

TEXAS Game AND Fish

AUGUST 1944

TEXAS STATE DEPARTMENT OF GAME AND FISH

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No Other Magazine

CAN MAKE THIS CLAIM . . .

The Only Way to Reach
the Half Million Sports-
men of Texas Is Through
Texas Game and Fish



Webster Short

On This Answer

Webster aptly defines fishing as "to attempt to catch" and "to seek to obtain by artifice." But Webster, says the New York Times, does not go into the intangibles, and the true fisherman is concerned with more than frying pan evidence. There are those who forthrightly say that a man goes fishing for the same reason he plays golf, that is, to get away from the work which supports his family.

Men from eight to 80 enjoy fishing. One can't logically claim that it is the spirit of spring, for there is a group that chops holes through the ice in midwinter and seeks to obtain by artifice the denizens of pond and lake. Fishing is more than a seasonal urge; it has little to do with age; it is highly self-centered and introvert in character.

There's the deep peace and satisfaction of getting out-of-doors. It's good to feel the raw wind or the warm sun. It's good to be in old clothes and to wear a hat that has been a boon companion for years. It's good for a man to smell the earth and water and lift his eyes to stretching fields and wooded hills.

Naturally, anything as important as fishing is divided into camps of opinion. There are those who recoil in horror from using an earthworm and a willow pole. Some stand adamant for wet flies and some believe the piscatorial bill of rights means a dry fly. There are men who delight in scrambling along a brook's edge; some prefer to wade in shallow, swift water. Others get a rowboat from which they cast plugs among the lily pads and water grasses. One group believes in trolling slowly and comfortably.

This is the way it should be. Fishing is too important for any governmental bureau to regiment unduly methods, equipment and philosophies. Within a broad reasonable framework of reference, fishermen should have the privilege of regarding highly their own ideas and scoffing heartily at others.

★ THE COVER—A group of herons. Upper is the Louisiana Heron. Lower left is the Green Heron. The white bird behind the slaty-blue adult, lower right, is the Little Blue Heron, frequently called a snowy egret.

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TEXAS Game AND Fish



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A GAIN the supply of white-winged doves is sufficient to permit a short open season. Until five years ago the white-winged dove in Texas was decreasing rapidly. It appeared that complete prohibition of shooting might be necessary to save the species in this State. But very short seasons, low bag limits and several fairly good nesting seasons have resulted in increasing the birds from a low of about 300,000 to the 500,000 that will be in Texas at the end of this year's nesting season.

This year's estimated supply of white-wings will permit a kill of between 125,000 and 150,000 without harm to the future supply. There is general agreement that with fair shooting weather such a total bag may be taken in five afternoons. The open season decided upon by the Game, Fish and Oyster Commission for 1944 is the afternoons of September 15, 17, 19, 21 and 24 in Cameron, Willacy, Kenedy, Hidalgo, Brooks, Starr, Jim Hogg, Zapata, Webb, LaSalle, Dimmit and Maverick Counties. During this open season the shooting of mourning doves also will be permitted. The bag limit will be 10 white-

STAGGERED SEASON FOR

Whitewings

By WM. J. TUCKER

wings or 10 mourning doves but not more than ten in the aggregate of both species.

Last year the Game Commission provided an open season for white-wings only of seven successive days. It proved to be very unpopular in the counties where the bulk of the white-wings are hatched; therefore, we return this year to the so-called "staggered days" season. But this was done only after three

public meetings were held in the Lower Rio Grande Valley at which the sportsmen were given every reasonable opportunity to express their views. They were almost unanimous in recommending the season that is being provided.

A few years ago we could find no encouraging sign pointing to future security of the white-winged dove. Everything indicated that they were decreasing so rapidly that it would be necessary



to place them on the "song bird list" if they were to be maintained as a native species. This condition had been brought about partially by over-shooting. The Game Commission was powerless to reduce the shooting by direct action, for until 1943 the Game Commission did not have the authority to make protective regulations for this species. But in 1937, as the result of the culmination of a migratory bird treaty with Mexico, the United States government did obtain such authority. The United States Fish and Wildlife Service was therefore somewhat in advance of this State in procuring necessary open season and bag-limit restrictions.

In 1927 the white-winged season opened in July and lasted until November. Shooting was permitted from dawn until dusk. The bag limit was 25 a day and the slaughter was terrific. Game Warden Charles Jones, who has been on duty in the Valley for eighteen years, says that under these liberal regulations as many as a million white-wings were killed in one year.

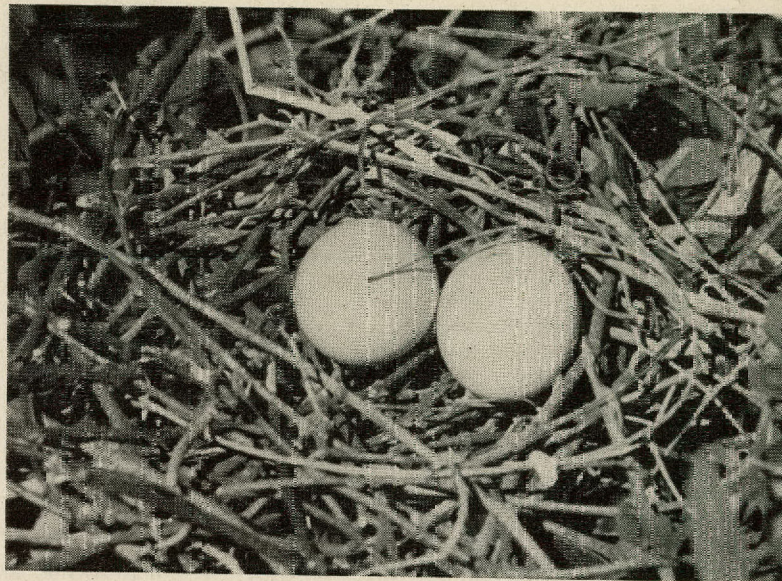
You could hear from hundreds of so-called experts: "It don't make any difference how many white-wings you kill in Texas. There's millions of them in Mexico that will keep our nesting sites filled." We didn't then have the facts with which to refute this fallacy. Banding of thousands of white-wings and the return of many of the bands has proven without doubt that we are dependent for our supply on the white-wings that are hatched in this State and for a very short distance the other side of the Rio Grande.

We have learned a great deal more about the white-wings from intensive studies that have been made for the last four years by a corps of State and Federal Biologists who were assisted during the hunting seasons by a sizeable corps of Game Wardens.

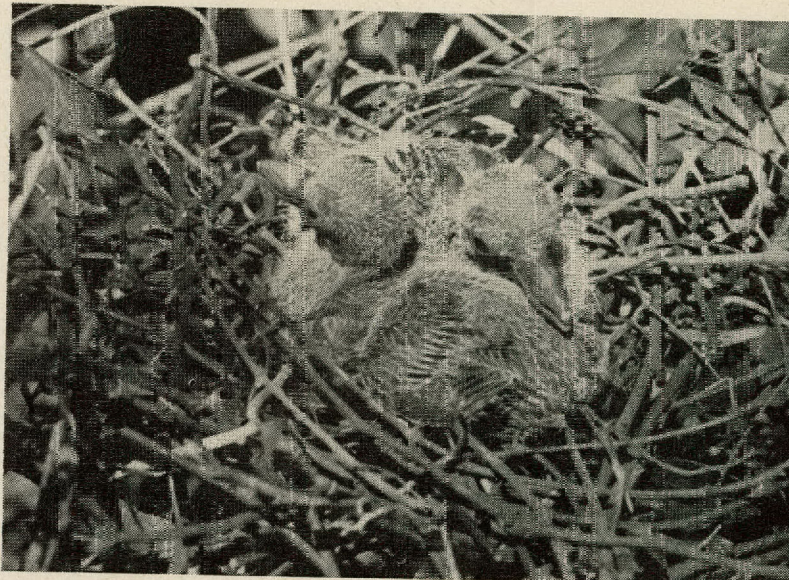
White-winged doves prefer the thick ebony groves that were once very numerous in the Lower Rio Grande Valley. Agricultural demands of the last twenty years have resulted in the clearing of hundreds of thousands of acres of brushland in the range that was formerly most favored by the white-wings. This forced large numbers of white-wings, as many as 400 pairs to an acre, to nest in the remaining ebony thickets. The growing of grain and fruits had brought the great-tailed grackle (Jackdaw to you) to the Valley in unbelievable numbers. They came to the white-wing nesting colonies and feasted on eggs, getting as high as 95 per cent of the eggs and young. Without success we have exhausted our efforts to control these pests. We know that it will not be many years before the remaining sites of white-wing nesting colonies will be cleared. What will then become of the white-wings in Texas?

We have considerable evidence that white-wings are much more successful in producing young where only a few pairs of these birds are found on an acre. They also show a tendency to use the mesquite for nesting much more than during the 1920's. They are found further North of the Rio Grande in much larger numbers than in former

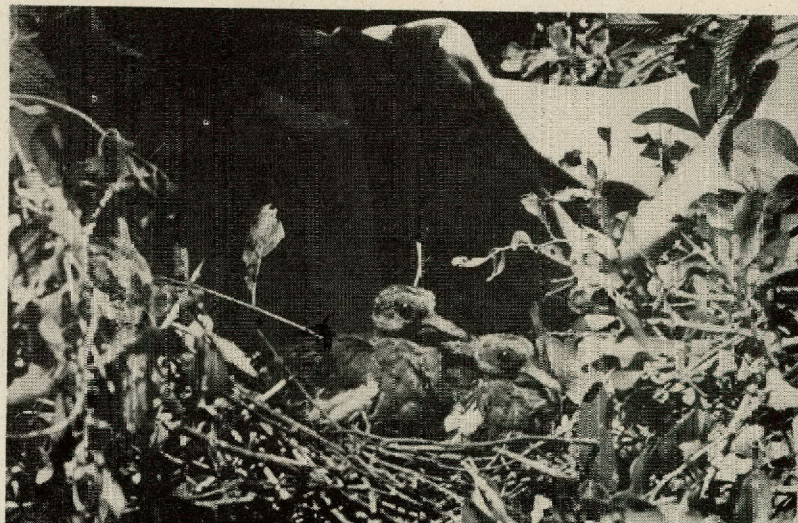
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WHITEWING EGGS in a nest in the lower Rio Grande Valley. Note the flimsy construction of the nest and the dense foliage surrounding it. The eggs are laid in pairs.



