

The Fishes of Texas

The channel catfish (*Ictalurus punctatus*), above, accounts for the greater number and poundage of all catfish caught in Texas waters. The blue catfish (*Ictalurus furcatus*), middle, is often mistaken for the channel. Count anal fin rays for positive identification. The channel has 24-29 rays, the blue has 30-35. The Rio Grande catfish, below, is a spotted variation of the blue, and is found only in the Rio Grande drainage system.



Dedicated to the conservation and enjoy-
Dedicated to the conservation and enjoyment of Texas fish, game, parks, waters,
and all outdoors. WAYNE K. TILLER JOHN HOUSER NANCY McGOWAN JOAN PEARSALL SPECK Advertising-Circulation LOUISE KREIDEL Business Assistant Distribution
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	n State Park signifies the dawn of exans are turning to water oriented ason.

Back Cover: Although the red fox is imported and not native to Texas, he is common throughout much of East Texas. Photo by Leroy Williamson.



When survey crews set their nets, analyze the fish they catch, and use the results for management . . .

Anglers Net Profits

by Robert N. Hambric

YARD by yard, the 150-foot net of slender nylon threads was hauled into the boat and piled into a tub. This was the last of the six nets set the previous day by the fisheries research crew from the Parks and Wildlife Department. Occasionally a struggling fish

was untangled and tossed into another tub containing several types of fish taken from other nets. The net had been designed to catch any type of fish that swam through it.

The first section of net, constructed of 3½ inch mesh, yielded only two buffalo and one channel catfish. But as more net was taken in and the size of the mesh became smaller, fish were found in greater numbers.



Many shad and carpsucker were caught, along with two bass, five crappie, three gar, and several bluegill. The last fish removed was a large female carp whose fins had become tangled in the small mesh near the end where the net was tied to a bush.

The boat operator then started the motor, and the three man crew headed across the lake to a public boat dock. One of the men obtained two sets of scales, a measuring board, and a note pad. Two crew members began to weigh and measure the fish while the third recorded information on the note pad.

Several people gathered around to watch the proceedings. Some wanted to know why small fish were weighed in grams while larger ones were weighed in pounds. They were also interested in why the fish's tail was not included in its measurement. They were told that the gram scale, marked off in individual grams, is very accurate but its capacity is limited to 500 grams or slightly over one pound.

Heavier fish are weighed on scales calibrated in pounds and ounces, as weights to the nearest one-half ounce are sufficiently accurate for the larger sizes. The length of a fish is measured from tip of nose to the last vertebra, which is about where the flesh ends and the tail fin begins. These are standard measurements used by all research crews. The tail fin is not included, because the tip is sometimes worn away by spawning activities.

Some of the fish were cut open. Many of the stomachs were empty but a few contained recognizable items. Stomachs taken from bass caught in the various nets contained crayfish or shad, while crappie stomachs contained mostly immature insects and minnows. The stomachs of channel catfish contained a variety of things such as algae, insects, and partially digested fish. But one catfish, which weighed seven pounds and four ounces, must have craved an unusual meal because his stomach contained two snakes. One was 17 inches and

The research crew weighed, measured, and examined each fish critically, cutting some open for stomach analysis. After each bit of information was recorded . . .

the other was 12 inches long. This was unique even for catfish, so the biologist took a couple of pictures showing the snakes in the catfish's open stomach.

Development of the reproductive organs of all of the fish was investigated. Some of the egg sacs were almost full. One of the crew members mentioned he had noticed that black crappie develop their eggs

quicker and spawn two or three weeks earlier than white crappie. The research crew analyzed each fish critically and noted any parasites, abnormalities, or unusual conditions, listing each bit of information on the record sheets. None of the edible fish were wasted because spectators quickly accepted them.

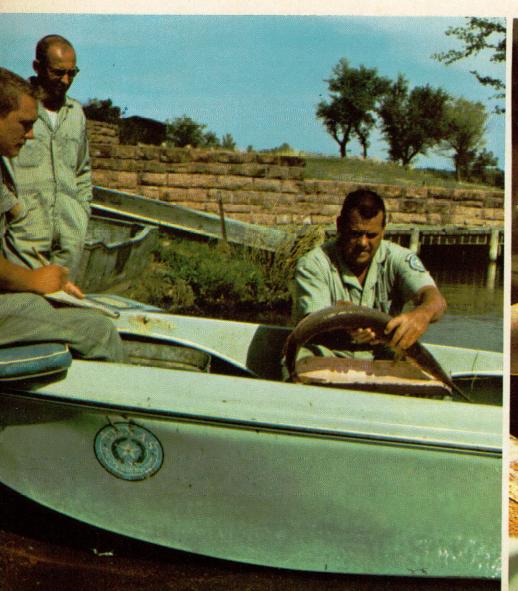
As the crew finished their work and began storing their equipment, one of the bystanders asked: "Just what do you think you can learn by setting nets in a lake?"

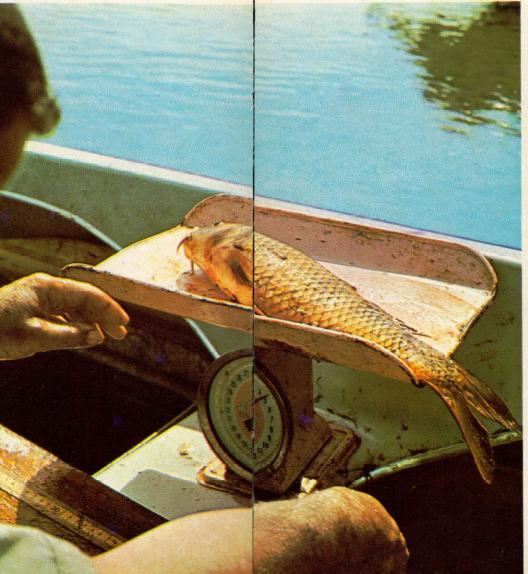
The biologist explained that, in order to furnish the best fishing possible, netting surveys are made to collect information for use in management programs. Fishermen also help with such surveys because the money they pay for fishing licenses supports this and similar research programs.

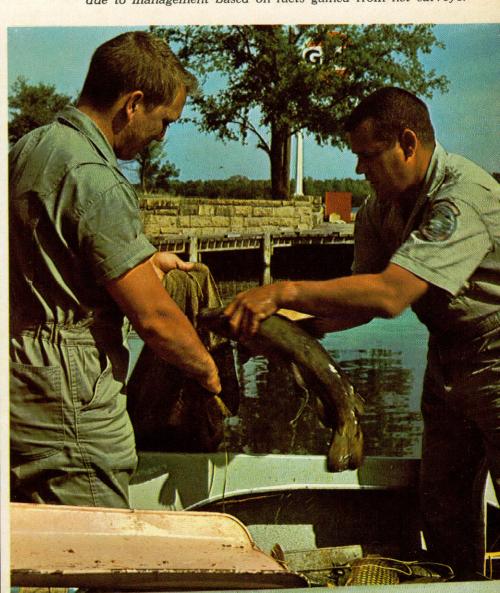
Fish are elusive creatures and normal methods of counting them by direct observation, as for birds or rabbits, can seldom be used. Therefore, a device is needed which will catch fish from the lake in such a manner that they will represent percentages of the entire fish population in the lake. Gill nets, which are constructed from sections of webbing ranging from 1 to 3½ inches in mesh size, are one of the most reliable types of gear used for fish sampling purposes.

It is not necessary to know the actual number of fish per surface acre for good lake management. But an adequate number of netting samples offers a good idea of the kinds of fish present and about what percentage of the total population each species represents. The small amount of fish taken with test nets

... none of the edible fish were wasted because spectators quickly accepted them. Game fish will stay plentiful due to management based on facts gained from net surveys.





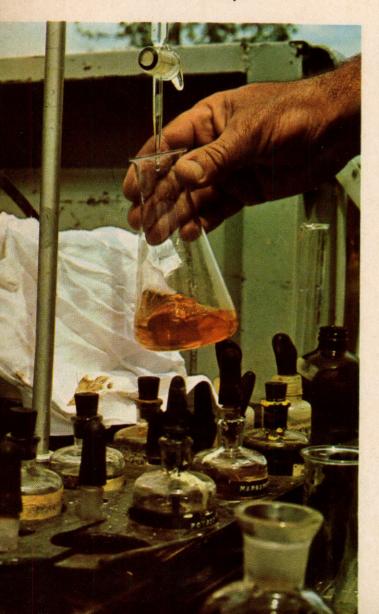


does not harm future fishing; it is no more than a fisherman might bring in at the end of a successful day.

Test nets are set in various ecological habitats, in all major parts of a lake, in deep and shallow water. One trip to a large lake seldom shows a true picture of the fish population, so nets are sometimes set in a lake once each month for a year or longer. Physical features, such as depth and quality of water and amount of brush or other fish cover, are also noted for various areas of the lake under study. Summaries of all such data show a complete picture of the relative abundance of each species of fish, along with other information that is useful in lake management. Seasonal changes in diet, reaction to rise and fall of the lake level, and the effect of changing weather conditions on the movement of fish are of special interest to fishermen. All this makes it possible to recommend harvest of fish species.

