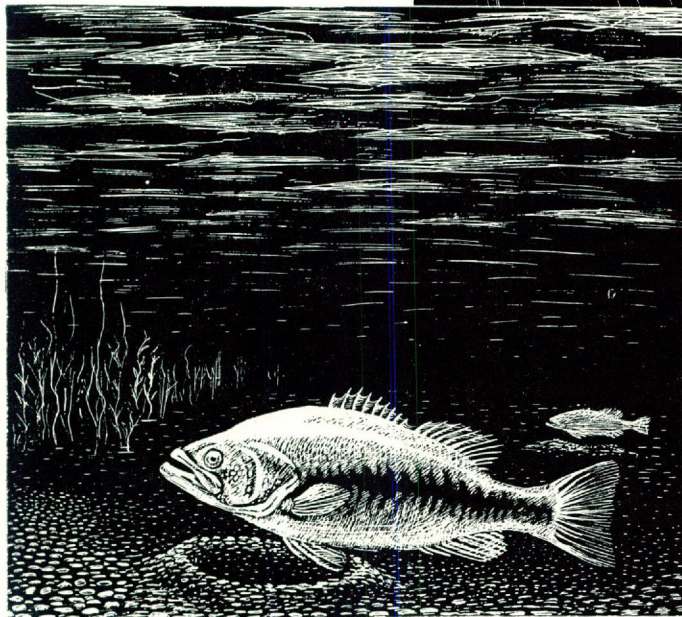


# BLACK BASS

The largemouth black bass is the most popular member of the sunfish family found in Texas waters. When largemouth bass are feeding they will strike with savage fury at their prey or artificial baits resembling food. Normally, their food consists of insects, crayfish, minnows, frogs, and other forms of aquatic life. Gizzard shad is their prized food in many of the larger lakes and streams.



Bass usually spawn in the spring, when water temperatures reach 60° plus, Fahrenheit. The male prepares a circular nest in gravel, hard soil, or a soft soil bottom where pondweeds or other vegetation is growing. After the female has laid her eggs, which the male covers with milt, she is driven away and the male guards the nest for the 5-14 days required for the eggs to hatch. The male also guards the newly hatched fry for a few days.



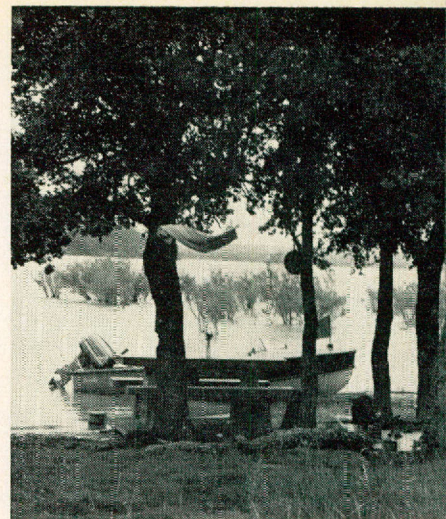
Largemouth bass prefer to live in sluggish streams, ponds, or lakes with soft bottoms. Logs, boulders, or thick patches of aquatic vegetation make the most likely cover where the largemouth may be found. Experienced bass fishermen study their fishing waters, knowing that a spot which produced a "lunker" yesterday will probably harbor another one tomorrow.



If you are planning a camping vacation, see what the state parks have to offer.

# Camping in Texas State Parks

By GORDON K. SHEARER



Lake Brownwood State



Roger Parker

SPRING BECKONS a pleasant invitation to the outdoors, and already the dyed-in-the-wool camper is looking over his equipment and itching to get on the road. Whether he has a luxurious air-conditioned trailer or a car and tent shelter, he's looking for good places to camp.

Many find an easy answer to the question of where to camp. They head for a state park. For seashore, mountains or forest, the camper need not leave Texas. He can pitch his shelter at sea level, mile-high in the Davis Mountains, or at lovely camp sites in the pine forests of East Texas. There is a state park camp to suit every taste and every family.

Except for a few small historic areas, camping space is available in nearly all of the state parks. Camp sites are assigned by the park manager and the best procedure is to see him before unpacking. Some sites have limited facilities, and charges for their use is gauged by the services supplied. Charges range from

Pleasant camping spots such as the one at Inks Lake, above, Garner State Park, lower left, or Lake Corpus Christi, below, are available in nearly all the state parks. Camp sites are assigned by the park manager. At some sites reservations should be made in advance.

Roger Parker



Texas Highway Dept.





*Gordon Lupton*



A simple shelter like this Buescher State Park installation provides a camper's basic needs, as well as an electric razor plug.

offers recreational facilities for the whole family.

50 cents to \$2.00 a car per day. Free camp sites have no special equipment. Parks located on lakes and streams usually have facilities where boats may be rented by the day or hour. Or the camper can bring his own boat and launch it from a park ramp.

Park managers find campers generally good humored and willing to put up with minor inconveniences. They enjoy "roughing it"—but not too rough.

Many state parks offer the popular shelter-type outdoor structure where the camper can have a roof above him, a concrete floor, running water, table, grill, plug for an electric razor, and a place to use his folding cot, sleeping bag or air mattress. Buescher State Park near Bastrop offers such facilities.

Another popular type of park camping facility combines the freedom of individual tenting or trailer sleeping with community building advantages like hot and cold showers, laundry tubs, rooms for dressing, and sewerage connections. In recently installed camps of this type the patrons are issued individual keys to the community facilities.

Most families bring folding chairs and some bring an ice box, which comes in handy for keeping food and any fish that are caught. Old-style ice boxes, that

were replaced with electric coolers in cabins at Possum Kingdom State Park, have been left at camp sites in that area and are used by many campers.

In Garner State Park metered electric current is run to each of the camping units in one camping area. The camper gets his current by dropping a quarter in a meter. But the outdoor lure of a lantern hung on a tree limb and bacon sizzling on an open fire is strong, and it has not been found feasible to extend the metered electricity to other areas in the park.

To add to his comfort the camper finds some "extra" state park services available. Ice, milk, staple groceries, gasoline for his car and confections for the children are all handy. Yet, there is an occasional dissatisfied camper, like the one who complained that he had to go to a filling station to blow up his air mattress.

So great is the demand for camping sites in the summer in a popular camping park like Garner State Park, that a two-week time limit is set on continuous occupancy. An extension is granted only if there is no one else waiting for the site.

Organized group camping is a phase of outdoor vacationing that is showing rapid growth. Texas has six organization or group camps. These camps have

● *Continued on page 30*



*Gordon Lupton*

Camping shelters have been provided at Balmorhea State Park, above, in far West Texas. This park provides an excellent camping

place for visitors going to the Davis Mountains and Big Bend National Park. The Davis Mountains are seen in the background.

By JAY VESSELS

## HIGH-LEVEL HUNTING

The Editor of the *Houston Press* waxed eloquent over President Eisenhower's winter hunting trip to Georgia, noting after contrasting benefits of the open field as against office pressures: "This week Ike is engaged in a still finer outdoor sport—shooting quail. No artist's canvas can equal the beauty of the sun shining through the pine trees on grass that ripples in the wind, where well-trained dogs work the field and freeze to a point. And no music is sweeter than the explosive flutter of a covey rise, the bark of a gun and the smell of powder in brisk air, and the fall of a bird from a well-placed wing shot. Greater serenity cannot be found this side of Paradise." Here, Rover; Come on doggie; we've got a date in the north forty!

## QUAIL HAVEN

Game Warden Supervisor Pug Mullinax of Rockport says a pair of bobwhite quail released on a chain of small islands in the Laguna Madre, along the lower Texas Gulf Coast, has been parlayed into huntable stock. He said the largest of the islands comprise "probably six to eight acres."

## ALLEYOOP!

The *Atascosa County Monitor* reports that ranchers in that deep South Texas area do not share the attitude that alligators are a nuisance. The paper observed: "Most of the ranchers in this area try to protect alligators in the creeks and tanks. Alligators keep the holes of water deep by stirring the mud and trash so that it will pass on when it rains."



## WHOOOPER CONSCIOUS

Public awareness of wildlife generally, as stimulated by using the waning whooping cranes as a conservation symbol, was indicated again recently when a Hamshire, Texas, schoolman mailed skull, bones and feathers of a large white bird to the Game and Fish Commission. The writer suggested the ill-fated specimen might have been one of the rare cranes. W. S. Jennings, Assistant Director of Wildlife Restoration for the Commission, determined that the carcass was that of a white pelican. Thanking the writer for his trouble in forwarding the "evidence," Jennings suggested the pelican was less than one year of age and added: "The shape of the skull and bill positively identify the remains. The broad flat bill with the curved tooth-like tip and the nostril opening immediately in front of the eye leave no doubt. In the whooping crane, the bill is shorter, more rounded, without a tooth-like tip and the nostril opening is about midway along the upper mandible between the eye and the tip."