A FEW HOURS OUT OF THE SHELL. These two white-winged doves are taking little interest in what is going on about them. Below: Ready to spread their wings for the first time. These two white-winged doves soon will be joining the thousands of other white-winged doves that congregate in the Lower Valley in early fall. Left: The white-winged habitat is rapidly disappearing as more and more land is being reclaimed for cultivation purposes.



HOW MUCH DO WE *Really Know* ABOUT WILDLIFE?

By DANIEL W. LAY

HUNTERS, fishermen, and naturalists have been studying wildlife as long as they have been going afield. In recent years various public conservation agencies have employed biologists to devote their full time to research and management of wildlife. A vast literature contains the more conclusive findings. Additions are being published every month. Yet the more we learn, the less sure we are of the answers.

The bobwhite quail has received more attention than any other one species. Yet a summary of the findings as they apply to Texas can only be written with such indefinite words as "probably," "usually," "generally," in every paragraph. Most of the information turned up by field research is fragmentary. We learn what quail eat at one season in one locality; but that raises the questions of how this compares with other seasons, other years, other localities. We observe that introducing Mexican quail or pen-raised quail rarely succeeds, and that type of management is abandoned in favor of habitat improvement. Yet many efforts to increase food and cover have not resulted in more quail.

Herbert L. Stoddard published a massive book on the bobwhite based on studies in Georgia. It is full of specific findings and the results of definite management practices, particularly for the cutover longleaf pine type. Yet in Texas the management he recommends is only partially successful. The broomsedge which he controls with carefully handled fires is only partially controlled by fire in Texas. Soil, rainfall, or some other factor, makes the broomsedge recover from winter fires in one season so much that it is almost too thick for quail the next winter.

Quail eat peas, corn, and other domestic crops. It is natural to assume that planting food patches is beneficial. Yet trials of food patches often do not succeed in attracting quail. One quail hunter planted several hundred acres of lespedeza, beggarweed, and field peas on fertilized strips. The seed production was good, quail were abundant; but the crops of birds killed contained the seed of a small inconspicuous plant common throughout the area. Even when food patches contain quail in winter, can they be credited entirely to the food patches?

The part of a wild animal's life span that a person is able to observe is relatively minute at best. It is comparable to a glimpse at human beings through a hole in the clouds. There is no reason to suppose that complex life is peculiar to human beings and that wild animals have simple lives that fit a well-defined pattern. In every case the more we have learned about wild species the

more intricate they have become. The recognition of psychological differences in wild animals is a young field of investigation, yet it is logical. Is there any sound reason to think all whitetail deer of a given race or even band think and act exactly alike? The domesticated animals, dogs for instance, have individual characters.

The ramifications of relationships between organisms and their environment are more far-reaching and intricate than

THE MAN ACROSS THE STREET

I never knew the fellow,
Who lived across the street,
We both lived there for quite a spell
Before we chanced to meet.

Just like a lot of other folks,
Too busy to be friends,
Too busy watching politics,
And world financial trends.

All filled up with office work,
Great rush and worldly woe,
You'd thought without my brilliant mind,
The world just couldn't go.

Until I saw this neighbor,
Across the narrow way.
Dustin' off some bamboo poles,
In a sort of yearning way.

Now I hadn't seen a bamboo pole,
Since I was a barefoot boy,
And the memories that it brought to me,
Just filled my heart with joy.

So I casually went across the street,
With a sort of lingering wish,
And I says, "Howdy friend
Did you used to like to fish?"

"Did I," he says, "I just was thinkin'
I'd like to go again,
But I'm all tied up with work and things,
Just like all other men."

Well before we got through talking,
We had planned some fishing fun,
And from that moment onward,
Our friendship sure begun.

We found that life's a heap more fun,
If you're outdoors for a while,
And you get a feeling deep inside,
That you'd always like to smile.

That's my neighbor across the street,
We're buddies, don't you see?
Cause fishin' made us human,
Like we really ought to be.

By Paul T. Gilbert in *Outdoor Georgia*.

most of us can even imagine. The result is that few conclusive and complete statements of fact about wildlife can be made.

For every finding there is an exception if not many exceptions. One ranch may have many deer, another few deer. If they appear to have similar habitat, we suspect one has not been

protected from excessive hunting. If hunting has been uniform, we look at the coyote population. If there are more coyotes on the ranch with few deer, one is tempted to blame the coyotes. Yet specific ranches can be pointed to where even coyote control has been uniform and deer populations still are high on one and low on the other.

There is nothing mystic about what we don't know about wildlife. There is a definite reason for everything. The answers just haven't been found.

It is probably as true of the wildlife field as any other that, the one who is most positive in his statements is the one who has the least information. I can see this beautifully demonstrated in my own limited experience. In eight years afield in Texas my interpretations of observations have been progressively less assured. Muskrats, for example, are simple enough at first; but after several years in which time their numbers fluctuate widely on different areas and a mass of circumstantial and sometimes contradictory facts accumulate, there is no possible way to assemble all the facts into one simple picture.

The men who know turkeys best have many facts but not nearly all the answers as to what is happening and why. And this is in spite of some concerted and well-planned research programs. Some conditions have been recognized. For example much of their former range is being destroyed by sheep and goats. The question is what practicable artificial counter measures can be taken? Is there a happy medium between excessive grazing and no grazing which will yield maximum long-term profits to the rancher and leave a place for turkeys?

THE problem of predator control is typical. The first impulse of friends of wildlife is to kill the hawks and owls and foxes. It seems obvious that the more natural enemies one eliminates the more quail and other desirable wildlife one "saves." Yet this isn't always true. Some persons argue that no predators should ever be controlled because they are just as much a part of the natural balance as game species. They can point to the abundance of game in the early days when predators were more numerous than today. Yet this isn't entirely sound. Predator control may be desirable under special conditions—as when deer are restocked in a ranch with many coyotes. Predation of the same coyote population might not require control or even serious consideration after the deer herd becomes established and large enough to afford natural losses of weaker individuals.

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TEXAS GAME AND FISH

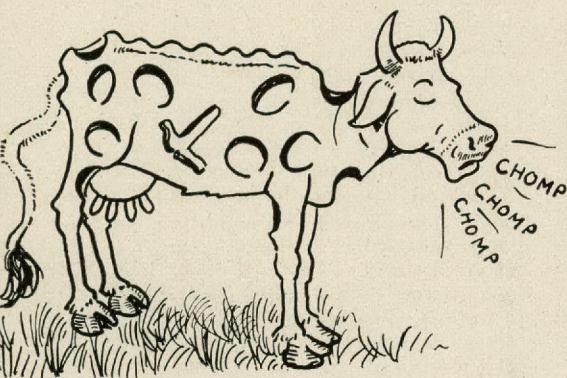
ARE YOU

Hungry?

OBESITY is a word which kind but misguided folks use when they want to get across to you that you are carrying what is commonly known in the trade as a "spare tire"—or, to be more explicit and frank—that you are FAT.

Usually when this word is tossed at you through lips wreathed in a smile, it is followed by kindly suggestions as to just how you can regain that hour-glass figure which intrigued you during adolescence. You will be told that such and such a diet is a dilly in rolling the fat off your midriff. And if you want expert medical advice at so much per throw you will be advised that the best way to keep your friends from tossing the word "obesity" in your direction is to exert a little more pressure on your forearm at the table. But be sure the pressure is in reverse, because reverse pressure will keep you just beyond eating range of the table. In other words use your forearms generously in pushing back from the table. Simple, isn't it? Actually, however, no diet or reverse pressure will work without supreme sacrifice.

Yet we sometimes are puzzled, especially when we pick up the evening paper and run across an item announcing the death of some glamorous star of the screen who literally "starved herself



Beefsteak on the hoof!

to death" for the sake of a figure that would make the cash register ring at the box office and perhaps bring wolfish gleams in eyes that are beginning to be dimmed by the onrush of the years. But even after reading such an announcement what do we usually do. We mutter, "too bad," and then rush for the table and resume our elbow exercise with reckless abandon. Then our mid-section bulges and in moments of re-

THEN
DON'T
READ
THIS

flection and meditation we wonder what made us do it.

Dietitians by the score tell us what we should eat and what we shouldn't let pass the portals of a taste hungry mouth. Vitamins and calories are kicked around until we look for them in every bite of food. Yet, we do very well. Cooks with a bit of magic in their make-up concoct new garb for our tried and tested dishes. They make spinach into a morsel that sets the old saliva glands to quivering with anticipation.

Now—if you are hungry, don't read any further. Put this magazine down if your tummy goes into a tail spin when a strange and exotic dish is taken apart and dissected.

For example, down in the South Seas there is a sea worm which emerges from under coral. Natives seek out this worm because they consider it a delicacy. The worm is dried out and in the same manner as you would smoke a sausage, the worm is made ready for the table.

And on rare occasions, such as the occasion when the daughter of the tribe's king is being traded off for a couple of pigs, a donkey and perhaps a rusty old axe, the natives will make what they declare to be something fit for the kings. It is a rare and exotic "worm sauce."

Now, if you think that is enough to make your saliva glands backfire somewhat violently and noisily, you might investigate a highly flavored stew brewed by a Filipino family. You will find in the pot a mess of beetles which



were caught as they fluttered about some bright street lamp.

Then take the likes and dislikes of an African bushman. He doesn't care what he eats. If it crawls, flies, runs or swims, he'll dine on it and smack his paddle-like lips for seconds. He excludes only those things he knows to be poison.

In Ceylon, the natives search out a tree thoroughly rotted, flavor it delicately with a sweetening and then gorge themselves on the delicacy. It's just too bad for the ants, bugs or anything else that might be in the bark when it goes down the gullet. They just add a little "body" to the feast.

Most of us drool and go overboard immediately for a clam bake or a bowl of clam chowder but in certain parts of Europe, your name would be deleted from the "register of epicures" if you ever confessed eating a clam. They have the same esteem for clams that we have for a nice broiled snake on toast.

An Indian tribe in British Columbia can whip up a great dish of seaweed and, of all things, candlefish oil. The reindeer in the frozen reaches of the far north is relished for the half-digested food it has consumed. The Eskimo goes in for raw meat and, incidentally few of these diminutive but robust people have ever gone hunting a dentist with a popping molar.