Lakes are not a static type of environment. Netting

Studies of environment, such as chemical analysis of lake water, are important supplements to the net surveys.



surveys show that most lakes follow a similar pattern during the first few years of their life. They are quite productive when new and raise an abundance of fast growing fish, usually a mixture of both game and rough species. The water is fertile from decay of vegetation and nutrients from the soil. There is little competition for food, space, and spawning sites. In a new lake each group has room to expand. Fish move around a great deal in search of food and unoccupied territory, and are easily caught by hook and line.

Lakes age rapidly, however, and the quality of fishing declines. Enthusiasm for fishing that particular lake cools as fish become harder to catch. Businesses supplying goods, services, and facilities suffer a loss in revenue. It is this decline in fishing quality and economic value that research crews are interested in pre-

venting.

From netting, some of the things have come to light that cause the decline of bass and other game fish. As the lake ages, important changes take place, which can be followed by sampling with gill nets. Undesirable fish, referred to as rough fish, often increase to great numbers. Also, some species of game fish, particularly crappie and other sunfish, sometimes become too abundant, and stunted for lack of food. When shad, which feed on small animal and plant life, become too plentiful they may compete with game fish for food. Bass, which we often think of as a vicious feeder, cannot stand competition from some fish. Bluegill in large numbers are highly competitive with bass and will often severely retard the growth of young bass.

Lakes are a complicated type of environment and many factors can affect their production of fish. Each of the five regions in Texas has research crews that spend considerable time on lakes and streams, collect-

ing information to improve the fishing.

Something interesting or unusual is always happening on these expeditions. For instance, in Southeast Texas, alligators are sometimes attracted to fish nets. Large ones seldom remain tangled in the nets, but will slowly circle the boat and watch as if they begrudge each fish taken. Occasionally they will chew up or drag away part of a net. But who can argue that alligators don't have equal rights to the fish in a lake?

Netting surveys are conducted throughout the year. In really cold weather, the nets freeze when lifted from the lake; they are just folded across the boat like chicken wire. With the exception of the crew's red noses and cold fingers, things move along in the usual

manner.

In fisheries, as in other fields, investigators are beginning to specialize in various phases of the study, and tools of the trade are becoming more sophisticated. Advanced electronic gear monitors the fish's pattern of travel; attractants and repellents affect its movement; and radiology is used to study the various functions of its body.

In spite of such technological advances, nets, similar to the ones used thousands of years ago by the Swiss Lake Dwellers to capture food, are still the primary gear used to sample fish populations in lakes today. * *



WHY STATE PARKS?

by Barbara Jaska

AN throughout his history has never been without parks of one type or another. ("Park" in this usage means outdoor areas set aside for pleasure and enjoyment.) Evidence suggests that the Sumerians, a people even more ancient than the Egyptians, had the forerunner of modern parks—an enclosed and well-kept woods primarily used for hunting.

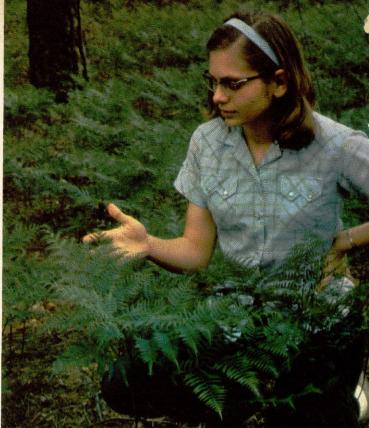
Most of us are familiar with the "Hanging Gardens" of Babylon, the outdoor gymnasiums of the Greeks, and the villas of the Romans. Some of the parklike areas were open to the public, but, in the main, they were owned and used by the nobility. After the fall of the Roman Empire, parks almost disappeared, except for those in monasteries and, later, those on wealthy estates.

By the end of the thirteenth century, parks of a more elaborate nature appeared in Italy, and by the fifteenth, had spread to the rest of Europe. Statuary, artfully shaped

State parks afford opportunities to enjoy nature at its finest. The study of native plants and wildlife is a peaceful escape from the complexities of urban life.

Scenic parks preserve unique natural areas. With this in mind, recreational facilities have been limited, in order not to destroy the environment.



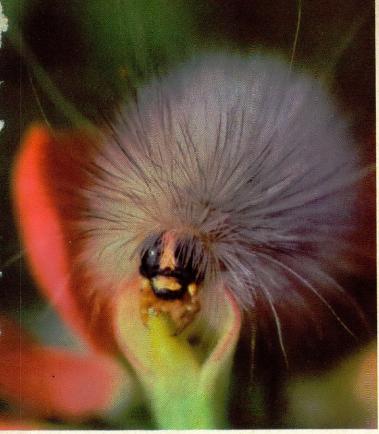


shrubs, grottoes, fishponds, fountains, and sports facilities were important elements. Depending on the generosity of the owners, many of these parks were opened to the public.

In the eighteenth century, England developed a more informal style—natural landscape with native plants and animals and open spaces for walking. These were the first truly public parks. Everyone, not just the wealthy or the nobility, could use them. As such, parks were a testimony to the rise of the "common man," for this was also the period when the American and French Revolutions occurred.

The idea of "people's parks" gained strong footing in America. As far back as colonial times there were public town squares in New England and plazas in Spanish settlements. Probably the greatest single factor in American park development was the spread of urbanization and industry. Cities, bulging with fledgling factories and crowded slums, set aside areas which emphasized natural scenery and offered respite from the urban smokestacks and traffic. One of the first was New York's Central Park, landscaped in 1854.

As settlers streamed westward implanting new farms, ranches, and towns on the frontier, a few forward thinking individuals realized that much of the nation's most spectacular natural scenery was being wiped out. In 1870, Cornelius Hedges, a Montana lawyer, proposed the idea of a national park while exploring the Yellowstone region for rumored geysers. Rather than claiming the land for themselves and taking advantage of its resources, he and his party succeeded in persuading Congress to place the land under Federal





protection. The Yellowstone Act of 1872 withdrew the park area from settlement and exploitation, and was used as a guide for establishing later national parks.

The national park idea gained recognition through the next several years, particularly with such enthusiastic supporters as John Muir and President Theodore Roosevelt. In 1916, Congress established the National Park Service as a separate agency within the Department of the Interior, to administer the growing list of national parks and monuments.

The development of the automobile at the turn of the century, and subsequently a network of improved roads, added a boost to the tourist industry. As automobile travel became more popular, a need was seen for a system of parks in each state that would place recreational and scenic areas within the reach of all citizens. In 1921, the National Conference of State Parks met for the first time, urging the preservation of natural scenery and wildlife and encouraging the organization of state parks systems.

In Texas, this need was crystallized in the appeal of Governor Pat M. Neff to the 39th Legislature in 1923. He recommended the creation of a State Parks Board. Up to that time, a few private areas were available to the public for limited outdoor recreation and social events.

One such area, a popular gathering place for camp meetings and political rallies, was located near Eagle Springs in Central Texas. The land belonged to Isabella Neff, the Governor's mother. In her will, dated June 2, 1916, she donated six acres of land to the State. This area later became the first State Park. The

park, now expanded to 259 acres, is known as Mother Neff State Recreation Park.

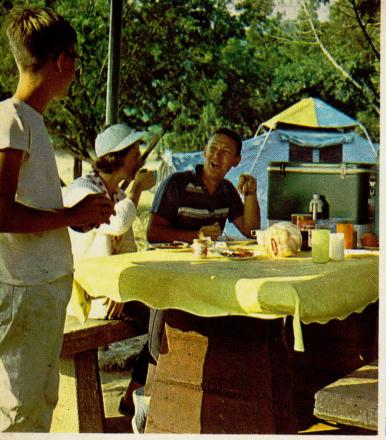
The State Parks Board in the 1920's and 1930's was limited to accepting park sites because it did not as yet have enough money to develop them. Money and manpower became available through economic recovery acts passed during the Depression. The Civilian Conservation Corps, cooperating with the National Park Service, laid out roads and constructed facilities in Texas State Parks from 1933 to about 1942.

Since World War II, a number of State parks have been created on the shores of newly constructed reservoirs, such as Falcon, Whitney, and Texoma. In 1963, the Texas Legislature, as an efficiency measure, merged the State Parks Board and the State Game and Fish Commission to form the Texas Parks and Wildlife Department. This Department today administers 59 State parks, encompassing 60,083 acres.

The important thing to note from this historical sketch is that as man has exploited the earth's resources for economic purposes, he has also felt a need to reserve some portions of land for pleasure and enjoyment. In Texas, as in most of the nation, this need has been felt on three levels: local, state, and national.

Local or city parks, while they help to beautify the city, emphasize playground recreation. National parks, on the other hand, preserve the most magnificent areas of the nation's natural scenery. They are open to the public for recreation, but only in such a way that the natural qualities are preserved for future generations.

Between the two extremes—local and national parks





—are state parks. State parks constitute resources for the wholesome enjoyment of outdoor recreation, recreation here meaning mental and physical, passive and active, expressive as well as receptive activities.

One has not always considered state parks as a place in which to play, as well as enjoy nature at its finest. Time was when the unique qualities of scenery, archaeology, history, and geology were the only characteristics of state parks. These features existed where Nature placed them or where man had happened to make a significant step in his progress through time. They were a resource for contemplation and recreation, but they could satisfy little of the growing demand for recreation by more with leisure time and more money to do more things.