## WHO SAW WHAT?

Joe Matlock, Federal Game Agent, formerly with the Texas Game Warden Force, gave Gus T. McMammal a hard time about a whooping crane reference by the noted layman authority on wildlife. Gus T. put out a news release stating that officials at the Aransas National Wildlife Refuge, wintering grounds for the whoopers, confirmed a report about one of the rare birds setting up bachelor's quarters on the King Ranch, some distance south of the refuge. "What do you mean confirmed?" pressed Mr. Matlock the next time he ran into Gus T. "Here I am one of the few men who ever observed whoopers both in their wintering areas and in their nesting grounds in the far north, and you break the word that somebody else has to confirm what I reported about whooper whereabouts!" Gus T., without ruffling a feather, assured Mr. Matlock, he of international aerial bird survey fame, that justice would prevail as per the foregoing.

## SNAKES WIN—AGAIN!

Some of the modernistic folks have been talking it up about how much fun it is to catch rattlesnakes en masse. But Gus T. McMammal, the layman observer, detected fine print in an AP article under a Sweetwater dateline, describing how the sport has been growing in popularity. Gus T., who is so squeamish that he objects to sleeping with scorpions and lizards, noted the quote attributed to Sergeant Billy Leonard who was smack in the midst of the rattler roundup: "They looked big and mean, I gave up the hunt right there. Just decided not to bother them any more."

## Press Views Game Notes

### COVERED (FISH) WAGON

Those intrepid redfish which made the long trip from Rockport on the Gulf Coast to Imperial on the Pecos River in Far West Texas, mimicked some of their pioneering forefathers. They had a rugged time but, just like the script, at least some survived to thrive. As the folks at the Game and Fish Commission Marine Laboratory recall it, the outlook was dark indeed for the three hundred plus four-inch fingerlings when they were placed in a pick-up truck with aerator equipment to maintain oxygen in the small tank of water. Some twenty-four hours later after a virtual non-stop covered wagon run, the survivors were placed gently in the Pecos out where the salinity is high and where the howling coyotes rim the river banks at nights—and sometimes in the day. In fact, the project was not considered a major restocking effort since the emphasis on trying to adapt the salt water species had been at Lake Kemp of the Wichita Falls chain in northwest Texas. But Game and Fish Commissioner Henry Coffield of Marfa, was optimistic, like his own forbearers. Besides the West-of-the-Pecos folks needed a new variety to go with their Pecos catfish. Imagine the jubilant gratitude then when the first of the grown *Scianops ocellata* (redfish to you) was caught and confirmed as a redfish at the Marine Laboratory at Rockport. "Just like striking pay oil," smiled Commissioner Coffield.

### TURTLE JAM SESSION

Game Warden Tom Waddell, whose Colorado County observation post helps nourish official wildlife records, observed a recent tragedy when "thousands of turtles" left Eagle Lake a month earlier than usual. He said countless numbers

of the reptiles were crushed by cars as they crossed highways seeking nesting areas. If that wasn't bad enough, Waddell reported that many of the migrating turtles got into deep cattle guards, from which there was no escape.

### MOTHERLY INSTINCT

The intense determination of birds to protect their nests was vividly demonstrated during a terrific hail storm in Austin, reports W. S. Jennings, Assistant Director of Wildlife Restoration for the Game and Fish Commission. He said a mourning dove braved a veritable sheet of hail stones, some one inch in diameter, to protect its nest in an elm tree, and succeeded, and survived.

### OPEN WATER POLICY

Gulf Coast outdoor writers took up the suggestion by Game and Fish Commission wildlife biologists that hunters handicap themselves by packing their shooting blinds too close together. Both Biologist J. R. Singleton and W. S. Jennings who take periodic aerial censuses of the winter waterfowl concentrations reported that there were "about ten times too many blinds," and not enough open water to permit ducks to light out of gun range.



### '57 MODEL TRUNK

Here's the five buck deer found in the trunk of a brand-new 1957 "lower price" automobile, stopped for illegal hunting. Game Warden Adolph Heep of Fredericksburg (right) and his assistant, Howard Lange, who made the seizure said all five "fine bucks" apparently had been shot from the car as the two occupants cruised the Hill Country area. "Only thing legal about the procedure was that the confiscated

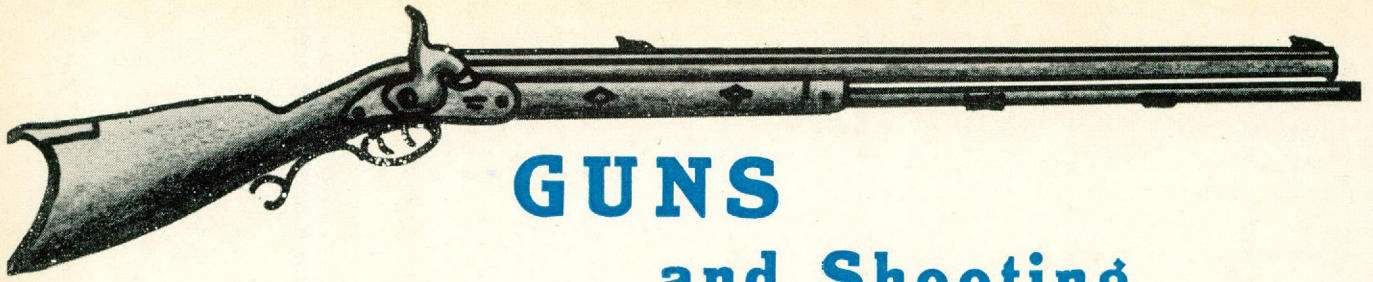
### WHAT, NO BACKLASH?

That fellow Floyd Murray, Page One columnist for the *Tyler Morning Telegraph*, reviewed the handbook of Sportsmen's Clubs of Texas, complimented SCOT's noble purposes and noted: "Among the directors listed in the publication are W. T. HUNT of Baytown, and Ross SPORT of Marshall."

### SPORTSMEN'S IMPACT

Archie Whitfield, in his "OUTDOORS" column in the *Marshall Messenger*, harangued the local sports about supporting their own East Texas Wildlife Association as their most effective medium, citing: "Remove all the hunting and fishing spots in this county and think where it would leave you! First, let's look at it from the sportsmen's viewpoint. No nearby places to go hunting, fishing or for a boat ride. . . . Think of the sporting goods stores and just what they sell to hunters and fishermen. And the service station operators and owners of commercial fishing camps on the lake and practically every other business house in Marshall, all touched in some way by the dollars spent by outdoorsmen."

game was taken during the calendar period assigned to big game hunting," said Heep. "But the timing was bad as all apparently were shot at night." One of the men was kept handy to dress out the deer, which they had neglected to do during the tour of butchery, while the other went back to their San Antonio home area to borrow the approximately \$850 needed for fines and court costs.



# GUNS and Shooting

By JOHN A. MASTERS

**This Month: New Guns**

The past few years has seen a great revival of interest in high powered rifle shooting. Shooters have brought about this revival in a number of ways, including big game hunting, varmint shooting, and bench rest shooting. Reloading has taken a big swing upward as a result of this new interest in high powered rifles. In all the hue and cry, the little .22 long rifle cartridge has sort of been let sit in the background, a cartridge largely left to youngsters.

This, I admit, is not as it should be. The .22 long rifle is a fine, highly developed cartridge, and one that deserves consideration for many purposes. I have several .22 rifles, and use them a great deal. For such things as squirrel hunting, the .22 has no peer. When I am back home

in East Texas where cottontails are plentiful, I frequently use a .22 for rabbit hunting. And though it isn't a long-range proposition, I have used a .22 extensively for varmint shooting. When equipped with a good scope sight, a .22 can be used up to 75 yards on varmints quite successfully.

I was glad, therefore, to learn that the .22 hasn't been forgotten. As noted in a recent "Shooting Shorts," Remington has just announced a new .22 autoloader called the Model 552 Speedmaster. I have had a sample gun for several weeks now, and after running several cartons of ammo through the gun, I have been quite pleased with it.

The 522 handles shorts, longs, or long rifles, singly or in any combination, without adjustment. Magazine

is adequate, taking 15 long rifles, 17 longs, or 20 shorts without crowding. That's a morning's shooting on the squirrel hunts I make.

The rifle can easily be loaded and fired as a single shot. When the magazine tube is removed, it can be used as a single shot to train young shooters.

The safety is a cross bolt type, placed at the rear of the trigger guard. Sighting equipment is the typical open rear sight and bead front sight. The receiver is grooved for the tipoff scope mount, and the rear sight leaf covers a dovetail slot that can be used to attach any sight that suits the owner's fancy.

The 552 looks and handles like the Remington semiauto shotguns and the semiauto big game rifles, so that it is now possible to have a matched set of guns for every shooting need, all semiauto, with much the same feel. I feel that this is a decided advantage for the man who doesn't shoot a lot, since all his guns will work and feel alike.

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## Shootin' Shorts

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I have long felt that the many Model 70 Winchesters in .22 Hornet floating around deserved a better fate. While the little Hornet case is a fine one with a long record of performance, it is decidedly on the slow side when stacked up against such cartridges as the .222 Remington.

One solution is to have Griffin and Howe convert the rifle to the .222 Remington case. The job will cost you around \$30, but it is like getting a new rifle for that price.