In Northern Asia, certain tribes dine on frozen horsemeat and they think nothing of eating 20 pounds of "Old Dobbins" at a sitting. In Abyssinia,

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SO! YOU BELIEVE IT, EH?

Hunters Should Know Habits of Game

THE SUBJECT of wildlife, particularly game, is a subject that almost everyone knows something about. This accounts, in part, for the widespread interest and curiosity in wild things. Persons who hunt usually know more about wildlife than those who do not hunt for to be a successful hunter one must have a general knowledge of the habits of the kind of game hunted. Moreover, the successful hunter must know how to get around in the out-of-doors and also be able to recognize the kinds of habitat in which the game may be found at different seasons and at certain hours of the day and night. The fact that a man is a good bobwhite quail hunter does not necessarily mean that he is also a good deer, squirrel, or turkey hunter. Likewise, it does not follow that a hunter may know anything at all about the other forms of wildlife which may be all around him while he is out hunting. Again the successful hunter may know next to nothing about the principles or practices basic to the conservation and management of his favorite game. Some progress has been made within recent years but we still have a long way to go in getting over most of the basic and elementary facts pertaining to the production and management of the various species of wildlife.

Wildlife biologists have advanced greatly our scientific wildlife front in recent years but there are a multitude of undiscovered facts. As with all scientific inquiry wildlife investigations are far ahead of application. It is unfortunate that a large segment of our population has adopted a great many erroneous ideas about wildlife. Not only this but some of our wildlife scientists and administrators are finding that ideas once thought to be sound are now untruths. Through protracted inquiry and experience, we have found that:

—Most small lakes and ponds contain too many fish rather than too few. An overstocked pond will not produce big fish because there is not enough food for all the fish. I know of ponds that were stocked with more than 100,000 small fry and fingerlings that should not have received more than 2000.

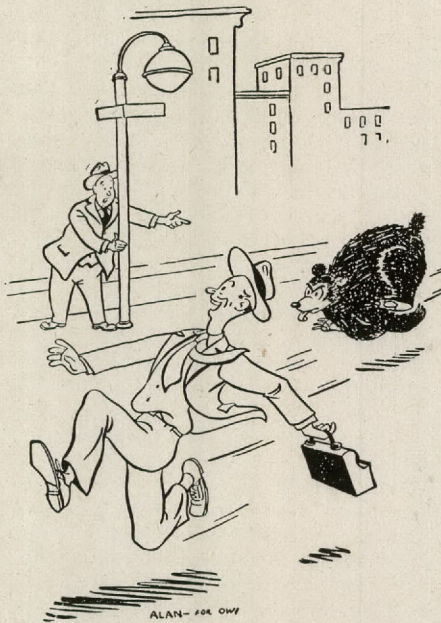
—Prairie chickens will not thrive in a wooded country. Why? Because the prairie chicken, as its name indicates, is strictly a prairie bird. For perhaps a thousand years or more the chicken has adjusted itself to a life on the prairie

By **PHIL GOODRUM**
Director, *Wildlife Restoration*

and now cannot change to a life in the forest.

—Pheasants will not, or at least have not, adapted themselves to most localities in Texas. I cannot say that they won't for some day they might.

—Most transplanted bobwhite quail do not "stay put." Quail from Mexico have been banded with numbered aluminum bands before being released in different parts of the state. Some of these bands were mailed to the Texas Game Department and an analysis of these records show that they moved an average of 6.3 miles from the point where they were released. One bird traveled 80 miles and several others about 20 miles.



"It's my wife's idea to get me to work on time."

—Some kinds of wildlife need "thinning" in order to produce a crop year after year. Muskrats and deer are examples. In the case of muskrats, if they are unmolested for too long a time they will eat themselves "out of house and home." The number of rats must be kept commensurate with the supply of native food. As for deer, it has been definitely demonstrated that they may also reduce their supply of food to a point where they will starve to death even if bucks are killed each year. In

localities where this happens an open season on doe deer would help correct the situation.

—Deer will become smaller if they cannot get a balanced diet and where trophy hunting removes the bigger and more virile bucks.

—Blue or scaled quail will not thrive outside their natural habitat in West Texas. Many trials have been made in the humid regions of the state and none have succeeded.

—Beaver will not often remain where you put them. Extreme care should be exercised in selecting a beaver restocking site.

—Squirrels will not do well or even stay in a wooded habitat without den sites or trees with holes in them.

—A given piece of land is capable of producing just so many of a certain kind of animal or bird. In other words it has a limit of productivity. For example most good quail land will not produce more than one quail per acre under optimum conditions.

—Wild turkeys require large blocks of land for best results. We know also that they must be relatively free of disturbances such as interferences at the roosts.

—Good bobwhite hunting grounds cannot be maintained year after year when more than one third of each covey is killed each year.

—Certain kinds of hawks can and do catch starving quail.

—A healthy quail with suitable cover available can escape most hawks.

—Severe drouths will cause quail eggs not to hatch.

—Deer and goats eat the same kinds of food. Therefore deer should be taken into account when stocking goats lest they both suffer.

—Without public support and cooperation, game wardens cannot enforce game laws even if there is one to every township.

—True sportsmanship is an essential component of any conservation movement.

—Not all kinds of soil will produce the same amount of wildlife or the same kinds. For example, bobwhites are found in greater abundance on sandy soils than on most other kinds. Why? No one can give a complete explanation but it is known that sandy soils grow a variety of plants that produce quail foods. Quail like to dust themselves in loose soil or dust because it

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TEXAS

Manatees

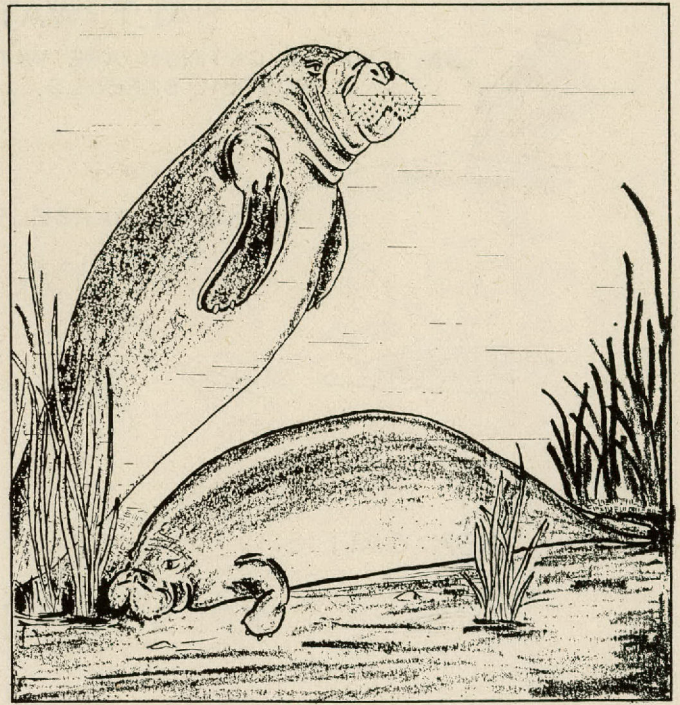
By GORDON GUNTER

Marine Biologist

OCCASIONALLY we have visits on this coast from a rare, helpless, large, lazy, good for nothing marine mammal commonly known as the manatee or sea cow. I say good for nothing advisedly because so many people ask what a species of animal is good for. Manatees are too rare to eat and they are of no value to the sportsman and of no commercial value. They are not predators and do no damage. They graze harmlessly upon succulent plant materials growing along the edges of the bays, lagoons and rivers where they live. In other words, they are "good for nothing" except to enjoy life from a manatee's standpoint. Nevertheless, they have been slaughtered and persecuted in most of their haunts in the United States, so that they are very shy and are growing increasingly rare. Naturalists and lovers of wildlife usually get a great thrill from the sight of one of them. There have been reports of Texas fishermen being scared partly out of their wits by a huge black animal that rose and snorted beside their boat and swam over or through their nets. Probably these incidents are all caused by manatees for there is no other animal known to visit our shores which fits the descriptions.

Manatees may grow to a length of fifteen feet and a weight of approximately a ton, but most of them are of smaller size. The body is barrel-shaped and there are no hind legs. They have a huge flattened rounded tail which is almost as wide as the body. The forefeet are developed into a pair of flippers. The neck is very short and thick and merges indistinguishably into the head. The eyes are small and it seems that the manatee cannot see very well. The lips are large, muscular and covered with heavy bristles. They meet along a wide margin in front of the manatee's mouth and it may be said that they are almost prehensile for either one can reach out independently of the other and pull grasses or herbs into the mouth.

Manatees are mammals, having warm blood, giving birth to their young and nursing them on milk just as other mammals do. They belong to the Order Sirenia. There are three chief divisions of this Order. The first contains only one species known as Steller's Sea Cow. This was a huge helpless animal shaped



much like the manatee but a little more streamlined. It lived in the islands of the North Pacific and was wantonly exterminated by the Russian explorers and hunters in about 1776. Another division of Sirenia includes the dugongs. These animals are very much like the manatee. They differ in certain anatomical characteristics and seem to prefer the shores of the open sea more than the manatee, which lives in the bays, inlets, bayous and lower reaches of rivers rather than on the open coast. Dugongs extend from the Red Sea to the Philippines, Formosa, Australia and the Solomon Islands. In short, they live in the tropics over practically the whole world with the exception of West Africa, South America and part of the Pacific Ocean. Naturalists are not quite sure whether they are all one species or not.

In the next large division of the Sirenia are the manatees. There are either three or four species. There is a species of manatee living in the lower reaches of the rivers of West Africa. The Amazonian or South American manatee inhabits the rivers of northeastern South America, particularly the Amazon and the Orinoco. This species is smaller than other manatees and it goes much farther upstream. It has been taken in tributaries of the Amazon in eastern Perú. In Florida there is another species known as the Florida manatee. According to some authorities all manatees in Florida and the Gulf of Mexico belong to this species. It is not quite certain that this animal is specifically different from the West Indian manatee of the West Indian Islands, Carriibbean Sea, coasts of Yucatan and the Middle America.