To emphasize certain of these purposes, the State of Texas has classified its parks into four types: recreation parks, scenic parks, historic parks, and historic sites. Recreation parks are "user-oriented"; they provide outdoor recreation in a natural environment. (Outdoor recreation is here defined as "those activities voluntarily undertaken during one's leisure time in an out-

door setting.")

Scenic parks, on the other hand, are "resourceoriented"; they preserve unique natural areas and provide only limited recreational facilities to assure the reason for preservation will not be destroyed. Lastly, historic parks and sites preserve historic structures and memorialize historic events with few, if any, recreational facilities.

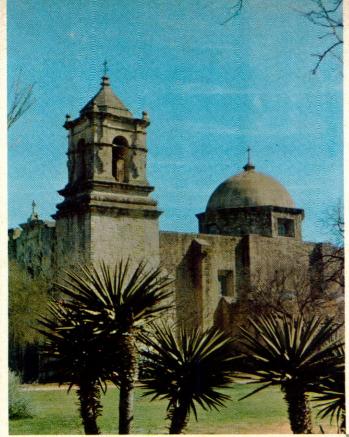
Up to the end of World War II, more Texans lived on the farm than in the city. Gradually, however, people began moving to urban areas. The complexities of urban life have an increasing effect upon the demand for outdoor recreation. Surrounded as we are by clicking typewriters, jangling telephones, clanging factories, rumbling traffic, and blaring radios, parks provide an escape—they give us a chance to enjoy peace and order in nature. Parks serve other purposes as well—physical fitness, mental well-being, appreciation of beauty, knowledge of history, awareness of man's role in the universe—in short, those basic human needs which cannot be classed as food, clothing, and shelter.

As Texans return to the out-of-doors, they are finding that privately owned natural areas are rapidly disappearing under the flood of new highways, houses, and factories. State parks are becoming a major source of outdoor recreation. The demand has increased to the point that shortages already exist in the State. In 1964, for example, Texas could have used an additional 22,000 campsites, 1,500 miles of hiking trails, nearly 800 miles of bridle paths, and about 20,000 picnic tables. However, visitation at the present State parks in Texas will reach its saturation point in 1971, less than four years from now. This means that any visitation over the 1971 level would seriously damage the parkland and its facilities.

If projections prove accurate, the demand for outdoor recreation by 1990 will more than double. Population itself will increase 1½ times, and Texans, endowed with more leisure time and higher incomes,

will visit State parks in greater numbers.

At the same time, the State parks system is not growing appreciably. Within the last 10 years, for example, the system has acquired only about two percent of its present total acreage. Moreover, not all of the total acreage is or can be developed for recrea-



A modern State parks system is a major source of outdoor recreation. Fishing, hiking, camping, picnicking, and water sports are but a few of the many activities demanded by Texans today.

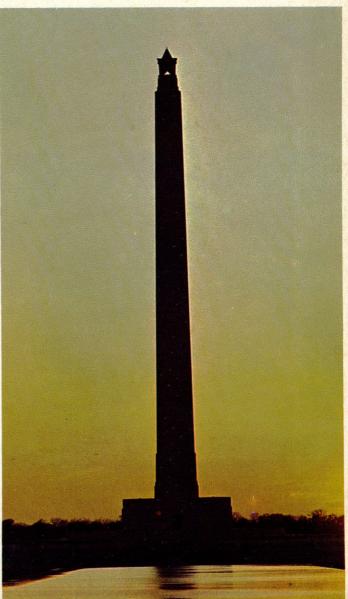
Historic parks and sites, with less emphasis on recreational facilities, preserve and memorialize Texas' historic events and structures.

tion because the present parklands encompass valuable historic sites and unique scenic areas.

Clearly, outdoors-loving Texans face a dilemma. Shall we let the State parks remain as they are and risk destruction through overuse? Shall we expand the system? Or shall we have parks at all? What is to be done? Let us assume that we do not want to do away with State parks. Figures indicate that people want more recreation, with the expected increase in leisure time and pressures of modern living. But the present State parks cannot accommodate such expanding recreational activity. This would eventually obliterate the parks' natural characteristics and, thus, the source of pleasure that we find in the out-of-doors. We do not want to restrict visitation, such as closing the parks when they reach a predetermined capacity. Such restrictions would perhaps place severe restraints on our freedom and would not provide complete satisfaction for our recreational needs.

The alternative is to acquire more land. The Texas Parks and Wildlife Department has proposed a program which calls for the acquisition of 61,000 acres for recreation parks (which in itself would more than equal the present total park acreage), 78,715 acres for scenic parks, and 5,005 for historic areas. (See February, 1967, issue.) The plan, which would take place over a 10-year period and be financed by a nominal fee for admission to the parks, appears a plausible solution.

When we consider the whole history of parks, and the purpose they serve today, it is logical to realize their value to future generations. Actions taken in the near future may well determine whether or not this legacy will be preserved.





bea a Skeeter" "You can't

MARK TWAIN once said, "It were not best that we should all think alike; it is difference of opinion that makes horse races."

Bearing this in mind, I would like to nominate my choice for the best all-round fishing boat ever constructed. This selection was not arrived at overnight. In forty years of fishing. I have fished from every type of craft from a dugout pirogue to the cruiser, Baltimore. The last wasn't easy, considering it was against Navy regulations-but I doggone sure did it!

Although other boats have copied the hull design, and others have come near to having the desirable features incorporated in the "Skeeter" boat, this has remained my choice of a fishing boat through nearly two decades. My Skeeters have seen service ranging from the usual fishing trip, to use as a "barge" for hauling large loads of lumber and equipment for building duck blinds. The little boat has performed well on all tasks.

When buying a fishing boat, the purchaser should consider many factors. First of these should be seaworthiness. This is the ability of a given hull design to remain afloat and dry in rough water, thus insuring the safety of the occupants. Stability, while an integral factor in seaworthiness, is also a prime requisite for comfort afloat. While many boats, especially those constructed of the lighter metals, are noted for tipping and "dancing" from under the unwary fisherman, the Skeeter is rock-steady—even bearing two two-hundred-pound men standing on the same gunwale without dangerous tilting. The Skeeter

is one of the steadiest of all fishing boats.

Fishermen who have been plagued in the past by excessive wind drift resulting from the straight, high sides of a fishing boat, will be pleasantly surprised at the little resistance offered to the wind by the Skeeter's slanted, low silhouette sides. Because of this, the Skeeter is easily handled by a single paddler, when a metal boat with high gunwales would be very unmanageable.

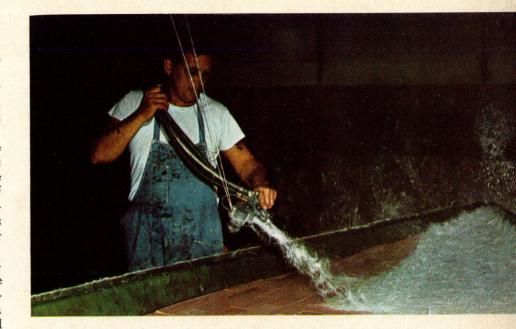
The unique hull design of the Skeeter often results in the erroneous identification of "speedboat" by the uninitiated viewer. In the matter of speed and ability to handle the larger outboard motors, the Skeeter has no superior. Although the smaller 14 foot model will plane with a 71/2 h.p. motor, many fishermen use motors of 45 h.p. and above on the larger "Super Skeeter." With forward controls, electric starting, and a foot-operated trolling motor mounted on the nose, these rigs are the elite of the bass fishing fleet.

The hull design of the Skeeter has one basic drawback. Being a flat, planing hull, it will not take exceptionally rough water without excessive pounding. While some will argue the fisherman should not be afloat intentionally during storms and rough weather, many of the larger lakes must be fished during times when there is quite a chop on the water, if they are fished at all.

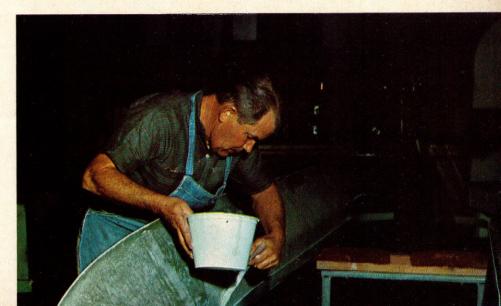
For this type of rough water, when a "vee" shaped hull is required to cushion oncoming waves, the boating industry has developed the "Tri-Hedral" - an especially designed bow and underwater hull incorporated in the "Boston Whaler," "King-



Balsa blocks used in hull provide extra safety flotation and rigidity.



Durable seven-ply "lifeguard" fiberglass hull is protected with fire retardant coating.





After permanent color coat, the two fiberglass halves are bonded together.



Front mounted trolling motor offers best control for easing up on unwary fish.



fisher," "Skeeter Hawk," and "Terry Bass" boats.

All of the above boats are favorites with serious bass fishermen, each having features unique to a particular brand of boat, and appealing to the requirements and desires of the individual who chooses that particular boat. Try 'em all out, and then decide which horse you wish to bet on!