Another solution is one that I took with my own Model 70. After studying the loading handbooks at some length, I decided that the .218 Mashburn Bee would be enough improvement. Since George Curry,

owner of the Custom Gun Shop in San Angelo, had the reamer, we put our heads together and came up with an idea that the bolt face and magazine could be altered to take the case. Two weeks later, George had the gun ready. The rig works beautifully, and I have gained a great deal velocity wise. I now use 16 grains of 4227 with a 45 grain bullet, where the Hornet case permitted 10 grains of 4227. One note of caution: Either use .223 bullets, or back off on the powder charge. Most Hornet bores are .223.

My .375 Short Magnum is much gun, but not the shoulder-breaker I had expected. More of a push than a kick. Actually, it is quite pleasant to shoot.—J.M.

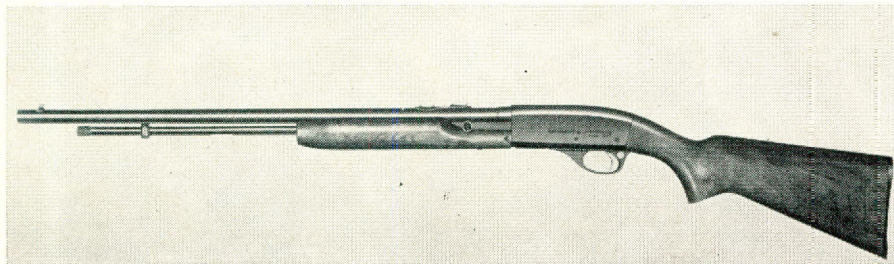
Another gun recently announced by Remington, that I am very pleased to see, is the Model 58 Sportsman in 20 and 16 gauges. My sample is in 20 gauge, and I don't think I have ever handled a finer 20. The new gun looks just like the 12 gauge Sportsman, having the same fine engraving on the receiver, and the same fine pointing qualities. It is operated by the Powermatic gas piston, just as the twelve was; it has the same dial adjustment for high and low power loads at the forward end of the magazine.

What I like the most about this little gun is the soft recoil. I have long contended that the .410 just isn't a hunting gauge for most

shooters. The 28 is the gauge expert shots use effectively and other shooters consistently miss with. That makes the 20 the smallest effective gauge for most shooters. While no American built 20 gauge has what I would consider excessive recoil, most of them are heavy enough to worry women and boys. That is why

my Sportsman 58-20 next season. Except for long-range pass shooting at ducks, which I really do very little, my 12 gauge will hang on the rack.

One overlooked advantage of a 20: The ammo is a lot lighter allowing a bigger supply to be carried in the hunting coat without fatigue. This is a greater advantage than



The new Remington Model 552 autoloading .22 caliber rifle.

I am pleased with the recoil on the Sportsman 58-20. I see no reason why anyone can have any fear of shooting this one.

I have run just about everything through mine, including the heavy Magnum loads. The gun handled all without a murmur, and without a bruise on my shooting shoulder.

I have always liked the action release on the Model 58. As you may recall from my piece on the twelve gauge written earlier, the release is on the under side, and operates as the shell is slipped into the magazine. One can draw the breech block back until it locks, drop a shell into the port, and when a shell is slipped into the magazine, the action closes, chambering the shell in the port at the same time. This makes for greater speed in loading when the doves are flying fast and furious.

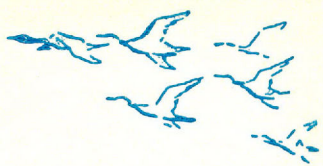
The smaller gauges are available in just about any practical choke and barrel length. It can be had also in a full-length ventilated rib if desired. Overall weight of my sample is just a bit over six pounds, which ought to be light enough to pack all day trying to run down my limit of blue quail.

I have found a 20 gauge big enough for most Texas bird shooting. Last year, John Blumberg, a shooting companion, used a double 20 all season, and his take was as consistent as anyone's. I was trying, as usual, a different shotgun on every hunt, mostly in twelve gauge, but I will probably standardize on

you might imagine.

Some readers may recall that I once remarked that Remington built guns more for use than for beauty. I shall be compelled to eat crow at least where the Sportsman 58 series is concerned. I do not believe a more beautiful standard grade shotgun is available on the American market today, and certainly the machine work is above reproach. The only evidence of metal stampings is in the elevator and slide release, where really precise machining is not necessary for proper functioning.

I think you will like both of these new guns. Both are well built precision guns, and will give a lifetime of service if properly taken care of.\*\*



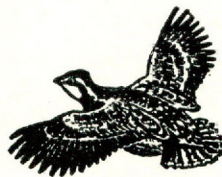
## It Happened This Way . . .

A warden tells it: One day I was just foolin' around up on the river—kinda taking it easy. It just happened that I had a cane pole and a rod and reel in the boat, along with about three dozen minnows someone had given me. Well, I pulled up into this cove that looked pretty good and anchored, baited both hooks and sat back and waited. Wasn't long before I had a bite on the cane pole and about that same time something took the bait on the other line. Well, there I sat—didn't know what to do, with a fish on both lines. I just stuck that cane pole down between my legs and hung onto it with my knees, and then reeled like everything on the other line. It was a nice white (bass). When I managed to pick up the cane pole again I figured the fish would be off the line. But I'll have you know I got another good white off that one, too!

-----o-----

Sometimes cameras and game wardens don't mix too well. Quite a number of years ago an enthusiastic photographer insisted on taking some pictures of a warden at a time when he was busily engaged in trying to discourage some rather determined men in their unlawful activities. The warden politely informed the photographer that he did not want any photographs taken. The photographer calmly went about the business of setting up the camera and focusing it. The warden again told the photographer that no pictures were to be taken. Still ignoring the quiet warning, the photographer snapped the shutter, whereupon the warden put a .45 slug through the lens of the camera, completely demolishing the camera and somewhat discouraging the photographer.

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# Don't Pick Up That Fawn!

By WES MABRITO, San Antonio NEWS

A baby deer dashes across the paved highway with an unsure footing, stops alongside a fence, and gazes at an automobile that pulls off onto the shoulder of the road.



HE'S NOT LOST!

Inside the car, a man out for a Sunday drive with his family points to the fawn and remarks in a sympathetic voice, "Oh look, a fawn lost from its mother. Poor thing, some wild animal probably will kill it tonight."

A little girl all of five years old and at the moment cuddling a purring cat, one of several pets she has come to love, immediately becomes excited and asks her father, "Can we catch it and take it home, father. It's so cute."

The man, who also has a soft spot in his heart for helpless creatures of nature, decides the humane thing

to do is exactly what his daughter has suggested. "It will make a fine pet," he says as he gets out of the car and starts to walk slowly toward the animal. The fawn, which most likely is experiencing its first contact with man, takes a few faltering steps in the other direction, stops again and allows the kind man to pick it up.

The scene depicted above really is nothing unusual. It's a re-enactment of a rather common unlawful occurrence, regardless of the sympathy involved. Picking up fawns and keeping them in captivity without a permit is against a Texas law. Fines are assessed practically every year for illegal possession of fawns.

Fawns in most cases will be reclaimed by their mothers, so a kind-hearted person need not worry much about the hazards facing what appears to be a lost baby deer. Anyway, deer kept in captivity can become a nuisance and often the males actually become dangerous, according to game department officials.

And that brings up the befriending of other wild animals. You read cases of creatures of the wild that have been caught while young and raised to be kind, friendly pets. You also occasionally hear of such re-oriented animals turning on their masters by biting, scratching or slashing viciously. The safest course, in addition to avoiding the infringement of any possible law, is simply to leave young wild animals alone.

## Salt Water fishing on the Pecos River

Fresh Water Reds

Continued from page 8

from three to twenty redfish in the river, but only one trout has made an appearance.

One red, caught in mid-March by Mr. Lee McClaren of Imperial, was returned in the frozen state to the Marine Laboratory at Rockport for further study. This specimen, which was about eighteen inches in total length, weighed two pounds and ten ounces, which is about the same length, but somewhat heavier than average for an eighteen-month-old redfish. In dissection two ounces of fat were found in the abdominal

cavity, and this accounted for the somewhat potguttied appearance. The color of this individual was more of a bronze than of its salt-water counterparts, and stomach analysis revealed a few bones which probably came from a small fish about two inches in length.

It is hoped that additional study will bring further knowledge of life histories, greater recreation to sportsmen, and enable better control of the fisheries in both the fresh and salt waters of the state. \*\*

## Texas Hunters Favored By Good 1957 Deer Crop

Combination of a good fall food crop and substantial winter rains enabled Texas' deer herds to endure the winter with the lightest die-off in recent years, according to E. A. Walker, Director of Wildlife Restoration for the Game and Fish Commission.

He quoted field reports from practically all parts of the main big game range that deer generally entered the spring fawning season "in excellent condition." "This," he added, "should yield a good fawn crop, since adult deer mostly were robust during the fall mating season and the does will be capable of nourishing their young this spring."

Walker said the reports of winter losses were confined to scattered parts of the Hill Country, including western Kerr County, and to the southeastern part of the Trans-Pecos area. He said malnutrition apparently caused most of these deaths.