The English word manatee is derived from the Spanish word manati which in turn was apparently derived from the

Carib Indian name for these mammals. When the sailors of Columbus first visited the West Indies they found manatees present and apparently they first called them mermaids. Manatees bear little resemblance to those exotic creatures of mythology but the story probably lost nothing in the telling and probably this is the reason why the whole Order was named the Sirenia, from the word siren.

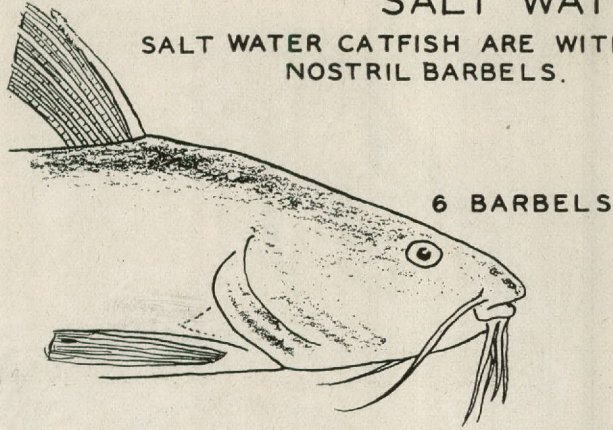
Manatees and dugongs have a superficial resemblance to walruses. They have moved farther along towards a purely aquatic existence than have the walruses, seals and sea lions, but not so far along as the porpoises, whales and dolphins. However, they are not at all close kin to these other water mammals and apparently their closest living kin today is the elephant. The elephants and the Sirenia are the only living mammals whose back teeth grow forward throughout life to replace those worn away in front. The Sirenia are also distinguished by possessing the heaviest type of bone known in the animal world. On my desk there is the rib of a Texas manatee. It is as solid as a piece of ivory. A section of a manatee's rib shows no hollows or spaces where the marrow or living material formerly existed. Possibly, the growth of bone in the Sirenia is somewhat different from what it is in other mammals.

Manatees have never been known to come ashore, although there have been reports of them climbing part way out of the water, propped up on their flippers, while feeding on plants on shore. They are good divers and can stay submerged for twelve minutes. They usually feed under the water. They cannot withstand even mild cold and hard winters kill them in Florida. This is

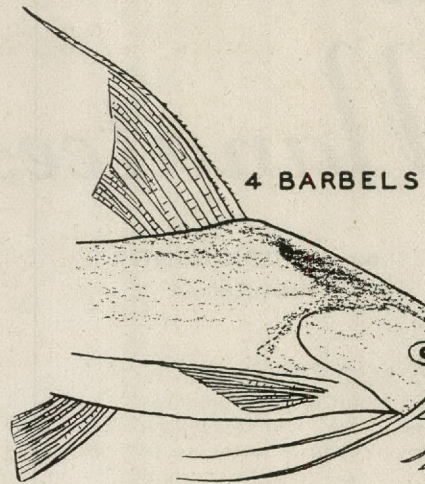
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SALT WATER CATS

SALT WATER CATFISH ARE WITHOUT
NOSTRIL BARBELS.



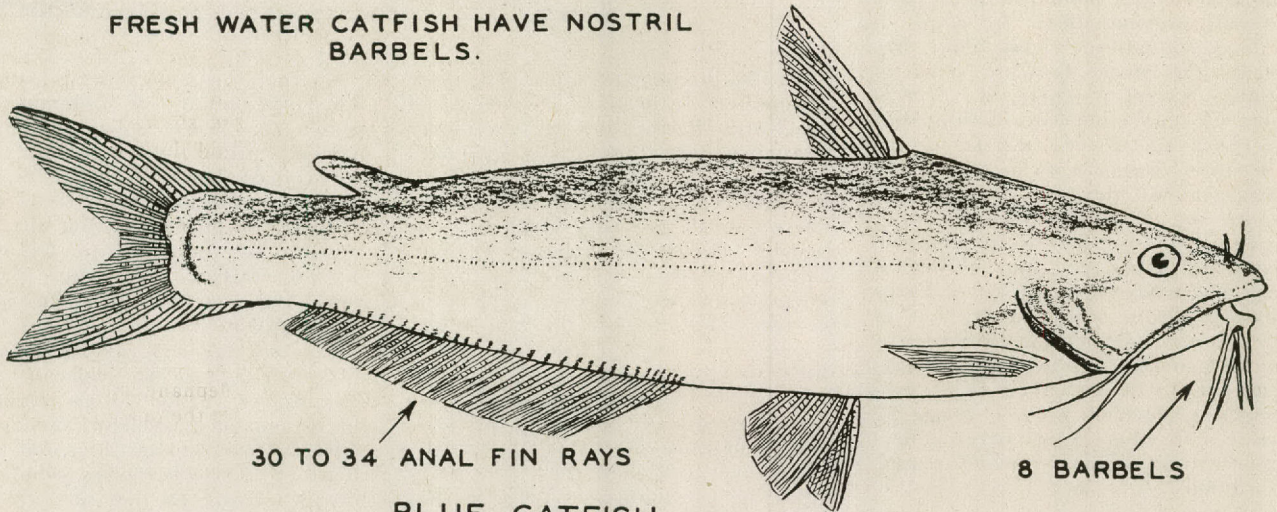
SEA CATFISH



GAFF-TOPSAIL CATFISH

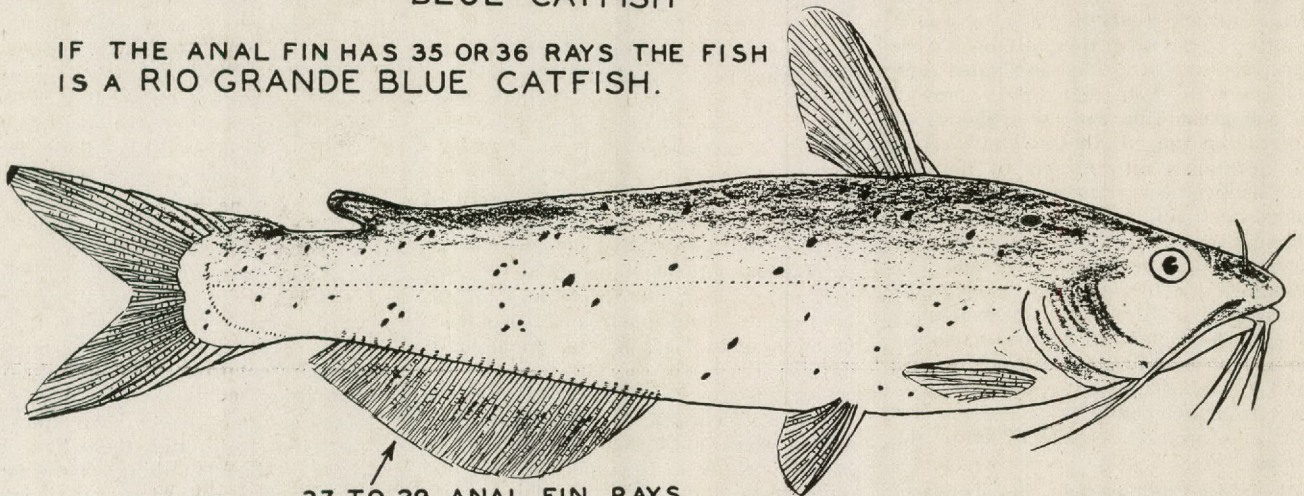
FRESH WATER CATS

FRESH WATER CATFISH HAVE NOSTRIL
BARBELS.



BLUE CATFISH

IF THE ANAL FIN HAS 35 OR 36 RAYS THE FISH
IS A RIO GRANDE BLUE CATFISH.



SOUTHERN CHANNEL CATFISH

IF THE ANAL FIN HAS FROM 23 TO 25 RAYS THE FISH
IS A HEADWATER CHANNEL CATFISH

Forked Tail **CATFISHES**

By **MARION TOOLE**
Chief Aquatic Biologist

RECENTLY the writer was informed that salt water cats were being caught in an inland fresh water lake. Other reports are constantly received of catches of blue cats being taken where blue cats are not known to exist. Apparently, much confusion still exists in the minds of many of the anglers of this State regarding the various forked tail catfishes.

The environment of fishes influence their coloration greatly, and occasionally whole spawns of fish are hatched that are sports or freaks. Each year at the State fish cultural station at Lake Dallas several spawns of channel catfish sports are hatched. Every individual in these spawns is without a tail. Other such phenomenon occurs occasionally in nature to help bewilder the poor angler that is trying to guess just what the fish is that he has just caught. The color of the fish is another poor clue as to a fish's identity. Catfish from the same spawn placed in clear water and muddy water for several weeks will have an entirely different color when compared. However, some external characteristics never change and it is these characteristics that should be used as clues for identification.

The tail of the fish must be examined first, unless it be one of the rare tailless fish previously mentioned. If the tail is forked or notched then the catfish in question is one of six catfishes. Two of the six are salt water catfishes and the others channel catfishes. If the tail is straight or rounded, then the catfish is a yellow, bullhead, or mad tom catfish.

While the salt water catfishes are very similar in appearance to the channels, especially the sea catfish, there is still one great difference. The whiskers surrounding the mouth of a catfish are called barbels. Salt water catfishes lack the barbels found growing from their nostrils. All the fresh water catfishes to be found in Texas have a barbel growing from each rear nostril. To distinguish between the two salt water catfishes it is only necessary to count their mouth barbels. Should the fish in question have only four barbels, it is a gaff-topsail cat, but if it has six barbels, it is a sea catfish.

The fresh water channel catfishes all have the same number of barbels, six around the mouth and two nostril barbels, making eight in all; so it is necessary to look for another clue to identify the various species.

This clue is furnished by the number of rays in the anal fin. The anal fin is clearly shown in the accompanying illustration. When counting these

rays be sure to include in your count all rudimentary rays. The blue catfish have from 30 to 34 anal fin rays. The Rio Grande blue catfish have 35 or 36 anal fin rays. The southern channel have from 27 to 29 anal fin rays and the headwater channel catfish have from 23 to 25 anal fin rays.

If the catfish you catch is speckled, you know it is a southern or headwater channel cat, but occasionally, when these fishes are caught from very clear water, their body coloration will be dark enough to hide all the specks.

If the angler will study his fishes as he catches them and will key them down to their correct species, he will soon know by a cursory glance just what species of fish he has caught. After all, the catfishes are as different in appearance as a fox is from a domesticated dog.