Contrary to popular opinion, the basic hull design of the Skeeter is quite old. It was first used for the "Narragansett Bay" duck boat, a favorite of East Coast wildfowlers for nearly a century. Originally, these boats were constructed with cedar keel and ribs, over which was laid a covering of basketwood and tautly stretched waterproofed canvas. Because of inherent stability and seaworthiness the "Narragansett Bay" boats were used both in the rougher, open waters of the bay, and as a sneak boat to rout the ducks from the marshes. So steady was the boat, that both the man handling the push-pole and the gunner remained in a standing position while attempting to sneak up on their feathered quarry.

With the advent of the outboard motor, some smart hunters seeking an easier means of propulsion for his duck boat, cut one of the pointed ends from his boat and fastened an early "thumb-buster" to the altered transom. What had always been the perfect duck boat turned out to be an ideal fishing boat for summer!

Quite a few years later, Holmes Thurmond of Shreveport, Louisiana, began manufacturing a fishing boat which incorporated the most desirable features of the old and proven duck boat. He called the boat the "Skeeter." The boats were constructed from marine plywood, and proved to be both lightweight and rugged.

Constructed on longlasting fiberglass, the Skeeter today has reached the apex of beauty, enduring quality, and desirability. Perhaps the old adages of "Build a better mousetrap" or "You can't keep a good man down" apply here. One thing is certain—you can't keep a good boat hidden on Narragansett Bay! * *

Glorious Rivers to Sewers

DISASTER BY DEFAULT by Frank Graham, published by M. Evans and Company, Inc., New York, 256 pages, \$4.95.

Water pollution, a growing menace threatening the nation, is one of the leastpublicized problems of our day.

Frank Graham, Jr. surveys the dismal effects of exploitation of natural water resources by many private interest groups, and shows how the lack of responsible

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public action has allowed these practices to continue.

"Rivers, which should be among America's glories, have become instead its sewers, and every level of society has ignored its obligation to them," he says.

Graham describes some of the early instances when water sources were polluted by shortsighted citizens. He notes that the river Tiber—receptacle for Roman refuse—was the first famous western river to become a sewer.

Scandalous conflicts of interest involving public drinking water occurred in nineteenth century New York. DeWitt Clinton, mayor of New York, also served as director of the company which was supplying tainted drinking water to the city.

Another instance when profit was placed above public good involved a well-known tanner who sold water polluted by his tannery wastes as "medicinal water."

Sickened New Yorkers tried to neutralize smells rising from their sewers by pouring buckets of perfume into them in 1875. But New York was not the only city with problems. Other cities polluted by various wastes also had difficulty getting pure drinking water.

Philadelphia officials resorted to fining people who tossed dead animals into the local water source, and offered half of a collected fine to informers.

Two yellow fever epidemics which killed more than 5,000 people in 1878-79

finally prompted Memphis to improve its sewer system.

Unfortunately, pollution continues today and, in many cases, has become worse rather than better.

By 1957, the Missouri River still had not a single big city which treated sewage along its 2,500 mile length. In addition to domestic wastes, the country's largest meatpacking companies dumped animal blood, hair, hooves, and stomach contents into the river. Unbelievable as it sounds, two million unknowing people used this same river for drinking water.

That same year, cities along the Missouri agreed to cooperate with U. S. Public Health Service officials in cleaning up the river. Yet in 1965, Omaha continued to dump 300,000 pounds of untreated packing wastes and grease into the river each day, and St. Joseph and Kansas City, Missouri, lagged far behind schedule in building promised waste treatment plants.

The U. S. Public Health Service, hampered until 1956 by limited power, has just begun to stop the most flagrant cases of pollution. Officials are working not only to punish polluters, however, but to devise new ways of purifying water more efficiently.

Graham does a fine job of bringing this situation to light. All his statements are well-documented and much of his material is taken from public records.

-Nancy Wallace



DAY OF YEAR!

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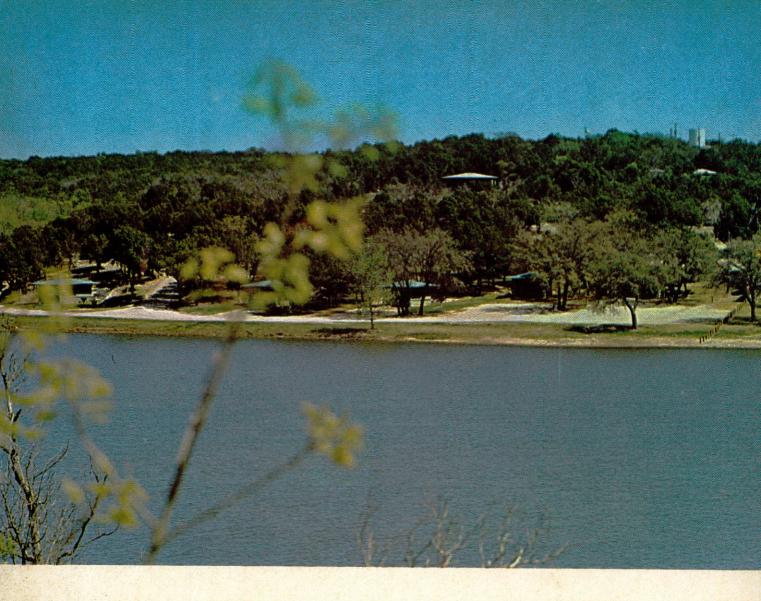
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Meridian State Recr

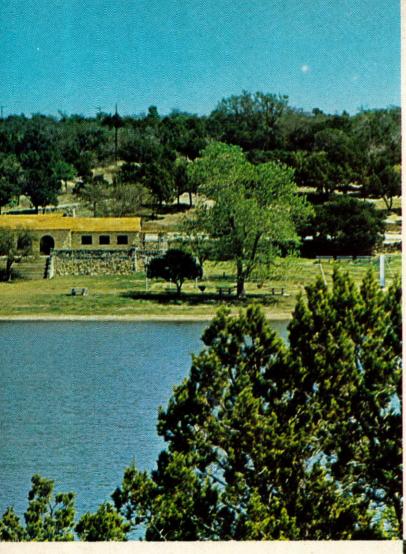
RENOVATION of one of Texas' oldest State parks has resulted in a superlative recreation spot where Texans may escape from the workaday world. Meridian State Recreation Park, in the wooded hills of North Central Texas, has recently undergone a \$102,000 face lifting program.

The park's hilly woodlands slope to a 73-acre lake, which sprawls like a gigantic maple leaf from the dam at Bee Creek through the center of the park. At the southeastern edge of the lake is the rebuilt concession building overlooking the portion of the lake designated for swimming. Also, bordering the lake are children's playgrounds, picnic areas, and six screened shelters.

Fishing and boating are popular water sports at the park. Because of the lake's small size, however, water skiing and motors of over 12 horsepower are prohibited. Summer usually brings out an assortment of small boats — sailboats, canoes, rowboats, and small motorboats. Fishing engages a number of enthusiasts in pursuit of bass, crappie, channel cat, and sunfish.

The lake is reached by Park Road 7, which leads from the park entrance to the concession building area and extends along much of the eastern side of the lake. The park road then circles back through sloping terrain, wooded with juniper (commonly called cedar), to the park entrance.

This scenic loop allows the visitor a chance to view some of the park's vegetation and wildlife. In addition to evergreens are post oak, live oak, and blackjack. Scattered among the trees are prickly pear cactus, paleleaf yucca, and mountain laurel (a shrub bearing fragrant purple blossoms and the famed mescal bean used by Indians in ceremonials). Mingled with the crisp scent of juniper in the spring are the delicate perfumes of wildflowers—bluebonnets, paintbrush, moun-



Improved facilities offer comfort and convenience to park visitors, as well as a wide choice of recreational activities.

The rebuilt concession building overlooks the portion of the lake designated for swimming.

ation Park

tain pink, gaillardia, and white rock daisy.

Birdwatchers look for the black-capped vireo, goldencheeked warbler, and rock wren throughout the park. Around the lake area especially are blue-winged teal, American coot, and pied-billed grebe, in addition to numerous other species. At night campers may catch a glimpse of ringtail cat, fox, raccoon, or white-tailed deer.

Visitors may also view the lake from the western shore, by means of a gravel road which forks to the south off Park Road 7. The gravel road crosses Bee Creek and leads to a picnic area behind the dam, then continues along much of the western side of the lake before veering to the extreme northwestern corner of the park.

Among the new park facilities is a headquarters and maintenance building near the park entrance, where the visitor may obtain assistance and information. Other





new facilities include 11 screened shelters, 7 tent campsites, 8 trailer sites, 20 picnic sites, and restrooms.

Within the picnic areas are tables, cooking grills, and drinking water, to aid the visitor in preparing and serving tasty outdoor meals. The tent spaces and screened shelters are similarly equipped, but tent campsites have leveled spaces for tents, and the comfortable screened shelters offer lights and electrical outlets.

Each trailer site, on the other hand, has water, electrical, and sewage hookups in addition to a cooking grill and picnic table. All of the camping facilities—trailer site, tent space, and screened shelter—have individual parking spaces. The restrooms, located within easy reach of picnicking and camping areas, are equipped with showers and laundry tube.

The present Meridian State Recreation Park is an excellent example of the new look that is emerging in State parks. Located four miles southwest of Meridian on Texas 22, the park was first acquired by the State in 1933. Its original facilities were built by the Civilian Conservation Corps in 1933-34. At that time the Texas State parks system was only 10 years old, the State Parks Board having been created by the Legislature in 1923.