"All in all," he explained, "the mortality rate for deer during the winter months was the lowest in several years, or since the great drought set in about seven years ago. In the area where acorns are a major food, a bumper crop of this staple meant the difference. Favorable weather likewise stimulated other kinds of food in other areas."

Looking at the broad picture from a game management viewpoint, Walker pointed out that in some cases the tremendous survival rate meant that "too many deer still are being carried on the land."

He noted that the trend toward applying modern methods toward relieving this critical situation continues in the Legislature, where additional communities are sponsoring measures to permit reduction of over-population when and if this condition develops.

The commonly accepted method for this herd correction, he said, is through liberalizing harvest regulations, either to extend hunting seasons or expand legal game beyond the ancient buck deer only provision.





At the recent regular meeting of the Game Commission the members voted to augment the department's whitewing dove restoration program.

## Game Commission Authorizes Quail, Dove Habitat Improvement At Recent Meeting

New momentum for bobwhite quail, white-winged dove and fisheries projects was authorized by the Game and Fish Commission meeting in Austin.

Howard Dodgen, Executive Secretary, was instructed to have an immediate survey made of state fresh water fish hatcheries to determine whether adequate propagation facilities are available to meet restocking opportunities incidental to an expanded state water impound program.

In this connection, the Commission formally accepted the gift of the old Federal fish hatchery at San Angelo and leased a tract of land adjacent to the hatchery as a buffer zone to protect the hatchery brood stock.

The Commission sanctioned new emphasis on the statewide quail

habitat improvement program, centering around the experimental state quail farm at Tyler. It acted after the first year's operational report reflected enthusiastic acceptance of the state quail restocking program by land owners and sportsmen.

Commissioner Henry LeBlanc of Port Arthur said the farm already has demonstrated, through the propagation educational program, that the experiment is justified. "Even if none of the hatchery quail survived," said LeBlanc, "we would have done a job in restoring habitat—after all, that's the real goal we are after." Distribution of farm-produced bobwhites is strictly contingent on applicants' meeting rigid habitat regulations.

W. J. Cutbirth, Assistant Executive Secretary, who is in direct charge of the quail farm, reported

that for the first year's operation, curtailed by a late start, 210 qualified applicants in 93 counties received 17,096 quail for release on 508,471 acres of approved habitat. Cutbirth urged interested Texans to rush their applications for 1957 farm quail and to get their land in shape immediately.

Commissioner Howard Carney of Atlanta, urged special informational efforts to notify Texans about quail restocking possibilities. He said in his East Texas region "thousands of acres are being retired from farming for the new soil bank program which will be available for ideal wildlife habitat."

The Commission moved to augment its new whitewing dove restoration program in deep South Texas where approximately 200 acres in Cameron County recently were acquired as permanent nesting areas for the once-populous game bird. The Commission voted to lease a fifteen-acre tract of prime brushland nesting ground near La Paloma. This tract accommodates 1,000 nesting birds per acre. A survey of a 1,300-acre nesting tract near Weslaco in Hidalgo County, was authorized to determine feasibility of its purchase and development for whitewing habitat.

## 1957 Field & Stream Fishing Contest Forms Available at Texas Game Commission Office

Affidavit forms for 1957 entry in the Annual Field and Stream Fishing Contest are now available.

A total of 175 prizes will be offered in this year's contest, including \$100, \$50, and \$25 U. S. Treasury Savings Bonds Series E. Certificates will be given for each fish qualifying in the contest.

The contest, open to all anglers, runs from January 1 to December 31, 1957. All fish entered must be caught in the United States and Territories, Canada, Bermuda, Bahamas and Mexico. The fish must be caught on rod, reel and line, and

may be played by only one person. There is no entry fee required.

For further information on contest rules or affidavit forms write either Fishing Contest Editor, *Field & Stream*, 383 Madison Avenue, New York 17, N. Y., or the Texas Game and Fish Commission, Walton Building, Austin.



### Are You Changing Your Address?

Then please fill out the following form and send to TEXAS GAME AND FISH, Walton Bldg., Austin, Texas, so that you will continue to receive your copies of the magazine. The magazine is sent second-class mail and cannot be forwarded by the post office nor remailed from this office. Allow six weeks for processing.

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## Painted buntings usually raise two birds—either their own or cowbirds

Pajaro de siete colores

• Continued from page 5

notes, which she has kindly lent me, say: "Young painted bunting called incessantly the first two hours, but it would not open its mouth to permit feeding. I force-fed it by opening its bill with my fingers and poking small grasshoppers down the gullet with forceps. By late afternoon the bird began opening its bill momentarily. July 1, I force-fed bird all morning. In the afternoon it suddenly began to hold bill open. Thereafter feeding was easy. It took four small grasshoppers the first normal feeding, five next time, then six; by late afternoon it was eating as many as 13 small slender grasshoppers at one feeding." Henceforth the bird was practically always hungry and the spare time of the biological station staff, students, and visitors was engaged in the science and art of catching grasshoppers.

Probably the only advantage birders have over birds in the raising department is discrimination. They don't unwittingly bring up cowbirds. Cowbirds lay their eggs in the nests of other species, including the buntings. After the female cowbird has deposited her egg, she abandons it to the foster bird parent. The baby cowbird hatches first, gets more food, grows faster, and usually smothers, tramples, crowds out or throws out the nestlings of its host, if it has allowed them to hatch at all. The foster parent keeps poking

bugs down the usurper's throat every few minutes all day long. Most small birds seem just as, or more, stimulated to raise cowbirds than their own young. In a weedy lane between cedars beside Lake Travis, Mrs. J. Frank Dobie and I have watched a female painted bunting feed a loudly begging cowbird, larger than herself, over three times as often as a near-by painted bunting chick.

Painted buntings usually raise two broods either of their own or cowbirds. After this, they moult. Moulting seems to drain their energies even more than courtship, nest-building, egg-laying, and feeding the young.

In late summer and fall the buntings wander around a good deal. However, they, especially the greenish and yellowish females and immature males, are apt to settle down for a two-week or longer feast if they come to a good food supply, such as a field of cotton boll worms or weevils.

As the birds grow older, they eat more seeds and fewer insects. On the basis of 102 stomachs of Texas individuals examined, the U. S. Fish and Wildlife Service reports that 86% of the summer food of grown painted buntings is of plant origin, 70% being seeds of bristle grass. The specimens had also eaten some panic grass, pig weed, wood sorrel,

spurge, and sedge seeds.

Finally the time for moving to wintering grounds comes. Last year birders reported the last painted buntings at Fort Worth on October 11, at El Paso on September 2, and near Cove (Chambers County), on October 6. Like many other species, painted buntings appear to move more slowly in fall than in spring. Otherwise migration in the two periods—the night flying of birds which are strictly daytime operators in their daily lives and the remarkable navigating—is similar. Often an individual's landfall is the same Brahma cow pasture in the tropics where it spent the previous winter.

By mid-winter the proper addresses for all painted buntings are the warmer portions of Mexico, Central America, Cuba, the Bahama Islands, and southern Florida. At this season the much publicized (*Texas Game and Fish, Life, etc.*) first bird lady of Texas, Mrs. Jack (Connie) Hagar of Rockport, is reduced from seeing to talking about painted buntings. If you ask her "how come" males of the species are always so brilliant, she will fire right back, "Because the females won't mate with a bum male!"

Why not keep an eye out for this bit of multi-colored beauty the next time you are outdoors in the good old Texas spring and summertime? \*\*

## House Committee Studies Boating Safety

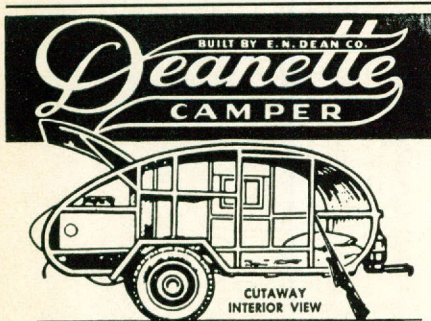
Representative Herbert C. Bonner (D-N.C.), Chairman of the House Committee on Merchant Marine and Fisheries, announced his plans for Committee action on the basis of the comprehensive study made last year on problems of recreational boating throughout the country.

In his statement to the House, Representative Bonner said that there are approximately six million pleasure boats in operation today in this country. Over twenty-five million citizens are afloat each year. Safety responsibilities and problems are being created on the navigable waters of the United States by the

tremendous growth and expansion of pleasure boating.

Bonner cautioned that the Committee on Merchant Marine and Fisheries was proceeding with extreme care so that the report and recommended legislation would accomplish the purpose of increasing small boat safety without detriment to the continued development of this health form of recreation.

He continued, "It is my hope that the result of the Committee's effort will not only furnish a blueprint for boating safety on Federal waters, but can be adapted by the various states for use on local waters so that a substantial degree of uniformity may be achieved."