Sizes of the fresh water forked tail vary with the species. The blue catfish grows the largest since it occasionally reaches a weight of 150 pounds. The Rio Grande blue catfish grows almost as large. The southern channel catfish seldom reaches a weight of over fifteen pounds and the top weight of a headwater channel catfish is about four pounds.



A little minnow so abundant its common name is "Millions," has been successfully used in fever-stricken districts of tropical America to fight the scourges of malaria and yellow fever. "Millions" eat the billions of larvae inhabiting pools and marshes where the disease-carrying mosquitoes habitually breed.

Manatees

■ *Continued from page 9*

probably the chief reason why they are not more common residents of the Texas coast. Manatees seem to migrate northward sometimes for great distances in the summer. They have been reported by scientists as far north as Virginia and there have been newspaper accounts of them as far north as New Jersey. Probably such animals are Florida manatees that return south with the approach of winter. An animal thought to be a manatee was found on the shores of the Shetland Islands over a hundred and fifty years ago. The writer who gave an account of it assumed that the mammal came by way of the Gulf Stream and probably "set sail" from the Florida coast.

Records of the manatee in Texas are rare. One from the lower Laguna Madre was sent to the U. S. National Museum ninety-three years ago by Dr. Luis Ber-

landiere, a famous Mexican naturalist who resided at Matamoras. Residents of Brownsville and the lower Laguna Madre region used to see manatees almost every summer in the lower Rio Grande and the lower Laguna Madre. A specimen was captured near Port Isabel in 1911 and was exhibited alive over various parts of the United States. Since about 1913 these summer visitors to South Texas Coast have not been seen. In 1928 a dead manatee washed ashore at the north end of Shellbank Reef in Copano Bay not far from the town of Bayside. It was ten feet and four inches long and weighed several hundred pounds. Mr. Ben A. Earp, who was then residing at Bayside, saved the skull and other parts of the skeleton. These skeleton remains have been deposited with the mammal collection of the Division of Fish and Game of Texas A. and M. College. In 1937 a dead manatee floated ashore in Cow Bayou, which empties into Sabine Lake. These are the last known records of manatees in Texas. They were much more common at least in South Texas in former years. Texas manatees probably come northward from Mexico and their increasing rarity here is most likely due to the fact that they are being killed out along the shores of the Gulf of Mexico to the south of us.

So, You Believe It?

■ *Continued from page 8*

helps them get rid of parasites. Although armadillos may be found on rocky or clay soils they exist in greater number on soft, sandy soils where it is easier to dig holes.

—Restocking a depleted area with pen-raised bobwhites is largely ineffectual in increasing the number of quail. Young birds about nine weeks of age are better than adult quail but both are of little value. Why? A detailed study of game farm birds, by Fred Baumgartner of Stillwater, Oklahoma, after they were released proved conclusively that they scattered widely and that few lived until the breeding season.

Glass Fishing Lines

Fishing lines of glass yarn are expected to replace prewar lines on postwar fishing trips, according to a recent article in *Florida Poultryman and Stockman*.

Already U. S. Army fliers are using kite strings of glass to send up box kites with radio antenna when they are forced down at sea.

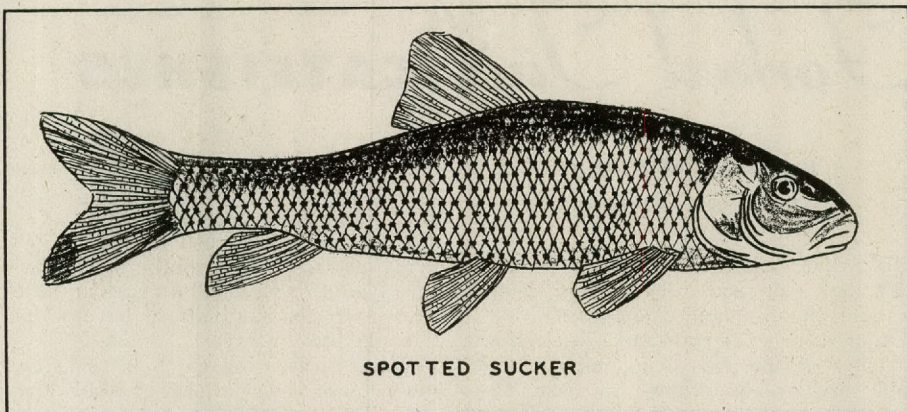
Army men consider glass lines a "natural" for fishing. Not only do they possess great strength, but they are impervious to salt water. There is also the possibility that they may be turned out in less visible forms than currently used lines.

Spotted Sucker and Chub Sucker

By MARION TOOLE
Chief Aquatic Biologist

FOR the past several issues of the TEXAS GAME AND FISH various members of the Castostomidae family found in Texas have been discussed. Only two genera remain. These are the spotted sucker, *Minytrema melanops* (Rafinesque), and the chub suckers, *Erimyzon* Jordan. The chub suckers occurring in Texas are the western lake chub sucker, *Erimyzon sucetta kenerlii* (Girard) and the western creek chub sucker, *Erimyzon oblongus claviformis* (Girard).

These members of the Castostomidae family are probably the least important of their family with one exception and are included merely to complete our discussion. It is very doubtful that many anglers will ever take or catch a spotted sucker or chub sucker unless he does so while seining for bait. Both the spotted sucker and the two chub suckers will



SPOTTED SUCKER

San Antonio, Rio Grande, Canadian and Devils.

As previously mentioned, two types of chub suckers may be found in Texas and as their names imply, one is primarily a lake resident and the other prefers to inhabit creeks. For the benefit of those readers that are interested in the study of fishes, it is well to mention the chief differences between the two species. The lateral line of the lake chub sucker has thirty-four to thirty-eight rows of scales while the lateral line of the creek chub sucker has from thirty-nine to forty-three rows of scales.

Chub suckers are light colored fish.

the Minnesota Department of Conservation bulletin entitled *Propagation of Minnows* (1940). Mr. Surber places the chub suckers in the same category with other stream spawning minnows. "The species included in this group spawn on gravel beds in swift flowing streams, or strong currents over lake reefs. To propagate this group of fishes commercially the eggs must be expressed (by hand stripping) and fertilized artificially, after which they are transferred to trays or jars for hatching, when the fry are subsequently removed to ponds for rearing." Mr. Surber further states "the chub sucker having spawning habits similar to other stream spawning minnows are included here, because the eggs are handled in the same manner, being non-adhesive in character and capable of a high degree of fertilization under artificial conditions." . . . "The process of taking the eggs from the larger fish is far easier than in the case of the minnows and with practically no loss of the adults, whereas with the minnows the loss is severe." The minnows referred to are horned-dace, Horny-headed chub, and stone-roller minnow. "Millions of the eggs of the common sucker have been taken from fish seined from their spawning beds in the upper Mississippi River, after which the fish were returned to the water without any loss whatsoever. The eggs transported a distance of 250 miles and handled in ordinary Meehan hatching jars hatched over 90%. They can also be handled on small-meshed hatching trays in troughs in the same

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FISHES OF TEXAS

bite a hook if it is baited with dough bait.

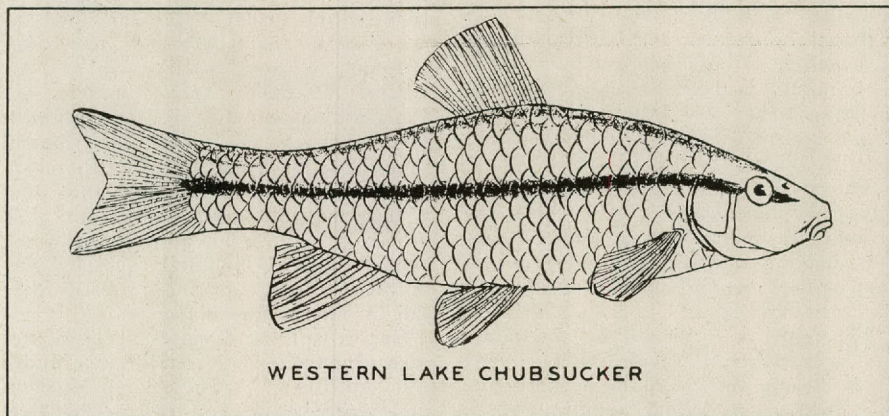
The spotted sucker grows to a length of eighteen inches, but the chub suckers never get that large. The lake chub sucker grows larger than the creek chub sucker. From eight to ten inches is the maximum size for the lake chub sucker and 5½ inches is the largest creek chub sucker that has been recorded in Texas.

Spotted suckers are used as a food-fish to a limited degree only. The young of both spotted suckers and chub suckers have been used for bait and are good bait. This is especially true in regards to the chub suckers whose propagation will be discussed more thoroughly later.

In the United States the spotted sucker is found in the Great Lake region and the Mississippi Valley. They have been collected from the Neches River basin, Trinity River basin, Brazos River basin, San Antonio River basin, and Guadalupe River basin in Texas. The chub suckers are found in practically all of the States of the United States east of the Rocky mountains. In Texas they have been collected from the following river basins: Neches, Trinity,

The young have a dark stripe running from their snout to the base of the caudal or tail fin. As the chub suckers grow older there is a tendency for this stripe or band to fade out or break up into indistinct bars.

Chub suckers are now being propagated by commercial minnow hatcheries to be sold as bait. Thaddeus Surber has the following to offer regarding the propagation of chub suckers in



WESTERN LAKE CHUBSUCKER



ARMS AND AMMUNITION

Edited by A. S. JACKSON

AMONG knowing wing-shots the so-called "cinch shooter" is really the fellow who, with quick decision, born of long and varied experience afield, has his bird, or pair, pretty well selected ere trigger-pressing time. Having rigged himself as to blind-room, wind-at-his-back, tree heights or stool yardage, he has reduced quarry maneuverings to the least common denominators (and they are important enough without the others) of *how far*, *how fast* and *when*. And still more important—if at all.