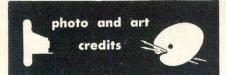
Also during that time, Texas and the entire nation were gripped by the Great Depression. The federal government's economic recovery acts, which created jobs for the nation's unemployed, at the same time provided money and labor for developing newly acquired State park sites.

Meridian State Park and other park sites became the focal point for landscaping and construction by the CCC in cooperation with the National Park Service. The CCC built a rock and earthen dam 30 feet high and less than half a mile long, on Bee Creek, a tributary of the Bosque River. The CCC also built the quarried limestone gateway at the park entrance and the concession building and pavilion, also of limestone.

Only minor improvements, such as the addition of a few picnic tables and campsites, were made at the park until 1966. In that year the Legislature appropriated funds from which \$51,000 was allotted to improve Meridian to modern standards. This allotment was matched by a federal grant-in-aid from the Land and Water Conservation Fund, raising the total monies available to \$102,000.

The Texas Parks and Wildlife Department, which administers the park, completed construction activity in April, 1967, in time for the current summer season. The Texas Highway Department, under an interagency contract, also has completed park roads and parking areas, and has plans to build a boat launching ramp in the future.

Meridian State Recreation Park is a pleasant destination for those who want to picnic, camp, fish, or swim in a peaceful, nature-blessed atmosphere. Located less than 1½ hours from two major metropolitan areas, Waco and Dallas-Fort Worth, Meridian is but one of the many parks now being brought up-to-date to help fulfill the growing demand for outdoor recreation in Texas.



Cover—Possum Kingdom State Park. Leroy Williamson; Mamiya C-33, 80mm lens; Ektachrome-X.

Inside Cover—Channel, blue, and Rio Grande catfish. Nancy McGowan; Grumbacher watercolor on D'Arches illustration board.

Pages 2-6— Fish net survey. Richard Moree; Hasselblad 500C; Ektachrome-X.

Page 7—Bastrop State Park. Williamson; Pentax Spotmatic, 55mm lens; Ektachrome-X.

Pages 8-9—(8 lower) Palmetto State Park. Williamson; Pentax Spotmatic, 55 mm lens; Ektachrome-X. (8 top) Bastrop State Park. Denton Belk; Ektachrome X, 35 mm. (9 left) Caterpillar on Indian paint brush. Belk; Ektachrome-X, 35 mm. (9 right) Wild orchid. Paul Hope; Ektachrome-X, 35 mm.

Page 10—(left) Possum Kingdom State Park. Williamson; Mamiya C-33, 80 mm lens; Ektachrome-X. (right) Lake Travis. Williamson; Mamiya C-33, 80mm lens; Ektachrome X.

Page 11—(top) San Jose Mission, San Antonio. Williamson; Mamiya C-33, 80mm lens; Ektachrome-X. (lower) San Jacinto Monument. Williamson; Calumet 4x5 view camera, 150mm lens; Ektachrome sheet film.

Page 12—Caddo Lake. Williamson; Pentax Spotmatic, 55mm lens; Ektachrome-X.

Pages 13-14—Stemco Marine Factory, Longview. Williamson; Mamiya C-33, 80mm; Ektachrome-X with strobe flash.

Pages 16-18—Meridian State Park. Moree; Calumet 4x5 view camera, 150mm lens; Ektachrome sheet film.

Pages 22-23—Glastron Boat Company, Austin. Moree; Hasselblad 500C; Ektachrome-X.

Pages 24-26—Skier and safety equipment, Lake Austin. Williamson; Bronica, 50mm lens; Ektachrome X.

Page 29—Checkered garter snake. McGowan; Grumbacher watercolor and gouache on D'Arches illustration board.

Page 32—Ocelot. McGowan; Grumbacher watercolor on three-ply Strathmore illustration board.

Inside Back Cover—Bass chasing snake. McGowan; Grumbacher watercolor on three-ply Strathmore illustration board.

Back Cover—Red fox, near Tyler. Williamson; Mamiya C-33, 80mm lens; Ektachrome-X.



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by Wayne Tiller

HIDDEN in the rolling hills about midway between Austin and San Antonio is one of the State's best fishing spots for this summer—Canyon Reservoir. A relative newcomer, the lake is only three years old, and for this reason many anglers believe now is the time they are going to catch the best stringers of bass, bluegill, and catfish.

As is the case in most lake histories, Canyon fishing started getting "hot" three years after it started catching water in 1964. One San Antonian, Charles McTee, helped start a flurry of action this spring when he walked onto the new boat marina with a string of 14 bass, weighing from 6 pounds, 4 ounces on down. But not down too far-the whole stringer weighed 63 pounds, an average of 4½ pounds each. His fishing partner, Jodie Griggs of Sherman, was not quite so lucky but equally proud since he makes the Hellbender lure that caught most of the fish.

Statistically, Canyon Reservoir collects runoff from the 1,425 miles of watershed area on the Guadalupe River above the dam. The earthenfill dam is 6,830 feet long and 224 feet above the stream bed. The lake

at conservation pool is 8,240 acres in size and boasts a shoreline of 80 miles.

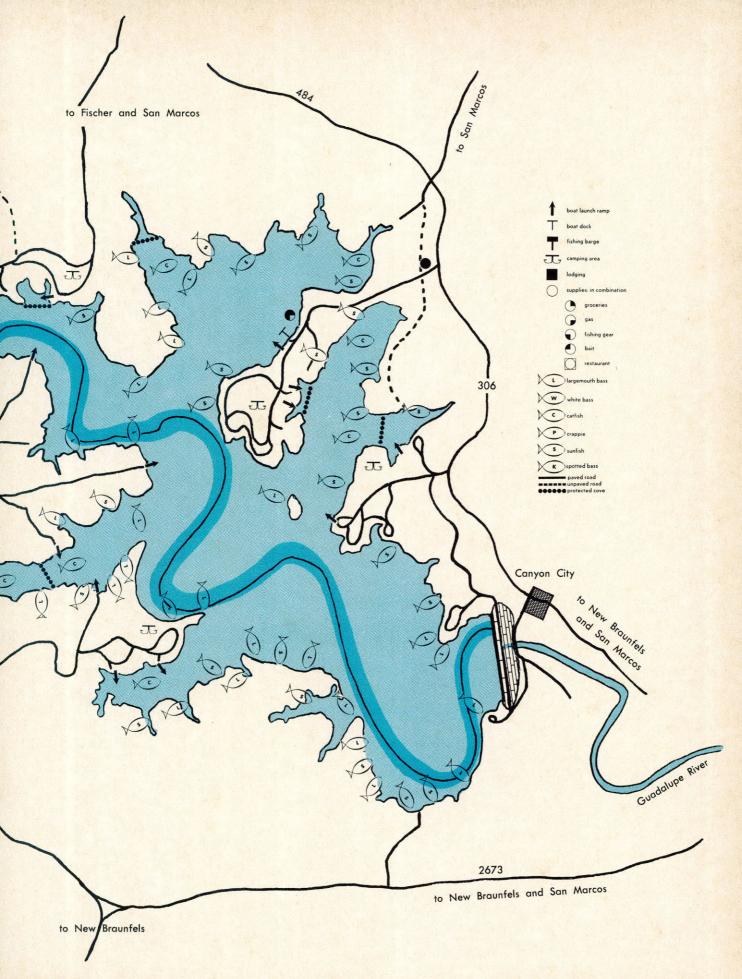
Many Corps of Engineers park areas are spotted around the lake, providing easy access and modern picnic and camping facilities. Since this is a multiple-use recreation lake, many of the bays have been designated as restricted boating areas. In nearby Startzville, Sattler, Canyon City, and other local communities, complete supplies of baits, tackle, groceries, and equipment are available as well as motels and restaurants. The new boat marina on the northwest side of Canyon Park Recreation Area offers a complete line of supplies and boat livery facilities.

Two experimental fish have been tried around Canyon, with a batting average of one-and-one. Early in the lake's history, walleye were flown in from Iowa and released in the lake. As often happens in experiments, the walleye evidently did not catch hold. Below the dam, cold water being released from the lake was stocked with large rainbow trout by the Lone Star Brewery, and their story is more encouraging. For miles down the river, anglers now enjoy trout

fishing in Texas.

For a lake only three years old, Canyon has established quite a reputation as a bass-sunfish-catfish lake; and from the way things got started this spring, anglers are out to prove this lake is one of the hottest in the State.

to Fischer



FOR SAFETY SAKE

VENTOLATE

FIRES and explosions of fuels in boats cause more property damage than any other type of accident in pleasure boating, and run a close second to collision in personal injuries.

Many boats are totally destroyed each year because of inadequate ventilation around the engine compartment and fuel tank compartments. Gasoline is highly dangerous if it is not handled properly. A cup of gasoline spilled in the bilges has the potential explosive power of 15 sticks of dynamite.

To combat this explosive power of gasoline and gasoline fumes, the Coast Guard has amended its regulations governing the ventilation of inboard motor boats, inboard-outboard crafts, or outboard vessels with closed fuel tank compartments. The requirements originally were to have become effective last year, but boatmen were given until June 1, 1967, in which to get their crafts in shape. These regulations are enforced on all public bodies of water in Texas patrolled by Texas Parks and Wildlife Department personnel, as well as the coastal waters of the State patrolled by the Coast Guard.