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# Use of Resources Is Major Discussion Topic For Outdoor Education Workshop, May 20-22

The first of three Outdoor Education Workshops for the State of Texas will be held at Camp Tyler on May 20, 21 and 22. Schools and colleges within a 150-mile radius of Tyler have been invited to send a representative for three days of demonstration, participation and discussion of techniques in outdoor education. Shooting and casting will be taught to a demonstration group of youngsters by some of the nation's outstanding sportsmen. Field experts from the Texas Game and Fish Commission, Texas Forest Service and other conservation agencies will lead field trips focusing on the wise use of resources.

The national project, of which the East Texas Workshop is a part, is a five-year undertaking of the American Association for Health, Physical Education and Recreation

(National Education Association), in cooperation with the Associated Fishing Tackle Manufacturers and the Sporting Arms and Ammunition Manufacturers' Institute. Co-sponsors of the East Texas Workshop are:

- Texas Education Agency
- Texas Conservation Education Committee
- Texas Association for Health, Physical Education and Recreation
- Texas Game and Fish Commission
- Texas Forest Service.

Dr. Lee Wilborn, Assistant Commissioner for Instruction, Texas Education Agency, will serve as workshop director. Tyler Public Schools, which operates Camp Tyler during the school year, will be host. The traditional hospitality, good food, comfortable quarters, and good companionship of Camp Tyler should



help to make the workshop a real success.

Registration is limited to 30 participants on a first-come, first served basis. School people within the area outlined on the accompanying map who have not received an invitation should write to George W. Donaldson, Camp Tyler, Route 10, Tyler, Texas, for further information.

## Tex. Forestry Association Increases Reward to \$500

A \$500 reward will be paid by the Texas Forestry Association for information resulting in the arrest and conviction of a person or persons guilty of a felony by willfully setting fire to East Texas woodlands, according to E. R. Wagoner, executive secretary of the Association. The reward, originally offered in 1956, was increased from \$250 to \$500.

This reward is offered with the hope that it will help reduce the total number and the extensive damage caused by incendiary fires in East Texas. Anyone, including law enforcement officers, is eligible to claim the reward. This claim, based on arrest and conviction of the offender, should be filed with the Texas Forestry Association, Post Office Box 1032, Lufkin.

## There's "dead" water below the Thermocline

got its first hope in fighting the problem when Robert N. Hambric, aquatic biologist assigned to the lake by the Texas Game and Fish Commission, explained what he knew about thermocline and water stratification to members. He told them of a new thermometer which had been developed to measure the temperature of water accurately at any depth. There was belief among scientists that fish prefer temperatures to their own liking and concentrate at the depth where water is nearest that temperature. In fact, he added extensive nettings at various depths and a study of temperature of water and its chemical contents at those depths in TVA lakes tend to back up this suspected correlation.

Hambric added that he planned to study the relation between temperature and chemical make-up of water and its effect on fish.

The Possum Kingdom Association bought a \$225 Whitney Underwater Thermometer to get the project started. Readings began in April of 1954.

"Look," I said, "just what is the thermocline?"

• Continued from page 7

There are varying opinions on the exact nature of the thermocline, Bob said, but his conception, based on the work at Possum Kingdom, is that the thermocline is a thin layer of water, usually only a few feet in depth, which divides any average lake into two distinct sections of water. Above it is the productive portion which contains ample oxygen for fish life. Below the thermocline layer, the water is "dead." Carbon dioxide exceeds the amount of oxygen there to the extent that no oxygen-breathing creature can live.

Thermocline fishing at Possum

• Continued on page 26

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## Game Losses Influenced By Improper Range Uses

There is strong evidence that *overgrazed* sheep ranges result in a higher incidence and degree of parasitism than *properly grazed* cattle ranges, according to a recent report received by the Game and Fish Commission on studies conducted on antelope parasites.

Under proper range use by domestic stock there is no indication that gastro-intestinal parasites cause heavy losses in antelope.

On the other hand, on sheep range which has been overgrazed 91 per cent of the antelope examined were infested with either the sheep wire worm (*Haemonchus contortus*) or the intestinal threadnecked worms (*Nematodirella sp.*), or both. The average load (index) on sheep ranges was 18.2 sheep wire worms and 48.5 intestinal threadnecked worms per animal.

On properly grazed cattle ranges only 48 per cent of the antelope revealed parasites of one kind or another and the degree of infestation was 5.7 of the wire worms and 1.9 of the intestinal threadnecked worms.

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Texas.

## This may be the answer to your fishing problems

**Thermocline**

• Continued from page 25

Kingdom didn't mean simply that the thermocline station located the depth of the thermocline for fishermen and that was all. Hambric carried the study far beyond that. He not only located the thermocline, but also tried to pinpoint the approximate depths where crappie and bass would concentrate. This concentration point isn't necessarily directly above the thermocline.

Bob invited me back to Cedar Crest on the following Tuesday. "We'll make our next thermocline reading then and you can see just how it's done."

It was shortly after 9 a.m. when Hambric arrived from his laboratory office. He stressed that his work was strictly experimental at this point and gave me a clearer picture of the project. As a lake warms up in summer, the water tends to form layers, each having a slightly different temperature. The major drop in temperature usually marks the location of the thermocline.

Fish, Hambric continued, are cold-blooded animals, and their body temperature closely parallels that of the water about them. In warm water their whole process of life is speeded up; they breathe and digest fast; they require more food and bite frequently.

Because the physiology of fish is closely tied in with the water temperature and chemical content, Hambric believed varying temperatures of water, coupled with chemical content of each layer of water might explain why some species of fish are sometimes found at certain depths and not at others.

We loaded into Rogers' boat. Equipment carried included the underwater thermometer, two chests of chemicals, and assorted test gear.

We cruised out to the thermocline station and the action began. The thermometer used is a simple-looking gadget. It consists of a dial which gives the temperature reading, and a long length of rubber-insulated electrical cord with a thermometer head on the end. The cord is marked at two-foot intervals for quick reading of the depth being gauged.

Just to show me how sensitive the thing really was, Rogers asked me to breathe on the thermometer. I did, and my warm breath made it rise.

Rogers and Hambric measured and recorded the water temperature at the surface and at every two feet from there to the bottom. The whole process took about half an hour.

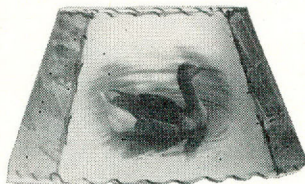
When the two Bobs were through, they sized up their findings. The temperature at the surface that day was 84.2°. It fell off steadily at the rate of about one-tenth of a degree per foot until a depth of 34 feet, where the water temperature was 81.2°. At 36 feet it had dropped to 80.8°, and at 38 it read 80.3°—a drop of half a degree within a space of two feet. "There," said Hambric, "is where we'll almost certainly find the thermocline."

He opened his box of chemicals and a box containing about 20 glass bottles. He and Rogers lowered a water sampler over the side of the boat. This equipment consists mostly of a metal chamber and a couple of tricky valves. It can be lowered to any depth without trapping water in the chamber.

Then, at the depth one likes, he can take a water sample into the chamber, close the valves, and bring that sealed sample to the surface. Hambric and Rogers took samples from various depths—enough to get a pretty clear picture from top to bottom.

Then Hambric began a whirlwind of activity which only chemists, biologists, or other scientists would thoroughly understand.

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When he was through, he showed me his completed chart. It contained the water temperature at every two feet and a complete chemical analysis as well. He'd measured the acidity and amount of oxygen and carbon dioxide in each sample.

I was especially interested in the 34-foot depth, where Bob had tentatively located the thermocline. Sure enough, it was exactly there that the oxygen content dropped to zero parts per million.

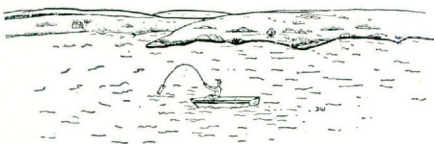
"Where do we go from here?" I asked. "How do you predict where the fish concentrate above the thermocline?"

"In the Southwest at least, bass don't fear light," Hambric said. "It's known biologically that they like warm water. Bass consequently will most likely be running near the surface, because that's where it's warmest."

"Does that mean," I asked, "that if I surface-fish for bass in the hottest part of the day I stand a good chance?"

"That's exactly what it means," he said. "There's no better time to go after bass than about 1 o'clock on a hot day."

"Crappies, however, are very pica-yunish. They don't like light. There's no point in fishing for these boys on the surface when the sun is bright, for they won't be there."



Fishing for bass at 1 p.m. was to me like adding two and two and getting eight. But the following Saturday at noon I decided to try it. Charles and David, my sons, thought I had blown my top and came along for the ride. Much to our surprise, I caught a bass in about five minutes. I was still playing with him when a two-pounder struck David's lure. We took in 14 in all. The demonstration made its impression on me.

Twice each week Rogers sends the thermocline information to newspapers, radio stations, and TV sportscasters in the towns nearest the lake and in Fort Worth. He also

## Overstocking May Result in Small Fish

A South Texan has just determined that overstocking of his private pond, and not some mysterious ailment, was responsible for the abnormally small catfish he has been catching.

Communicating with Marion Toole, Chief Aquatic Biologist of the Game and Fish Commission, the man learned that the seven hundred plus big and little channel cats he placed in his one-acre tank originally comprised about fifteen times more than recommended by technicians. He had complained that, after four years, the catfish he was catching were only five or six inches in length.