"When wildfowl whisk curvingly outside one's decoys, twist roaringly up through buck-brush and willow tops, or shyly circle the perhaps too distant rim of some woods-pocket, the *cinch-shooter* never even hitches his gun into firing position until eye-to-brain focus signals merger of reflexes guiding him to a clean kill. Such a type was the seasoned market hunter of long gone years. Under pressure he could *reach out*. But his skill rarely overdid its extra-yardage account. His prototype now constitutes a huge minority. Today's vast army of well-nigh regimented hunters have but two wildfowling systems. To get their license-money's worth any old way, and the easier and

quicker the better, with sportsmanship be hanged; or to fill the woods or tall grass full of gut-shot, winged cripples as a result of their thoughtless, heartless, long range *sky busting*. Hard words, but true, and open to self diagnosis.

"If an upland gunner over dogs, the sound wing-shot analyses in advance every phase of the point. This includes diagnosis of bevy-lie, possible and more likely avenues of escape-flight, plus advantageous site of personal gunstance at the flush. Nothing then obstructs nerve composition for rise-restraint. Unflustered, cool, selection during early covey-zoom saves many a wasted shell. Such pause allows for more time than the average hunter realizes for establishment of overage, underage, or angularity of forward allowance and barrel-level.

"There are, of course, those legendary infallibles of the marsh and upland who deliberately slow down their fire until two selected cock-birds cross for a deliberate double-kill with one shell. Or those wizzards *dead-eyes* who with never a miss, down quail doubles from horseback. And don't forget his twin-in-skill, the *from-the-hip* shooter. And last, but not least, and wonder of wonders, those supreme exhibitionists who, to avoid hashing up their

birds, shoot them with the thinner pellet coverage of their outside shot-patterns. In other words *shoot 'em glancing*. For all such we hand out *oak-leaves* and *summe cums*, ad lib.

"By-products of temperate wing-shooting are those qualified sportsmen, who, for reasons of their own, rarely risk long shots. They know gun-yardage but seldom exceed known personal ability to *out-point* distant flyers. Some, even when pretty good at the longer tries, are considerate enough to prefer going gameless rather than risk crippling birds. Others, proud of their reputations of getting fast "limits with few shells," simply don't fancy having misses obscure their places in the fowling sun.

"Such more or less beneficial types are largely indigenous to three game areas. Around the better duck clubs where flight conditions are pretty much deluxe shooting routine; commercial, per-diem ducking resorts, where at a guide's signal, the *lit* are mown down and fees quickly paid; or, on quail and pheasant preserves where bevy and bird abundance, plus steady dog work and competent retrievers, permit extra and undisturbed gun restraint. All such take up a lot of slack in salvaged cripples and waste fewer shells.

Wildlife

■ Continued from page 6

Foxes eat quail and quail hunters often advocate a "war" on foxes. But the numbers of quail eaten by foxes depend on local factors such as the numbers of rabbits and rodents present, the numbers of quail, and their supply of cover and food. These vary from one tract of land to another, from one season to another. In many places killing foxes may help quail, in others it certainly would not.

Marsh hawks killed more than 1000 quail on one 640 acre section observed by A. S. Jackson during the winter of 1942 in King County. Yet the consensus of written records about the marsh hawk is that it does more good than harm. And it probably does, in spite of the 1000 quail. A vast number of migrant hawks had been attracted to the region and they were feeding on the

peak populations of rabbits and rodents. A high population of quail was present. Cover became scant as winter progressed, something happened to the rabbits and rodents, and the quail suddenly became vulnerable to the concentrations of marsh hawks. But eliminating the hawks would not have saved the quail. More quail were present than the range would carry in winter, the critical period.

Fishing is often very poor in waters that have been repeatedly stocked and have been fished little if any. Only in recent years has it been learned that such waters might be overstocked and the fish stunted for lack of food. Microscopic plants and animals in the water feed the fry and minnows, which feed the larger fish. A limited supply of food can be produced, even when waters are fertilized. Most waters must be fished heavily to remove enough of the larger fish to maintain a balance between the food and the fish. This comparatively

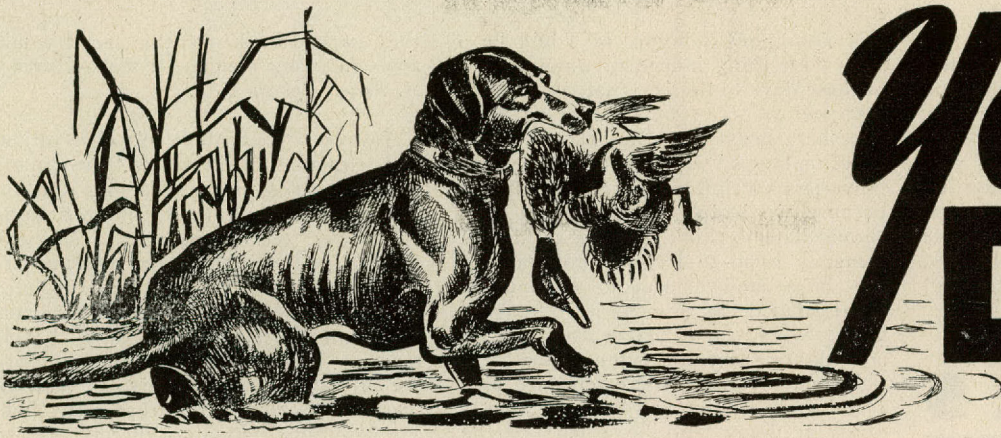
new approach to the problem of improving fishing resulted from the accumulation of facts, without which diagnosis of fishing troubles would still be haphazard. Yet, there are differences between any two bodies of water often requiring different treatments. In fish management as well as other wildlife fields, researchers will be working many years from now, because each new discovery raises a geometric proportion of new questions.

Each new situation can be judged only when the facts are known. In defense of our shortcomings, it should be pointed out that the field of scientific wildlife management is hardly past infancy. Agriculture has had the benefit of research on organized experiment stations for several hundred years.

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Mimus polygottos is the scientific name for the popular mockingbird and means "many-tongued mimic."





Your DOG

A SOW TRAINED TO POINT

Edited by H. L. VAN VOLKENBERG, D.V.M.

(Editor's Note: The most remarkable case of intelligence and tractability of swine, of which we have heard, is that of a sow trained to hunt, an account of which is given in the following extract from Daniel's Rural Sports.)

TOOMER, (formerly one of the king's keepers in the New Forest, and afterwards gamekeeper to Sir Henry Mildmay) actually broke a black sow to find game, and to back and stand. Slut was bred in, and was of that sort which maintain themselves in the New Forest without regular feeding, except when they have young, and then but for a few weeks, and was given, when about three months old, to be a breeding sow, by Mr. Thomas to Mr. Richard Toomer, both at that time keepers in the forest.

From having no young she was not fed or taken much notice of, and, until about 18 months old, was seldom observed near the lodge, but chanced to be seen one day when Mr. Edward Toomer was there. The brothers were concerned together in breaking pointers and setters, some of their own breeding, and others sent to be broke by other gentlemen. Of the latter, although they would stand and back, many were so indifferent that they would neither hunt, nor express any satisfaction when birds were killed and put before them.

The slackness of these dogs first suggested the idea that, by the same method, any other animal might be made to stand, and do as well as any of these huntless and inactive pointers. At this instant the sow passed by, and was remarked as being very handsome. R. Toomer threw her a piece or two of oatmeal roll, for which she appeared grateful, and approached very near; from that time they were determined to make a *sporting pig* of her. The first step was to give her a name, and that

of Slut (given in consequence of soiling herself in a bog) she accompanied in the course of the day, and never afterwards forgot.

Within a fortnight she would find and point partridges or rabbits, and her training was much forwarded by the abundance of both, which were near the lodge. She daily improved, and in a few weeks would retrieve birds that had run as well as the best pointer. Nay, her nose was superior to the best pointer they ever possessed, and no two men in England had better. She hunted principally on the moors and heaths.

Slut has stood partridges, blackgame, pheasants, snipe, and rabbits, in the same day, but was never known to point a hare. She was seldom taken by choice more than a mile or two from the lodge, but has frequently joined them when out with their pointers, and continued with them several hours. She has sometimes stood a jacksnipe when all the pointers had passed by it; she would back the dogs when they pointed, but the dogs refused to back her until spoke to, their dogs being trained to make a general halt when the word was given, whether any dog pointed or not, so that she has been frequently standing in the midst of a field of pointers. In consequence of the dogs not liking to hunt when she was with them, (for they dropped their sterna and showed symptoms of jealousy), she did not very often accompany them, except for the novelty, or when she accidentally joined them in the forest.

Her pace was mostly a trot, was seldom known to gallop except when called to go out shooting, she would then come home off the forest at full stretch, for she was never shut up to prevent her being out of sound of the call or whistle when a party of gentlemen had appointed to see her out the next day, and which call she obeyed as regularly as a dog, and was as much elevated as a dog upon being shown a gun. She always expressed a great

pleasure when game, either dead or alive, was placed before her.

She had frequently stood a single partridge at forty yards' distance, her nose in an exact line, and would continue in that position until the game moved. If it took wing she would come up to the place and put her nose down two or three times. But if a bird ran off, she would get up and go to the place, and draw slowly after it, and when the bird stopped she would stand it as before.

The two Mr. Toomers lived about seven miles apart, at Rhinefield and Broomey lodges. Slut has many times gone by herself from one lodge to the other, as if to court being taken out shooting.

She was about five years old when her master died, and at the auction of his pointers, etc., was bought in at ten guineas. Sir Henry Mildmay having expressed a wish to have her, she was sent to Dogmersfield Park, where she remained some years. She was last in the possession of Colonel Sykes, and was then ten years old, and had become fat and slothful, but could point game as well as ever.

She was not often used, except to show her to strangers, as the pointers refused to act when out with her. When killed for meat she weighed 700 pounds.

(From the "Cultivator," a farming magazine, pp. 278-79, September, 1847.)

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Take a Tip from a Dog

After he's through running and playing, have you noticed how your dog completely relaxes and falls asleep on the rug at your feet? He lets go, rests every nerve and muscle, builds up his strength for the next run.

You, too, need to relax. Take a tip from your dog and let go! In these high tension days it is vitally important to learn to relax. A prominent efficiency expert taught that we should use our "moments of unavoidable delay" to relax and store up energy for work.

←An unusual photographic study of the head of a turtle found in Texas. Photograph by E. P. Haddon.