The law states, "All motorboats ... except boats of open construction ... shall have at least two ventilator ducts fitted with cowls or their equivalent, for the efficient removal of explosive or flammable gases from the bilges of every engine and fuel tank compartment. There shall be at least one exhaust duct installed so as to extend from the open atmosphere to the lower portion of the bilge and at least one intake duct installed so as to extend to a point at least midway to the bilge or at least below the level of the carburetor in-

take. The cowl shall be located and trimmed for maximum effectiveness and in such a manner as to prevent displaced fumes from being recirculated."

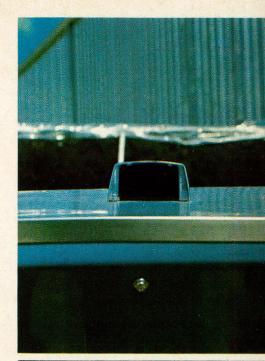
Open boats are exempted from this rule. Regulations define open boats as "those motor vessels with all engine and fuel compartments and other spaces to which explosive or flammable gases and vapors from these compartments may flow, open to the atmosphere and so arranged as to prevent the entrapment of such gases and vapors within the vessel."

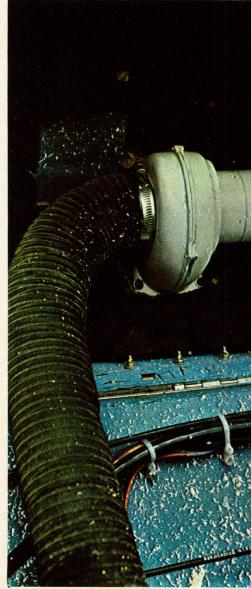
This regulation applies to manufacturers as well as boat owners. Most boats purchased within the last two years were constructed to meet these requirements. The boat owner or prospective owner should check his boat to make sure the manufacturer has installed required ventilation and ductwork.

Complete coverage of fire and explosion hazards and elements of a natural ventilation system is found in the Coast Guard pamphlet, "Ventilation Systems for Small Craft," which is available without charge from Commandant (CHS), U. S. Coast Guard, Washington, D. C. 20226.

If you have any doubts, check with the local Coast Guard office or Coast Guard auxiliary unit and have them thoroughly inspect your vessel. Local game wardens and boat dealers also have information and offer their assistance.

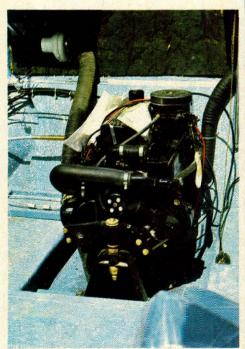
These ventilation requirements, as with most boating laws, are designed to save boaters from their own carelessness and to protect unsuspecting passengers and crew. These regulations could save your boat and your life.

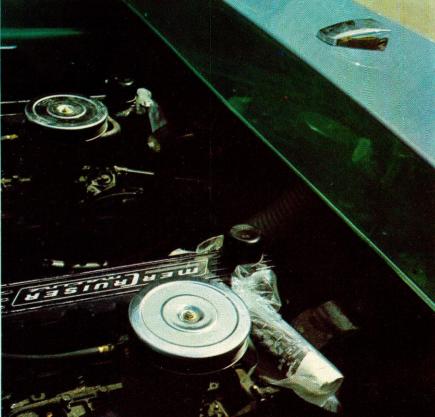






Required vents must pull fresh air into compartments, circulate it around dangerous areas, and then remove it from the boat.

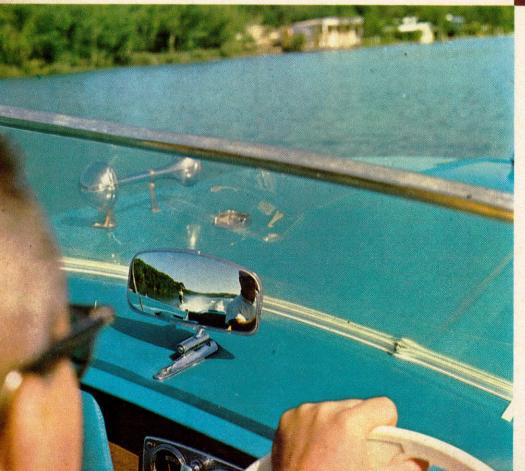




JUNE 1967

Legalize Your Boat

by John Houser

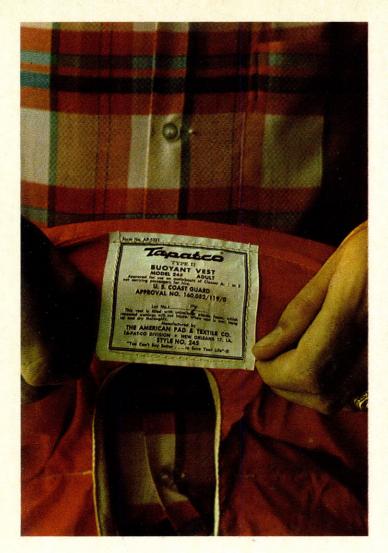


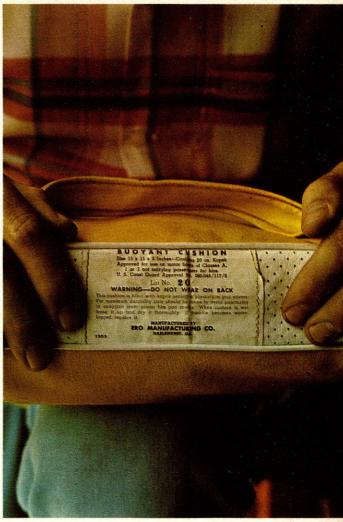


All lifesaving devices are required to have a Coast Guard approval number stamped on them or on a label sewn into the device.

All motorboats towing persons are required to be equipped with rear view mirror, or to have a passenger watching the skier — preferably both.

TEXAS PARKS & WILDLIFE





SAFEGUARDING water recreation enthusiasts and enforcing the regulations of the Texas Water Safety Act is the responsibility of the Texas Parks and Wildlife Department.

State game wardens, empowered by this act, are finding many violations of safety provisions for life preservers, mirrors, and registration certificates.

Every boat over 14 feet in length entering the water is required to have a registration number and a certificate of registration. The registration number must be on the boat at all times and the certificate of registration must be in the boat while it is in operation.

In addition, all motorboats towing persons on water skis, aquaplanes, or similar devices are required to carry an observer or to be equipped with a rear view mirror, of a size no less than four inches in measurement from bottom to top or across from side to side. Such a mirror must be mounted firmly so as to give the boat operator a full and complete view beyond the rear of his boat at all times.

Game wardens are inspecting all vessels closely to see that all water-borne persons have access to the proper type of lifesaving device. They have been instructed to apply the safety code strictly so far as it affects the individual.

The term "lifesaving device" includes life preservers, buoyant vests, buoyant cushions, ring life buoys, and special purpose water safety buoyant devices. Any of these devices are acceptable on motorboats less than 40 feet in length not carrying passengers for hire.

Vessels carrying passengers for hire must carry life preservers. Class 3 motorboats (40 to not more than 65 feet) not carrying passengers for hire must carry life preservers or ring buoys. A motorboat towing water skiers must be prepared to take the skier on board at any time because of accident, sea conditions, skier fatigue, or other causes. Accordingly, water skiers shall be counted as "persons on board" when determining the number of lifesaving devices required by motorboats towing skiers. At least one lifesaving device is required for each person on board.

Lifesaving devices must have the Coast Guard approval number stamped on either the device itself or on a label sewn into the device. Just having "Coast Guard Approved" written on the device is not sufficient. Kapok or fibrous glass lifesaving devices are not considered sufficient unless they are encased in sealed plastic bags. Cork or balsa wood life preservers are no longer



approved by the Coast Guard; however, having been manufactured and labeled before the effective date of the approval suspension, these preservers are approved until such time as they become unusable and unserviceable.

Kapok or fibrous glass life preservers can be checked for unsuitability by applying pressure to the flotation part of the preserver. If they collapse under normal pressure, there probably is a hole in the plastic bag and they would not be considered usable. All lifesaving devices are checked for serviceability by the condition of the flotation

itself. If the fabric is rotten or torn to the extent that it will not properly hold the flotation material, it is no longer usable.

All lifesaving devices on board must be readily accessible to the persons aboard the boat. If they are in unopened shipping bags, display boxes, storage containers, stowed in cabins, locked in deck boxes, or otherwise concealed, they are not readily accessible and are in violation with the Texas Water Safety Act.

Failure to comply with the Texas Water Safety Code could meet with a maximum \$200 fine. These regu-

Every boat over 14 feet must have a registration number and certificate, both must be on the boat while in operation.

lations are designed to protect the individual boating enthusiast from loss of property damage and personal injury.

Before you take your boat to the water on that next outing, check to be sure that you are not in violation. Knowing that your boat satisfies the safety requirements means a more tranquil mind and a better and safer boating journey.