Toole explained that planting 50 catfish fingerlings in a tank the same size will produce amazing growth. He wrote to the mystified landowner:

"From experiments conducted by our Mr. W. H. Brown, it was found that in a one-acre pond 50 channel catfish after eight months had an average length of 18.9 inches and a weight of 33.0 ounces.

"When 75 channel catfish per acre were stocked, at the end of 18 months they attained a size of 16.3 inches and a weight of 23 ounces. When 100 catfish per acre were used,

passes out reports at Cedar Crest Camp.

How did it work out in actual fishing tests? Well, I didn't always get a lot of fish by concentrating on the suggested depths, but there were very few times when I didn't make a fair showing.

This much is certain: Even an amateur with practice, could probably locate the thermocline with no more than temperature readings. He could also make fair guesses at where bass and crappie will range.

Should the method of thermocline-temperature predicting used at Possum Kingdom gain wide acceptance, someone might raise the question of whether this is taking unfair advantage of the fish. Rogers and Hambric don't think so. "It's still up to the fisherman to make the lure look appetizing enough to get the fish to bite. We just tell him where they are." \*\*

at the end of 18 months they had an average length of 15.9 inches and a weight of 22 ounces. We also have received verified reports that nine months after stocking, some pond owners when stocking 100 fingerling catfish per acre were able to catch some channel catfish that measured 15.75 inches.

"It is a truism that waters are capable of producing a given amount of fish weight. For example, if a pond is stocked with 100 fish per acre and a like pond is stocked with 1,000 fish per acre, the two ponds will produce the same poundage of fish. You can readily see that the pond with the 100 fish per acre will be the pond that produces the large fish.

"It is also true that any time bluegill sunfish are present in a body of water they will reproduce so bountifully they soon become present in large quantities, causing a stunted population of their kind."



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## The biggest single danger to the diver is himself

SCUBA

• Continued from page 9

Stetson banks and in the vicinity of the Mississippi Delta.

Many different degrees of visibility and temperature have been encountered. At one location in the Gulf off Galveston, visibility of fifty or more feet was encountered while on the other hand in a dive off Grand Isle, Louisiana, the divers had to maintain contact by holding hands due to muddy water. The temperature ranges encountered in the Gulf range from 50° F. to 85° F. but the Pacific off California is generally much colder and not often above 65° F.

It is well known today that the sea, rather than being barren, is actually a beehive of life and activity and one of its most fascinating areas is the bottom. You never know just exactly what you will find. During one dive off the Texas coast our divers found the bottom literally covered with sand dollars, while at another location only a few miles

away there was not a sand dollar to be found. But here a huge colony of fighting conchs had taken up residence.

Last summer while diving on Heald Bank we encountered a rather remarkable little fish. This fellow when disturbed simply swam into the bottom. What makes this remarkable is that he needed no hole, but just swam right into the sand, and not just on top either. We dug after him for a foot or more but could not find him.

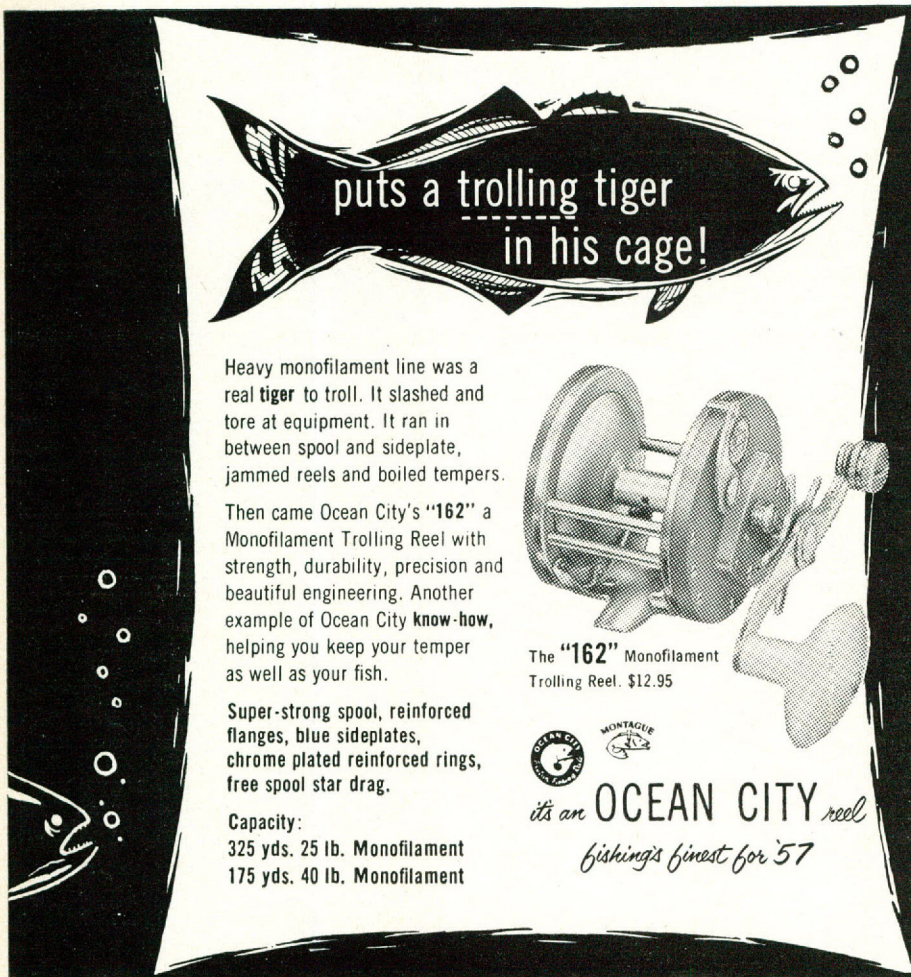
Not all of the sea life, of course, is so charmingly introvert. On the last cruise to Stetson Bank the divers very realistically chose not to dive. One of the men had hooked a large fish and was playing him when suddenly the fight stopped and he reeled in the front two feet of what had appeared to be a four-foot fish. The rear part had been neatly severed by one of the large barracuda which frequent the outer banks.

This is an example of why there is a gun guard armed with a high powered rifle on deck whenever a dive is made. No attempt is made to injure the fish as blood in the water can be hazardous. The shock and splash is usually enough to frighten away even the biggest fish.

Although such fish as barracuda and sharks can be quite dangerous, the biggest single danger to the diver is himself. This is the reason we place such stress on proper training. Diving might be looked at as being much like driving a car. Although practically everyone can drive, you would not ask a person who has never driven to proceed across Houston or Dallas at 5:00 p. m. However, many persons will buy a lung and go down in the sea knowing very little or nothing about diving. Eighty or ninety feet underwater is no place to be if you have trouble and do not know how to correct it. Actually such depths are not necessary to kill. An embolism, which can and often does result in death, can occur in just 10 feet of water.

Thus far the only mishaps to divers have been barnacle cuts obtained from an oil rig and one punctured ear drum which occurred in the College pool.

Actually, although the dangers to diving must be known and appreciated, anyone who is a good swimmer with sound ears, lungs, heart and sinuses can dive. We will be happy to hear from any divers in the area and anyone else, particularly scientists, who would like to take the diving course. \*\*



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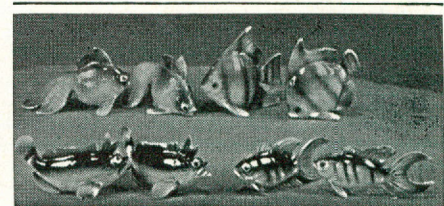
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A typical farm pond.

erage cost of construction of ponds of the same size in the particular county.

In order to qualify for ASC payments, the pond must be built in a manner and place that will cause it to be of value in soil and water conservation. After the pond is completed, Soil Conservation Service officials again visit the landowner, and determine if the pond qualifies for Agricultural Stabilization and Conservation payments. After Soil Conservation Service officials give final approval, the landowner receives payment.

To make a happy situation better, both State and Federal governments provide fish for stocking ponds, at no cost to the landowner. The Texas Game and Fish Commission operates 13 fish hatcheries to provide fish for stocking Texas waters. Applicants should write to Texas Game and Fish Commission, Walton Building, Austin, Texas, for official application blanks. Applications are accepted at any time, but when fish are needed during the current year, it is best to apply before August first.

The United States Fish and Wildlife Service has eight hatchery districts serving Texas. County Agents have application blanks and assist local applicants in securing their fish. Applicants may also write directly to the Regional Office, United States Fish and Wildlife Service, Box 1306, Albuquerque, New Mexico. Separate applications must be submitted for each pond, and the number of surface acres of each pond must be indicated. Largemouth black bass and bluegill sunfish are

## An Open Letter...

Editor:

In regard to your request for the support of the antlerless deer hunt, I am very thankful that the ranchers of the Hill Country did not support the hunt.

I have hunted in the hills (Blanco County) all my deer-hunting days and do not think that we have a surplus of doe any more; especially not in the last five years. According to your survey it looks as if most ranchers agree with me. The years in the late forties saw the heaviest population of deer herds. There were no doe seasons then, soon came the drought and it took care of any surplus deer. In my opinion you started about five years too late. Stopping the hunt in 1953 instead of starting it.