Watch your dog when he wakes up. He stands up and stretches his entire body. That's tip No. 2. Stretching and deep breathing are the finest exercises. To the Hindu Yogi, breath is life and his entire philosophy of mental and physical poise is built around breathing exercises. Throw open the window. Reach for the ceiling! Try to reach the floor with the tips of your fingers, without bending your knees. Breathe! Stretch! Live!

LETTERS

About England

Dear Editor:

This England is some place. I should hate to think that our own country would ever become as used up as this place is. It is quite true that the so-called English Countryside is quite beautiful but at the same time, it is so very artificial and to me so lifeless. I have seen endless tiny fields surrounded by the equally endless hedgerows until I am utterly sick of it. To a fellow like me that is used to the great open plains this country is stifling. I sometimes feel that I would give anything I possess to be able to get into a car and start out across country with nothing in my way for about 20 miles. Here you can't drive $\frac{1}{4}$ mile in a straight line on the highways. And, the place is devoid of any kind of animal life. I've seen a few warblers, two or three rabbits and that's the extent of the wildlife here. We Americans, especially those of us who are lucky enough to live west of the Mississippi River, don't realize just how fortunate we are to be living in a country which still possesses such a good supply of wildness.

I used to wonder how in the world this country managed to keep from wearing its soil out. I know the answer. There just isn't any erosion problem over here, at least not in the part of the country where I am. They have fields here that run right up the side of hills that are quite steep. And yet, the soil still looks very rich and healthy. Of course it is fertilized, but all the topsoil is still there. The answer is that the rain here never falls; it just drizzles and every bit of it soaks in. There is very little surface run-off and as far as I have been able to determine, the various streams and brooks are fed by water which has seeped through the soil rather than running off the top cutting gullies as it goes. This sub-surface drainage is another reason for the soil being in such a good condition in that it prevents the ground from becoming "sour" as we used to say of the soil in the vicinity of College Station. But, even with all the trouble we are having at home with erosion, I'll still take the old southwest.

You know, I am mighty happy to know that the conservation program is

still going on at home. It would be a very poor thing indeed to wake up one of these days to the fact that the country that we are so proud of, that we boys over here boast of so much, and which all of us love so very much, had become powerless to clothe and feed us all just because we hadn't taken care of it. I should hate to think that the children I someday hope to have would have to live in a land as devoid of animate natural beauty as this one is. When you boil it all down, I believe that we are now fighting for the right to live in a rich land of peace where our own kids and those to follow will have the opportunity to know and be a part of the great out-of-doors and the wide-open-spaces as trite as it may sound. For one, I should be greatly disappointed to have to come back to a land where I couldn't load up the old shotgun every now and then and shoot a few quail or bag myself a deer every fall.

Over here all of the hunting, if there is any, is done with a double barrel shotgun and most of the ones that I've seen are very old fashioned. I don't recall having seen over one or two hammerless guns. Nearly all of them have the old style curled hammers and even the ones they make now are made that way. The other day, I was in an Ironmongers (the local hardware store) and I was amazed at the prices they got for their guns. Of course, nearly all of them are hand made but even at that, they were high. For example, he had a .410 that he was asking E27 for which at the current rate of exchange amounts to about \$108.00. I'll swear, I sold a .410 just like it 3 years ago for 15 bucks and thought I was doing good. Hunting over here is definitely the rich man's right. Around here, most hunting consists of running to the hounds although some of the wealthier men sometimes go bird-shooting. I haven't found out yet what kind of birds they shoot. Of course ammunition is very hard to get.—Paul V. Jones, Jr.



More About Rattlesnakes

Dear Mr. Jackson:

I have just read your article "About Rattlesnakes" and enjoyed it very much. I was reared in Kimble County and so have known rattlers all my life but this past winter I learned a new theory and would like to know if there is any truth in the belief. I have always heard that you could tell a snake's age by the number of his rattles but last winter I employed an aged Mexican and he told me he could tell me the age of a large snake I killed. He pried open its mouth and with a wire extracted eleven fangs from the sac above and behind each imbedded fang. Even though the snake only had seven rattles (of course I know this idea is a fallacy) the Mexican said the snake was eleven years old as they shed their fangs annually, like a deer sheds his antlers. And instead of them dropping out of his mouth

they packed back into this sac. I would appreciate your opinion on this.—Clarence A. Fish, Lamesa, Texas.

Answer — Your Mexican's observations and explanation illustrate how many close observers place fallacious and entirely too difficult interpretations upon what they see. Actually, the Mexican showed you something few persons are acquainted with; he just took the hard way round explaining how the extra fangs got there. Rattlesnakes shed their fangs periodically and irregularly; more are probably jerked out by the startled reaction of their prey than are shed. The additional fangs are merely reserve fangs, there for the purpose of replacement when fangs are lost, or about to be shed. Quite often two are found in one socket. I have dissected several skulls of rattlesnakes to show this feature; the young fangs lying laterally along the upper mandible are progressively smaller the further back they go, which of course would not be true if they were placed there AFTER being shed. The forward, so-called ERECTILE fangs are seated in ball and socket joints, so that as the mouth is opened a lever-like arrangement of the skull bones rotate them forward and out. When not lost through accident, these fangs seem to be pushed out by one of the reserve fangs moving in, which accounts for two fangs of different size sometimes being found in one seat. As to the age, I doubt if there is any relationship between it and the number of young fangs.—A. S. Jackson.

Suckers

■ Continued from page 12

manner trout are hatched, but of course, in warmer water. In experiments in Michigan with the chub sucker apparently no attempt was made to express the eggs of that species artificially, but the eggs which had been deposited naturally over beds of aquatic moss were removed and hatched in jars. There is no reason why the eggs can not be taken and fertilized artificially." The spawning period for these fish is from March through May.

Only one species of the spotted sucker occurs in the United States. These fish can easily be identified by their spots alone which are responsible for their common name. Each scale along the sides of their body have a square spot at their base. These spots form horizontal rows on their bodies. The best location for finding spotted suckers is in small creeks because it is there they like to stay. They are found only occasionally in larger streams and rivers.



The weatherfish is a European loach and is said to exhibit uneasiness at the signs of an approaching storm. In certain parts of Europe, weatherfish are often kept in bowls to serve as weather prophets.

The Truth, SO HELP ME!

Well, here it is folks! A "Tall Tale" and what a tale. It comes from H. R. Fields, 4536 Polk, Houston, Texas, with this explanation: "It may be of some interest to start a tall tales column among the various readers as there are some whoppers lying around that will really take the hair off when told. Now I don't claim to be the biggest liar in Texas, for the simple reason that he who makes such an assertion in good faith would actually be the biggest of all liars." Who else has a good "tall tale" tucked away under the bonnet?—Editor's Note.

YOU know when a fellow gets to be a gun bug a lot of queer things can edge up and happen to him. Now for instance I had a friend named Bill who went plumb loco on the subject of guns, powder, bullet shapes, etc. One day Bill called me to come over to the house. Said he wanted to show me a new weapon he was working on. When I got there he suggested that we ride over to the river to see could he get a shot at a deer, so just to see what would happen I up and went along.

Bill had been working on high speed stuff and had decided that if he could take a rifled slug shotgun shell with a hollow point and speed her up that he really ought to have a load that would anchor anything walking. Following this notion he had rigged up a fourteen pound shotgun with a recoil cylinder on the side and a two-legged muzzle rest on the front. Taking this awful weapon and two shells we went out to kill a deer.

On reachin' the woods, Bill picked out a good place to hide near a spot where the deer crossed a little creek at the foot of a hill. After waitin' about an hour here comes two does and a right good buck easin' down the hill toward the creek. At the foot of the hill the buck stopped and threw up his head as tho windin' somethin'. Just then that awful weapon of Bill's roared and the most remarkable thing I ever seen before or since took place. That big slug took that buck in the neck about eight inches below his jaw and completely cut his head from his body and threwed his head about fifteen feet in the air, and at the same time his body wheeled around and raced for the brow of the hill. When that headless body reached the top of the hill, it stopped and wheeled around sorta like it was going to look back down the bill but it evidently realized it didn't have nothin' to see with so right there it collapsed and rolled back down to the bottom of the hill. I pushed my lower jaw back up off my chest and turned and looked at Bill just as Bill turned and looked at me. After a lot of Blinkin' and Gulpin' Bill said, "Well I'll be damned".

Poor old Bill was killed a few months later while foolin' with a new cartridge. I wish he was here now for I know he would vouch for this story.

YOUR

Wildlife Primer

The armadillo always gives birth to exactly four young at a time—and all four children are always of the same sex.

It's a toss-up between the coyote and opossum when it comes to giving birth to the greatest number of young at one time. The opossum has the greater average, bearing between six and 13 in each litter. The coyote's litter runs from four to as many as 17 or 18.

The rattan palm, a giant sea-weed growing on the coast of California and Calamus, is the longest plant known. It may exceed 970 feet in length.

Were it not for its weakness for sunbaths, which brings it to the surface to pamper this failing, the broadbill swordfish would never be caught commercially, since it is essentially a deep-water dweller.

Cats can find the most carefully hidden birds' nests by the calls of the young birds that are still in their shells. Being extremely fond of eggs that are just about to hatch cats will go to a great deal of trouble to reach such nests.

The old expression "As scarce as hen's teeth," wouldn't always have been true. In ancient times certain birds, now extinct, had teeth—and plenty of them.

In the South the quail is known as the partridge . . . which it isn't . . . and, in most of the South quail are referred to simply as "birds" . . . when you hear a man talk about birds in that territory he isn't referring to birds in general . . . just to quail . . . the bobwhite quail is the only bird that whistles the characteristic bobwhite call . . . and it is the unmated cock that makes this particular note.

Are You Hungry?

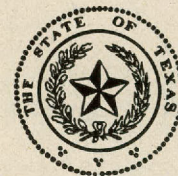
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where anything can happen and usually does, those charming people hang up a cow at the kitchen door and then while the animal is still kicking in protest at such undignified treatment, they carve off their lunch. They cover their steak with a pasty-bread and then go to work. The Chinese cut the cow's jugular vein, then perform a hasty first-aid treatment to prevent excess bleeding. Then the Chinese take stick and beat the cow to death. This is done to produce an exceptionally tender steak. The only difference between the New and Old Worlds is that the Chinese believe in tenderizing their steaks in the rough.