Long Shots Short Casts

Compiled by Joan Pearsall

LESS MESS LESSON: At last there seems to be a hopeful trend in the problem of litterbugs. The National Litter Index published annually by Keep America Beautiful, Inc. showed that, although there was a small increase in 1966 in the amount of littering, the rate of increase was less than half that of the previous year. Figures are determined from vehicle miles traveled on primary state highways and the annual cost of clearing the litter from these same highways. The apparent slowdown in the increase of littering is significant in view of the national beautification programs sponsored by the Administration in Washington and the thousands of anti-litter programs conducted by civic-minded groups at the state and local levels across the country.

FROM PEEVE TO REPRIEVE: The water hyacinth is a thorn to fishermen and boaters when it impedes water travel. But recent studies by the Florida Game and Fresh Water Fish Commission indicate that it may be a bouquet of roses to the fish! The investigators found the water hyacinth serves a useful purpose in providing food and cover for fishes. It is a major habitat for organisms on which fish feed, and the plant serves to buffer water from extremes of temperature. The biologists recommended against total eradication of the water hyacinth, and stressed that control of the plant by means of chemicals should be conducted with extreme care.

SUCCESS FOR ELK EXCESS: Rocky Mountain National Park, in Colorado, has a surplus elk problem as does Yellowstone, but there are not as many elk involved, and Colorado's sportsmen will get them. A four-way agreement between the National Park Service, the U.S. Forest Service, the Bureau of Land Management, and the Colorado Game, Fish and Parks Department, is designed to keep Colorado's elk in Colorado, by moving them to various suitable areas. No herd reduction slaughter or transportation out of state will be necessary, thanks to combined planning by the state and federal agencies. This cooperative venture avoids controversy such as was aroused at Yellowstone, and will make the surplus elk available to sportsmen next fall.

PARKS AFAR: The Department of the Interior has been requested to send a three-man team to Ethiopa, to conduct a preliminary survey of the country's park and wildlife resources, and historic sites. The team will work on the development of a comprehensive plan to assist the Government of Ethiopia in identifying, establishing, and managing areas of historic and recreational importance. It will also recommend plans for management and protection of the native wildlife.

PROMOTES EDUCATION: In Missouri, the fines from fish, game, and forestry violations are given to the public schools. In 1966, such fines totalled \$60,000.



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JUNE 1967 27

-Patchwork--Prowler-

CHECKERED garter snake, Thamnophis marcianus, is one of nature's creatures who, like most reptiles, just wants to be left alone. He's not exactly harmless, however, because he does like to eat.

And the checkered, or Marcy's garter will eat almost anything he can sink his teeth into. Small frogs, toads, salamanders, fish, tadpoles, insects, earthworms, and other living creatures try to travel a wide circle around this gluttonous snake.

T. marcianus is a native of the arid Southwest and is most abundant in Oklahoma and Texas, west to southeastern California and south to northern Mexico. Seldom does he stray far from streambeds, springs, or other places where water may be present near the surface. It is in this natural habitat that he finds the type of food that he likes best.

The most strongly spotted of any of the 20 species of garters, the adult checkered is, on the average about 24 inches long with a diameter of 3/4 inch. He gets his nickname from the two rows of square black spots between his stripes in alternation or checker-board pattern over a brownish-yellow body. A yellow crescent behind his mouth and the third scale lateral stripe also distinguish the Marcy's from other garters. A vertical black mark on the upper lip behind the yellow mark, and a yellow belly with dark spots on each side of the scales also are identifying characteristics.

Checkered garters usually come into the world with a large amount of brothers and sisters. Average size of a litter is about 30, but this prolific snake has been known to give birth to as many as 70 at a time.

The young of this garter, contrary to the practice of most of the snake world, are born alive. Unborn checkered garters remain in an egg form in the mother's body until they are ready to hatch. After hatching, the young are expelled in a thin, transparent membrane from which they emerge immediately. Thus, they are called *ovoviviparous* and are distinguished from *viviparous*, which are retained and nourished in the female, and *oviparous*, which are released from the female

and later hatch.

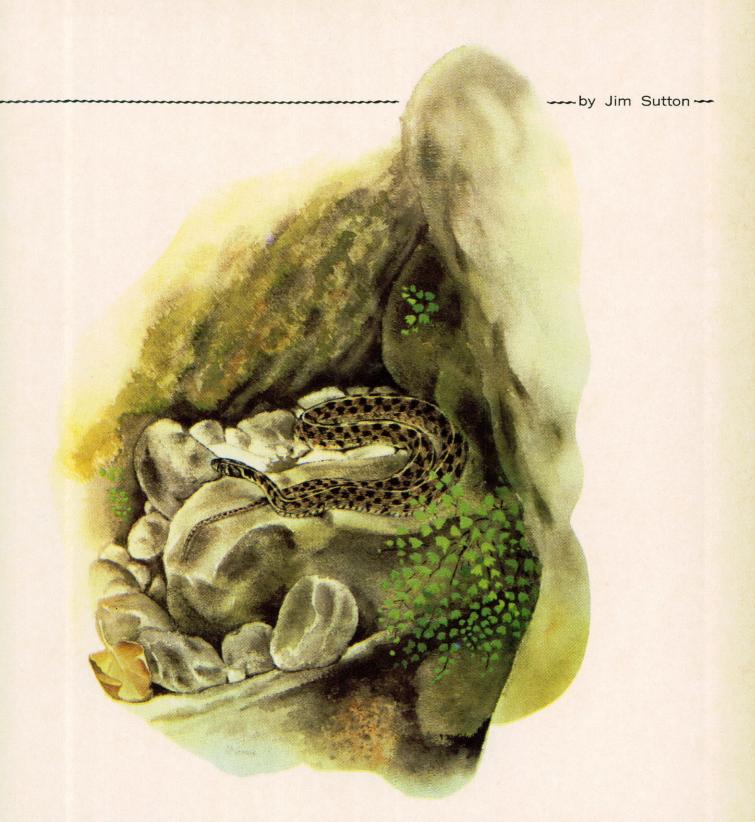
From the time of birth until death, checkered garters are on their own—and it's an uphill struggle for most of them. If born with a large litter, many die from natural causes, such as not being developed enough to live. In the normal litter the young are seven to eight inches long and physically able to adapt to their new world. They do have problems, however. If they don't become an appetizer for one of their many enemies, such as crows, ducks, hawks, owls, frogs, cats, skunks, rats, foxes, and barnyard poultry, they still must overcome the difficulties of finding their own food.

This is not an impossible obstacle, because many litters are born in the fall and go into hibernation soon afterwards. Experiments have shown that the checkered garter — and most other snakes as well — eats less in cool temperatures. Therefore, this garter does not have a real food problem until he comes out of hibernation in early March.

The checkered garter is not considered harmful to man or the creatures man needs for his own sustenance. Although the snake does eat earthworms, which are useful for aeration of the soil, the supply of them is much greater than the demand. Some of the insects and bugs that are part of his cuisine are destructive; thus the checkered garter makes a small contribution to conservation.

This creature can easily become a good pet, if gently handled. After becoming used to being played with, he is a very docile snake. At first, however, he can be a slight "terror." Although his teeth are not very sharp and his jaws are not very strong, his bites may cause slight infection. He does have a well developed protective device in that, as a last resort, he will emit a yellowish substance from his cloaca which has a strong odor and is designed to frighten or surprise his handler into dropping him.

But his handler would not be the only one frightened. This garter frightens easily and flicks out his long tongue when nervous. The tongue also is a sensory instrument used to explore the environment by testing



the odors or chemicals nearby. It is an adjunct to the Jacobson's Organ, which is a chemical-receptor system located in the roof of the mouth.

Although the checkered garter does not have adequate protection from all potential enemies, he at least has enough to get him by in the small world in which he lives. His checkerboard pattern provides at least a partial camouflage, and his ability to sneak up to his prey gives him another important advantage. But aside from the need to satisfy his urge to eat, and the effort to avoid becoming a meal himself, the checkered garter prefers to live in peace in a dangerous world. • •



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Fishing Aids, Above and Below

One of the greatest needs of bespectacled sportsmen has been answered by Bausch & Lomb in the form of GlasStrap—a new headband to keep glasses in front of the eyes and not sliding down the nose. Some sportsmen have used rubberbands, string, fishing line, and various makes of eyeglass "keepers," but most have proven uncomfortable or impractical.

GlasStraps are made of Velcro®, a product originally developed as an answer to the problem of men's inability to control their movements under weightless conditions in space. It consists of two different fabrics: one is studded with minute plastic hooks, and the other has a tough, curly nap.

Once the two pieces are pressed together it is practically impossible to slide the two apart. However, they can be peeled apart with relative ease. There is nothing to wear out, the materials will last indefinitely, and the whole thing can be sent through the family washer.

Wearing GlasStrap is a breeze since you merely fasten the two straps to the ear-pieces of your glasses, pull them around the back of your head to a comfortable tension, and press them together. Total weight is only a fraction of an ounce. Where quick action under adverse conditions is a must, the GlasStrap assures added safety through better vision.

News from Uncle Josh, famed maker of pork rind bait, points out that with the summer season they have added a spring lizard, revamped the pig tail rind to spin tail, and have given that jack-of-all-trades, the fly strip, a thinner and more flexible body action. Also, they would like everybody to know that they are going great guns in the scent bait and synthetically treated dough baits.