I did go on a doe hunt for one day in 1953 and killed a doe. At the checking point that evening I was taught my lesson and set firmly against any antlerless hunting. The percent of full-grown doe killed was low, there were just as many fawns, yearling bucks and young doe as there were full-grown doe. This to me was a pitiful sight and I want no part of it ever again. Any hunter who wants to hunt bucks in the future will realize what this will mean.

W. G. K.  
Brenham

(In general the Game Commission had very good cooperation from ranchmen in the reduction of surplus deer from overpopulated ranges. A few have declined to participate—largely because they do not understand the program.

The Commission started working for control of surplus deer herds many

years ago but it was not until 1953 that the people decided to follow. Before any program can be a success, the people first must make up their minds that it is a good program. In the Hill Country, where deer are a major economic factor, some ranchmen naturally take a "wait-and-see" attitude; thus, not all participate.

During your antlerless deer hunt in 1953, you mentioned seeing the high kill of young does in the kill being brought into the check station in Gillespie County. If you had checked the kill at the end of the season or read the report in our magazine, you would have found that a total of 661 antlerless deer were killed in Gillespie County, and of these only 80 (12.1%) were buck fawns and 90 (13.6%) were doe fawns. Over 74% were adult does. Only slightly over 25% were young deer. The Commission was well satisfied with these results.

The main objective in antlerless deer hunting is the removal of surplus deer from ranges overstocked with deer and livestock. If this can be done with only a small loss in young deer, the herd will grow vigorously, the animals will be bigger and bucks will be more plentiful.

In spite of the severe drouth, there are still many ranches tremendously overstocked with deer. On them, the surplus should be reduced to the carrying capacity of the range and from then on, the surplus must be removed each year if the ranchman wishes to intelligently manage his deer herd to his best advantage.—W. S. Jennings, Assistant Director, Division of Wildlife Restoration.)

available throughout the State. Channel catfish are available in most counties, and redear sunfish are available in counties served by Federal hatcheries in Austin, San Marcos, and Uvalde.

The State fish hatcheries raise largemouth black bass, spotted black bass, calico bass (black crappie), white crappie, Warmouth bass (goggle-eye), rock bass, green sunfish, channel catfish, redear sunfish, bluegill sunfish, redbreast sunfish and minnows.

Information on stocking and managing ponds is available from the Texas Game and Fish Commission, Austin; and the Texas Extension Service, College Station, Texas.

A pond is essential, or at least de-

sirable, to most rural Texas landowners. By placing and constructing his pond wisely and cooperating with United States Department of Agriculture (SCS and ASC) officials, the landowner can receive payment of one-half the cost of construction. But his real payment comes from the pond itself, which furnishes ideal wildlife habitat, and may be managed for maximum fish production along with its use as a stock-pond. \*\*

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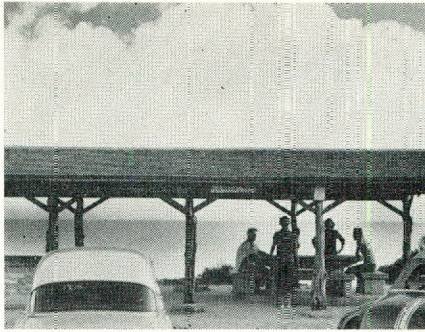
## Facilities are available for almost any size group

### Camping

• Continued from page 17

facilities for groups of 80-200 people, and can be rented as a unit for a group. Church groups, Boy Scouts, F. F. A. groups and others have made use of these facilities. Demand for them has become great, and already some are booked solid through the 1957 summer.

The typical large group camp has two dormitories for men, with a service building between the dormitories; two dormitories for women with a similar service building; a kitchen and dining hall, a recreation hall and a residence for the camp supervisors. The kitchens have a complete supply of utensils, food storage room and refrigeration stor-



A bayfront camping shelter at Goose Island State Park.

age. Some of the larger camps have walk-in refrigerators. Dormitories have army type beds and good mattresses. The campers bring their own pillows, blankets and bed linens.

## Awards Offered for Conservation Work

Dr. Logan J. Bennett has been elected by a poll of the nation's newspaper and magazine outdoor writers as the 1956 Winchester Outdoorsman of the Year. Dr. Bennett, Executive Director of the Pennsylvania Game Commission, is considered an authority on wildlife and wildlife management.

This award is in line with a growing trend towards recognition of the importance of conservation by busi-

ness and industry all over the United States. Awards are being offered to men and women who have been of outstanding service in wildlife conservation.

Ten professional and ten non-professional workers are recipients of the 1956 Nash Conservation Awards. The selection was made by a committee of conservationists from nominations submitted by officials of state, federal and private conservation agencies. Leon J. McDonald, an assistant state conservationist of the Soil Conservation Service in Stillwater, Oklahoma, is a winner from the Southwest area.

The *Taylor Press* is sponsoring the George B. Peeler award for an outdoor sportsman who is a resident of Williamson County. This award is to be made in memory of Mr. Peeler, who was an ardent outdoor sportsman and vitally interested in wildlife conservation. Further information can be obtained from Bill Kennedy, Outdoor Editor, *Taylor Press*.

The winner of the 1956 Sears-Roebuck Foundation Forestry Awards program has been announced. The Union Grove Chapter of the Future Farmers of America in Upshur County won first place. Now in its fourth year, the Forestry Awards Program is sponsored by the Department of Vocational Agriculture of the Texas Education Agency and the Sears-Roebuck Foundation.

Stainless steel knives, forks, spoons, platters and cups are part of the dining room equipment.

The percentage of state park visitors who camp with tent or trailer is increasing steadily. The ratio of increase in Texas is about the same as that for the Nation. A national survey of 1950 showed that 64 per cent of the overnight use of state parks was by tent and trailer occupants. Another check in 1955 showed that the figure had risen to 72 per cent. The popularity of camping was also revealed in another survey, which showed that the number of camp sites in state parks over the country increased by 43 per cent in four years.

For further information concerning camp sites, park managers and camping fees write the Texas State Board of Parks, 106 East 13th Street, Austin, Texas. \*\*

## Texas Represented at Wildlife Conference

Nearly 1,500 international authorities on renewable natural resources management, conservation administrators, biologists, outdoor writers, and sportsmen attended the Twenty-second North American Wildlife Conference held in Washington, D. C., in March. Howard D. Dodgen, Executive Secretary, and James Teer, wildlife biologist, represented the Texas Game and Fish Commission.

The theme of the conference, sponsored by the Wildlife Management Institute, was "Conservation is Everyone's Business." Representatives from the United States, Canada, Alaska, Mexico, Norway, and England were present.

"The Professions' Stake in Conservation," was discussed in the opening general session. Topic for the second general session was "The Public's Stake in Conservation." "Waterfowl Potentials," was the discussion theme of the closing general session.

Also conducted throughout the three-day meeting were six technical sessions devoted to specific problems in all phases of renewable natural resources management.

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## Man's Effort to Improve Marine Fisheries Status Theme of Marine Meeting

The regular meeting of the Gulf States Marine Fisheries Commission was held March 21-22, in Austin. Howard D. Dodgen, Executive Secretary of the Game and Fish Commission, gave the welcoming address to representatives of all of the Gulf Coast states.

The general session had as its theme: The Effect of Man's Effort on the Possible Depletion and Improvement of the Marine Fisheries. Expansion of this theme included talks by H. S. Swingle, Alabama, "Is Artificial Propagation of Marine Fishes Feasible to Improve Annual Production?"; Paul E. Thompson, Washington, D. C., "Should Areas Be Set Aside as Nursery Grounds to Aid in Annual Crop?"; Gordon Gunter, Mississippi, "What Effect Does Siltation Have Upon Production?"; James N. McConnell, New Orleans, "Is Physical Improvement to Adjacent Land Needed to Improve Fish Production?"; and Howard T. Lee, Rockport, "Is Physical Improvement to Inland Waters Possible, So as to Improve Fish Production?"

The scientific session of the meeting, held March 22, consisted of discussion of the various papers which had been presented in general session.

## Things You May Not Know

Florida's Everglade Kite is considered to be the third rarest bird in America. It eats only fresh water snails and when the snails are destroyed by drying up of their marsh homes, the kites must move elsewhere.

The Greenland ptarmigan molts three times a year. It has black and yellow feathers in the spring, gray in the fall and is pure white each winter.

The male cowbird is probably the only black bird with a brown head in the United States; the female is a dull gray color.

The legs of the penguins are enclosed in the skin of the body thus making their walk slow and clumsy.

The tongue of the African chameleon is longer than its whole body.

The word giraffe means "the one who moves swiftly."

### A profitable and fascinating hobby

Beachcombing

• Continued from page 11

knives, muskets, skulls, etc. on the wall of your study, or (4) a professional, selling your loot to tourists or making use of it in buildings and other objects d'art.