Yes—this is a dizzy old world. It is strange how far men will go to obtain a vitamin in its best form. We of the human race have been endowed with a top ranking digestive system, for which we all should be downright grateful.

But—pass the soda and a little water, please!

State of Texas



COKE R. STEVENSON, Governor

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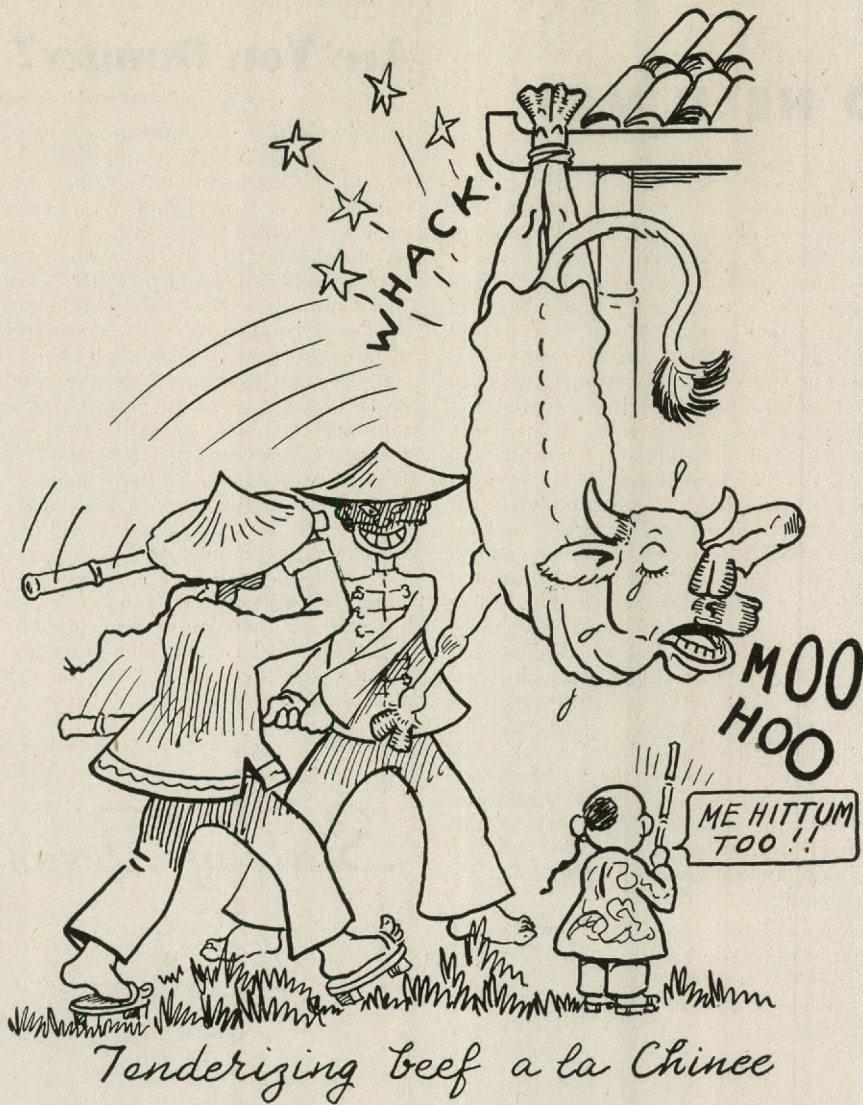
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Tenderizing beef a la Chinee

A bear cub is born while its mother is sound asleep in mid-winter. The cub is smaller than a new-born kitten.



There are more than 450 kinds of woodpeckers in the world.



The mourning dove is a close relative of the extinct passenger pigeon.



The curious Horse-fish of South Africa is unique in being able to cast off its skin in patches like a snake, a new and brightly colored skin developing below the old one.



So much of the peculiar friction-reducing slime excreted by fish is oozed out by the Hag-fish that a single specimen, placed in a bucket of water, will soon convert the fluid into a thick mass of whitish jelly.

Whitewing

Continued from page 5

years. The young that are produced in such counties as Uvalde, Medina, Frio, Bee, Goliad are now of increasing importance. We hope that much of the brushland that is fifty or more miles North of the Rio Grande, and that will likely remain in brush for many years, may eventually become the major producing area of the Texas white-wings. But this cannot be accomplished unless the birds are completely protected in these areas until they have built up a considerable population. After all at the present time 90 per cent of the white-wing that are killed each season are being taken in Willacy, Cameron, Hidalgo, Starr, Zapata and Webb Counties. This reveals that a great sacrifice of shooting would not occur if there was no white-wing harvest in the other counties. But, because the flights of white-wings produced in the counties bordering the Rio Grande might shift on account of food conditions, the Game Commission has fixed the White-Winged Dove Zone to include Cameron, Willacy, Kenedy, Hidalgo, Brooks, Starr, Jim Hogg, Zapata,

Webb, Maverick, Dimmit and LaSalle Counties.

If all goes well with the efforts of the State and Federal authorities and we get the necessary co-operation from sportsmen, the indispensable support and tolerance of the landowners, it may not be many years until white-wing shooting can be permitted over more South Texas counties. We hope the population of the birds can be increased to a million and that we will be justified in taking a larger annual harvest.

There are hundreds of sportsmen in this State who believe that shooting the fast-flying white-wing is the acme of all sport afield. There are hundreds of nature lovers who delight in watching the courtship antics of these birds. Their ears are pleased by the doleful hooting of the white-wing, whose notes are translated, "Who Cooks for You!"

Dr. George B. Saunders, biologist of the U. S. Fish and Wildlife Service, in a recent issue of "Agriculture in the Americas" wrote:

"The white-winged doves that breed in eastern Mexico and southern Texas journey each autumn to wintering grounds in Central America. In April the flocks return, following the Pacific coastal plain northward to the Isthmus of Tehuantepec, crossing at or near the natural pass to the Gulf coastal plain, along which they have nesting grounds northward to southern Texas. At the height of migration, as the flocks pass overhead, the observer is again reminded of the stories of passenger pigeon flights of old.

"The eye-catching arc of white across the middle of each wing identifies the bird in flight. It is one-fourth again as heavy as the average mourning dove and appears even larger because of its sturdier build. Viewed at close range, the adult white-winged dove is a most pleasing combination of soft grays and browns, accented by the brilliant coral red iris, glossy iridescence on the sides of the neck, contrasting black flight feathers and white wing band, and carmine legs and feet.

"... The flimsy nest is built by the female or twigs brought to her one at a time by the male. Two cream-colored eggs are laid at each setting and the parents share the duty of incubation, which last two weeks. The nestlings are fledged at about two weeks of age and by the time they are four or five weeks old they are weaned from parental care and join the adults in flights to food and water. During the nesting season in Texas from one to three or more settings of eggs are laid by each pair, but predators take a heavy toll. Most pairs succeed in raising only one brood of young each season.

"In September when the first so-called "northers" sweep across Texas, some white-wing flocks begin their journey southward. By mid-October almost all are on their way to sunny wooded valleys of the Pacific coast in Central America."

Antelope Hunt!



Present indications are that the hunt will be held on certain designated ranches in Culberson, Hudspeth, Jeff Davis, Presidio, Brewster, Pecos, El Paso, Reeves and Terrell Counties. The hunt will be held in October. It is likely that a series of hunts will be held; and that no hunt on a single ranch will be for longer than three days; therefore, you cannot expect an antelope hunting permit for longer than three days. Each hunter will be limited to one buck antelope to be taken from a designated ranch.

The cost of the antelope hunting license to be obtained from the Game, Fish and Oyster Commission, is \$5.00. The land owner on whose property the antelope are to be hunted will make a charge of not to exceed \$25.00 to each hunter. Each hunter will be expected to provide his own camping facilities or to arrange to stay at a hotel or tourist camp near the hunting grounds.

A hunter, who desires to participate in the drawing for a permit, will use the enclosed application blank and mail it to this office with his check for \$5.00. Only a limited number of permits will be awarded. Those whose names are drawn will be notified and sent the antelope hunting license. Those who are un-

successful will be notified and have their checks returned to them. Each person hunting antelope will hunt under the supervision of a representative of the Game, Fish and Oyster Commission and in accordance with specific rules, which will be later provided by the Game, Fish and Oyster Commission, and shown on the antelope hunting license. The antelope hunting permit will not be transferable, and an application for a license will not be cancelled after the drawing for permits is held. The drawing for permits will be held about the first of September so that each successful applicant will have at least a month's notice.

So far as possible, we will give requested preference to the successful applicants as to the place that they desire to hunt and the members of their hunting party. It is assured, however, that every successful applicant will be assigned a place to hunt where he will have a chance to kill one large buck antelope. No other game will be permitted to be killed on the property where the hunt is being conducted at the time of the hunt.

WM. J. TUCKER, Executive Secretary
Game, Fish & Oyster Commission
State of Texas



**CLIP THIS
APPLICATION**

Now

**AND SEND IT IN
WITH CHECK
OR MONEY ORDER
FOR \$5.00**

APPLICATION FOR ANTELOPE HUNTING PERMIT FOR SEASON OF 1944

GAME, FISH AND OYSTER COMMISSION

Austin, Texas

Gentlemen:

I herewith enclose my check for \$5.00 in payment for one 1944 Antelope Hunting License in the event that I am a successful applicant in the drawing that is to be held this year.

Herewith is the required information in connection with my application:

NAME _____

ADDRESS _____

HEIGHT _____ WEIGHT _____

COLOR OF EYES _____

PREFERENCE OF PLACE TO HUNT _____

WITH WHOM DO YOU DESIRE TO HUNT? _____

Sign Here _____

THINKING OF BUYING A WAR BOND?



Men Are Dying While You Make Up Your Mind

They don't ponder and weigh . . . analyze the order and make up their minds what they will do. Their only choice is to obey . . . to face the fire . . . to listen to the screaming shells . . . charge through mud and wire entanglements . . . see comrades fall at their side . . .

Their lives hang in the balance . . .

One minute they think of home and the kind of lives they want . . .

Next minute they claw the earth for cover . . . sweat and swear . . . maybe writhe in pain . . . pray for mercy . . .

Over the din of battle their call to us comes clearly: "Back us with everything you have; give us the tools and we'll do the rest."

Do we need to ponder before making up our minds?

Back the Attack — Buy More Than Before.

INVEST IN INVASION