Uncle Josh Scent Baits are unlike the old-fashioned stink baits. They are colorful, inoffensive to handle, and won't spoil. And while they are soft, the basic ingredients used in their formulation impart a firm, tacky body texture that keeps them on the hook, under almost any weather and water conditions.

Included in the Uncle Josh line is a blood bait, catfish cheese bait, trout cheese bait, carp bait, and pan fish bait. All are packed in plastic jars and securely sealed against contamination by gasoline, insect repellents, oil, grease, and other unnatural matter. Most of these new Uncle Josh ideas should be in sporting goods stores by this time.

Home-state manufactured Hellbenders made big news around Canyon Reservoir lately (see story this issue). The green perch was the



most popular, but the black and white rib and the grev ghost models made good accountings also. But just as is the case so many times, some people fished real hard and threw green perch all over that lake but never made a sizeable catch. The difference is often the way the lure is fished, and the proper approach to a "fishy looking" spot.

The Hellbender is made to bump right along the bottom so one of the best ways to fish it is to cast it from a boat toward the shoreline. Then with a few quick cranks and some tension on the line by bowing the rod, the lure's big lip bites into the water and zigzags to the bottom. Once there, and you can usually feel it hit, slow the retrieve and keep it bumping along as it works its way into deeper water.

Later in the day, it is often productive to cast away from shore and work submerged areas. Then a long cast is necessary; as soon as the lure hits the water, bow the rod and pull with the rod tip just above the water, and continue to pull violently as you feel the lure going deeper and deeper—even easing off to reel line in and bear down again. Then work it along the bottom as before.

Don't be afraid of getting snagged, because usually the Hellbender will have only the long bill caught, and as you pull, the hooks are lifted over the obstruction. If caught firmly, ease off a minute. The lure will float and if it is not hooked, it may float free. Of course, if the hooks have imbedded themselves into something, you might try some type of lure retrieving technique—but don't let your guard down too soon; it may be a fish.

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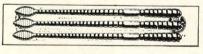
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JUNE 1967

Letters



to the Editor

Coyote Pest

In Texas Parks and Wildlife I read where one calls himself Coyote Fan, and can't see why Comal County pays a bounty for coyotes. Well, maybe if he had to scratch a living out of those rocks and hills like old-time people who homesteaded Comal County for about eight or ten kids, he might see it differently.

One coyote can go through Comal County and kill more than a hundred sheep or goats in a few days. They go in pairs and each kills his own sheep or goat, and will not eat stale meat if he doesn't have to. Sometimes he will just tear three or four throats out for fun or for the blood. He is careful to pick out a good one, not one that's so old it's not tasty any more.

East of San Antonio they have to keep their chickens locked up till 9 a.m. to keep the coyotes from getting them, and sometimes they dig under the fence and get them. At one time, one of the ladies killed one with a crowbar in her chicken pen, and rabbits and rats are in abundance out there.

Those rangers and landowners have a point, where they have to get him.

Mrs. G. H. Z. LaCoste

A Lot of Coral

I have finished reading "Giant Coral" (letters page, February issue), and would like to relate a similar incident. My hunting companion, Frank Engles of Edinburg, found a coral snake that measured 33 inches long, while we were hunting near Rachal. We were always under the impression that the average size was around 18 inches. What is the concensus of opinion to this growth?

Dr. W. I. Crone, Jr. Edinburg

Best references available list the average adult size as 20 to 30 inches, and a record of $47\frac{1}{2}$ inches, for the eastern coral snake. Incidentally, the rhyme quoted in the letter "Giant Coral" was inaccurate, and should have read "Red and yellow, kill a fellow; Red and black, venom lack."—Editor.

Elusive Buzzard

I am a serviceman stationed at Fort Hood, Texas. On my off-duty hours I instruct local Boy and Girl Scouts in American Indian lore, handicrafts, and dancing. I have found that the best possible feather for any and all of our Indian crafts is that of the local BUZZARD or VULTURE.

My copy of the Texas State Game Laws for 1967 states that this bird is classified as a predator and is therefore not protected. Well, they sure are protected from me. I have spent endless hours crawling around in the brush, trying to sneak up on roosting buzzards, with a remarkable lack of success. I have fired volleys at them with my old singe-shot 12 gauge. Thus far, I have yet to even ruffle the dignity of these birds.

As is the case with most Scout activities, we are not well funded. Therefore, if any of your readers have the magic needed to bring down any of these critters, and would chop off the wings and tails, in-

cluding the flesh, and mail them to me, I and many Boy Scouts in Coryell and Bell counties would be very grateful.

> SSG Thomas M. Sharper 1301 East Robertson Ave. Copperas Cove, Texas 76522

We are glad to publish this letter, with the complete address, so that readers who can be of help to Sgt. Sharper can reply directly to him.—Editor

Citizens' Rights

I have read your magazine for years and like it fine. I think your historical articles are very good. "Historical Hill" in the February, 1967 issue, is very good indeed.

Freedom of the individual is the foundation stone of our American liberty. The right to keep and bear arms and the other basic liberties guaranteed to the people in the "Bill of Rights" are a priceless heritage. They must be cherished and protected from those who would impair them. We must guard them against gradual abridgment or they will be destroyed.

I would like to see articles in your magazine defending our citizens' rights to "keep and bear arms."

I have lived and traveled on all of the continents to some extent except Antarctica and South America. I find that there is very little real freedom in most countries as we Americans know it. So let's keep and cherish our freedom. I was born in beautiful Bosque County, Texas.

Robert Lane Fort Worth

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Slow the Rush

Personally, and also on behalf of the Texas Explorers Club, I want to express our great appreciation for the excellent conservation articles you have recently been publishing.

Particularly, the article, "The Eleventh Hour" deserves the congratulations of conservationists all over the State. Joan Pearsall's writing and the excellent art work really impress us.

We also believe you are doing a great service by publishing such articles as your recent ones on the coyote and red wolf. Your articles make an important contribution toward the substitution of fact for folklore and prejudice. Similar public attitudes toward many endangered species (including human beings) might help slow down the rush to extinction.

President, Texas Explorers Club Bob Burleson Temple

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Bass Catchers

With school out, and weeks of freedom ahead, it's a safe guess that fishing is high on the list of things you are planning. And bass are likely to be high on the list of the fish you'll be catching.

Bass are among the most popular game fish in America. Have you noticed that they are caught mostly around cover like sunken logs and stumps, weeds, brush, or piles of rocks? There are several reasons, the most obvious being that they find their food around such cover, and that fish need home sites. There also is another interesting reason.

Try this experiment on a friend, or a pet cat or dog. Put your hand over one of his eyes for a few seconds, then quickly remove it. The pupil of the eye will immediately get smaller when it is exposed to light. If you do the same thing to a bass, next time you catch one, you will find that its pupil does not change size.

This is because the bass is one of the fish that have a "fixed focus," wide open pupil. Therefore, they do not see so well in bright sunlight as they do in shadow, so you can understand why they are most likely to be caught in shady areas. These are the places to fish for them during the bright hours of the day, and it is also good to try deep trolling, where not much light penetrates.

Dawn and dusk are times when light conditions are good for bass catching, although on cloudy, dull days they can be caught throughout the day. Nighttime is probably best of all, in the bright summer months.

Try building a rock or brush pile shelter, and see how much it will help to improve your fishing. Such a "housing project" will not only attract bass, but several other species as well. Any branches of different sizes intermixed will make a good home site. To hold the pile in place, push some green sticks into the bottom.

Now, having pinpointed their location, here's something that will add to your chances of reeling 'em in. Bass go for pork rinds, so how about making some for yourself?

In any store where salt pork is sold, ask the butcher to give or sell you some of the rind. Scrape off the fat, cut the rind into desired shapes, then place into a strong brine solution for two or three days. Next, remove and soak the strips in a dilute solution of hydrochloric or acetic acid until they turn white. They can be dyed different colors, if you wish.

Pack the strips in airtight jars, in a preservative such as rubbing alcohol or heavy brine. Now you have a valuable aid on hand, which added to your lure may help you be the best fisherman on the block!

Hatchery Bass

I wanted you to see the string of bass I caught in my Grandfather's tank at Lockhart. Please thank the Texas fish hatcheries that gave the baby bass to Grandfather.

Patton King, age 10

Dallas



Here's a young man who is a master bass catcher! We admire your skill, Patton, and also the fact that you are so appreciative of the Texas fish hatcheries.

Many of you have not heard about the work of these fish hatcheries that do so much to help make fishing good in this State.

Texas is one of the few states that not only stock fish in public waters, but also do so free of charge in private waters, when necessary. Certain conditions must be met before this is done. Stocking fish does most good in new lakes and ponds, or places where water has been treated by draining or scientific kills of undesirable fish. It would be a waste to keep restocking an old lake, year after year, that needed treatment of some kind. Once a new body of water is properly stocked, natural reproduction should keep fish populations steady, and fishing good, for years to come.

Therefore, when people apply to the Parks and Wildlife Department for "fingerling" fish, game wardens come out to inspect the areas to make sure that conditions are right, and that there is a need for restocking, so that the fish won't be wasted. The requests must be made by certain times each year.

As well as for raising and stocking fish, the hatcheries are places where their habits and diseases are studied, to improve methods of culture and management. Texas fishermen have good cause to be glad and proud of their State hatcheries.