There is a museum on Padre Island devoted entirely to objects collected on local beaches. One room contains nothing but pieces of driftwood shaped like animals; another contains historic remains and a comprehensive shell collection; another, old bottles and glass floats. These glass objects, incidentally, are prized because of the beautiful colors they have turned due to years of exposure to the sun. One type of glass will turn an amethyst color, another, an amber, another a dark green. (Modern glass made in this country will not turn.)

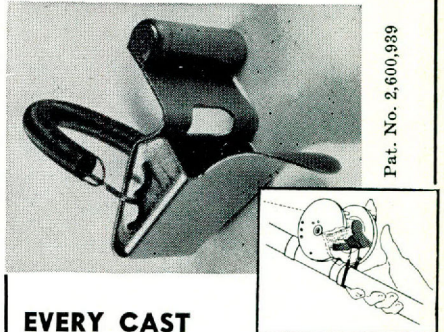
Beachcombing is like fishing or

playing bridge: not until you make your first find (catch in the case of the former, or grand slam in the case of the latter) will you become an adrent advocate. And, as I have said before, it has its advantages. It doesn't take as much money and equipment as the former, or as much brains as the latter. \*\*

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80 ft. TROTLINE on winder, 16 assemblies.....	\$3.95	\$5.75
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# Outdoor Books

**LIVING TOGETHER IN THE MODERN WORLD**, a series of eight volumes. Each volume contains approximately 120 pages of text, faced individually with superb full-page black and white photographs. Published 1953-54 by the Creative Educational Society, Mankato, Minn. \$5.95 each, \$49.50 per set of eight.

Living in our world today is becoming an ever-increasing problem. Every step towards understanding things around us is beneficial. More than 900 full page documentary photographs have been grouped in seven books under major headings relating to the problems of modern living. The individual volumes are: food, shelter, clothing, transportation, communication, conservation of human resources, conservation of natural resources, and an index reference guide.

Each full-page photograph is accompanied by a facing page of text, which gives interesting facts about the subject. Within each volume, titled pictures are grouped under certain broad headings. The vocabulary level of the set is generally sixth to eighth grade. However, the interest level has no age or grade limit.

The set, each book of which is beau-

tifully bound and designed, was edited and compiled by a group of consultants and specialists from various parts of America. An emphasis on "you," the reader, is especially brought out by the use of thought-provoking questions at the end of the majority of the texts. This series has been highly recommended for use in elementary and junior high schools.—D.W.

**ARMS AND ARMOR IN COLONIAL AMERICA 1526-1783**, by Harold L. Peterson. 350 pages generously illustrated with excellent black and white drawings and photographs. Published 1956 by The Stackpole Company, Telegraph Press Building, Harrisburg, Pa. \$12.50.

Although during the past few decades historians have scrutinized the material culture and social life of the American colonial period, military topics have been almost entirely overlooked. The author remedies this situation by delving into 200 years of firearms, ammunition, equipment and edged weapons, fully explaining these artifacts of war and the men who used them.

Sponsored by the Company of Military Collectors and Historians, this book was twelve years in the writing.

It is divided into two sections: The Age of Colonization and Exploration, and The French Wars and The Revolution, Mr. Peterson demonstrates the effect of weapons on the thought and actions of "men who cleared away the wilderness and brought the United States into being." A well-organized bibliography is included.

This material is presented in an entertaining way, touching upon almost all forms of arms and armor. More than 300 striking illustrations will be of interest to the reader.—D.W.

**THE RAIN FORESTS OF GOLFO DULCE** by Paul H. Allen. 417 pages well illustrated with excellent drawings by Dorothy O. Allen, and black and white photographs. Published 1956 by University of Florida Press, Gainesville, Florida. \$8.50.

*"I say, in general, that the trees of these Indies are a thing that cannot be explained, for their multitude; and the earth is so covered with them in many parts, . . . in this respect one could say that this is a GREAT AND DARK SEA, because though part is seen, much more is not."*—Gonzalo Fernando de Oviedo y Valdes, 1526.

Thus an early explorer described the magnificent tropical forests of the Golfo Dulce.

Golfo Dulce is a bay located on the Pacific side of the southern tip of Costa Rica. Because of an average rainfall of 200 inches per year, the area around the bay is covered with a dense typical tropical rain forest. Paul Allen chose this unspoiled tropical area as the site for his studies of the botanical species present in such rain forests.

Keys to the various types of vegetation, both by location and by characteristic aid in an understanding of the many species. Common and scientific names are given, as is a list of the various uses of the species—economic, medicinal and poisonous. An excellent alphabetical index to families, genera, species will prove of value to the reader. Each of these sections is generously and well illustrated with drawings by Dorothy Allen.

An excellent glossary, including many terms which may be unfamiliar to readers in less tropical areas, is followed by a section of 34 plates of superb black and white photographs.—J.R.

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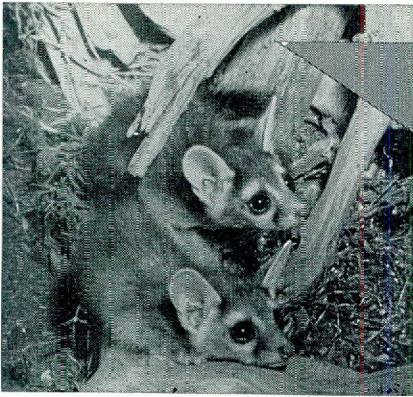
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# Junior Sportsmen

*Wildlife Looks To You*

*For Help*

## Give Mother Nature a Hand

You have probably overheard your parents say that "Charity begins at home." So if you, as a young conservationist, would like to extend your charity to wildlife, a home is a good place to begin.

"Home" has a different meaning for each type of wildlife. To a bighorn sheep out in West Texas, home may be a craggy mountain top. An antelope is at home on sagebrush plains. A pair of ducks may seek the secret silences of a coastal swamp. And a badger likes his living quarters below ground.

Hollow trees and hedges, old stone walls and burrows all furnish homes, especially for the smaller of our wild creatures. You can start now helping to keep some of these natural homes from being harmed.

A good home for wildlife should include: shelter from the weather; safety from enemies; a place to rest; privacy; proper temperature, and nearness to

such essentials as food and water. Home should be a good place to raise a family.

Nature once provided most wildlife homes, but with the advance of civilization, many of these have disappeared, especially the woodlot and marsh homes. Pollution of waters with sewage and industrial wastes have destroyed many of the living places of waterbirds, fish, and furbearers such as muskrat, mink, and beaver. Fires have also ruined the homes of many animals in our forests and grassland areas.

You may be able to give Mother Nature a hand. Many of our wild creatures seem to like man-made homes as well as the ones they had. Wood ducks, squirrels, and songbirds may be quick to take advantage of your efforts to help them find a home.

First of all, study and learn to recognize natural wildlife homes by taking a trip to a local natural area. Then decide what wildlife you want to help. Next, make a survey to determine their needs. Your local conservation biologist or science teacher may be willing to help you in this survey. Get permission from the person who owns the area you wish to work in before starting your project.

Develop and follow a well-organized handyman housing program for the type of wildlife you have chosen to help. For example, a hollow gourd hung from a tree may make a home for a wren. Bits of string hung from limbs of trees can be used by birds in building their nests, and in a similar way, small sticks and twigs can be broken and laid out to help birds in nest building. A small brush pile for a rabbit den can be made in a couple of hours. And if you're still looking for something to do, perhaps your parents would be interested in assisting in a program preventing water pollution that has ruined many natural aquatic homes. Or . . .

You might try one of these:

1. Farm pond—for fishing and fire protection.
2. Log dam—a simple type of stream improvement.



*National Wildlife Federation Photo*

The beaver is one of nature's most skillful engineers.

3. V-Dam—easy to build and keep up, and provides shelter for finny residents.
4. Reforestation—Much abandoned farm and forestland could be restored through planting and by providing protection from fire, disease, and insects.
5. Willow planting—an easy method of helping prevent streambank erosion.
6. Brush shelter or multiflora rose hedge—a good shelter for birds and small game.
7. Bird house—hundreds of varieties of homemade birdhouses have been accepted by songbirds.
8. Squirrel nesting box—many species of squirrels readily move into these constructed shelters.

If you want further information on homes for wildlife, write the National Wildlife Federation, 232 Carroll Street, N.W., Washington 12, D. C.

—Doris Wilson.



*National Wildlife Federation Photo*

Bob White quail find refuge in multiflora rose hedge.

### Note to Our Junior Sportsmen:

This is your page! If you have a question about wildlife, or a picture that you are proud of mail it to us.—Bob Meyer.



Known as "cougar", "panther", "catamount", or "puma" the mountain lion ranges from Canada to Argentina. In Texas, he is found mostly in the western part, making his den generally in a rocky cavern, under an old uprooted tree, or in a dense thicket. His preferred diet is deer, but includes foxes, racoons, rabbits and rodents. He may go as far as 25 miles a day hunting food.

The mature mountain lion is generally yellow-brown to gray in coloration, and the kittens are yellow-buff with dark blotches and a black-ringed tail. An adult is large and slender, weighing about 135 pounds. The average litter is usually two in number, but may be up to five. These young, which may be born at any season, are blind at birth and open their eyes in about 10 days.



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