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# TEXAS Game AND Fish

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



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**ROGER M. BUSFIELD**  
Editor

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**KING**



of

Tackle Busters



By J. L. BAUGHMAN

**H**ERE in Texas we call 'em reds. Over in Louisiana you might hear a bayou Frenchman say something about "Dat poisson rouge." In Mexico they seem to think that "pez colorado" is the ticket, while the F. F. V.'s dignify him with the name of Channel Bass. Old Man Sciaenops Ocellatus (to get technical about it) is a gentleman of distinction, and a tackle buster in any language.

A member of the roncadore or croaker family, whose members are found in warm seas throughout the world, Sciaenops confines himself strictly to the Americas, where may be found some of his more notable cousins, also. Among others are the totuava, a hundred and fifty pounder from the Gulf of California; the white sea bass, a hundred pounder from Catalina Island and the surrounding waters; and the common squeateagues or sea trouts and drums of the Atlantic and Gulf coasts.

Reds have been described so frequently that it is hardly necessary to repeat. However, for the benefit of those who have never seen one, look for a fish shaped much like a northern kingfish or whiting, only slightly more blunt in profile. The back is washed with bronze, which extends over more and more of the fish with age; the sides are silvery bronze; the belly, almost white, especially in the smaller specimens. The truly distinguishing feature by which the fish may be known from all others of the family on the Atlantic and Gulf coasts, is a black spot about the size of a dime, found on either side of his body, at the base of the tail. This spot may be multiple in some cases. The fish sometimes reaches a weight of 75 pounds. Their range is great, extending from New Jersey in the north to Panama in the south, wherever sandy coasts form the shoreline. It is not found where the formation becomes rocky. However, with the possible exception of a short stretch on the East Florida coast, around Biscayne Bay, and again at Key West, they are common to almost the entire Atlantic and Gulf Coasts at certain seasons of the year. Whether they are truly migratory is not as yet known. It is true that their first spring appearance on the Atlantic coast north of Florida is around Charleston, South Carolina, generally in

March, and from there their arrival becomes later and later the farther north you go along the seaboard. New Jersey anglers begin to look for them about the middle of June, and they are taken from then on to the latter part of October, unless early seasonal storms cause their disappearance sooner. Off North Carolina they are caught as late as November, but from the Indian River in Florida on to Key West, and on the Gulf Coast, as far south as Panama, they are caught throughout the entire year, and in Texas furnish a very valuable proportion of the commercial catch.

It has been established by Jordon and Evermann in studies at Indian River, and by Pearson in his observations on the "Conservation of the Redfish and other Commercial Sciaenids of the Texas Coast," that there are seasonal movements at both of these places. These movements do not seem to entail any great amount of travel, however, the fish merely moving into deeper water with

weight increasing accordingly. The smaller fish, up to about fifteen inches in length, are known by Texas fishermen as rats, or rat reds.

At the end of the first year they join the seasonal movement of the older fish, leaving the sheltered waters where they have spent their early lives. They return each year to the bays and shallows of the coast until they are four or five years old, at which time they reach sexual maturity, and have attained sufficient bulk to make deeper water and more food a necessity. They then join the schools of larger fish which frequent the offshore waters and which, at times, contain enormous numbers of fish.

Curiously enough, while usually a very shy fish, the noise of a passing launch or the thumping of an incautious foot on the bottom of a boat being sufficient to put a school down immediately, at times they appear absolutely insensible to the presence of danger. A friend of mine once told me that while fishing in Aran-

**"Old Red" Is Known By Many Names but He Is a Gentleman of Distinction and a Worthy Foe**

the advance of the cooler weather, returning to the bays and offshore bars with the arrival of spring. It seems entirely probable that further study of the eastern fish will show that they do not migrate either, but that their appearance in the spring is merely a seasonal movement inshore from the deeper waters of their winter home, and that the time of their arrival is governed by the rising temperature of the ocean waters. The spawning habits of the northern fish are not known, but Pearson states that along the Texas littoral this takes place in October, the fish congregating off the mouths of bays and passes where the spawn is deposited and the young fish hatch. Swept from here into the more sheltered bays and inlets by the action of the tides and their own efforts, the young fish spend their first year in this environment. Growth is rapid. Their length at the end of the first twelve months is thirteen inches, with a gain of six or seven inches in the second year, three the third, three or four the fourth, and about the same the fifth, bulk and

sas Bay off Rockport, Texas, that he and three other men encountered such a school feeding in a shallow bay. As they waded among them, with the fish brushing their feet and legs, the waters appeared bronze from the great numbers of reds that were present. The school was of bull reds, as we call the larger fish and he thought that they would average between twenty-five and thirty pounds apiece, as most of them appeared to be over the legal length. I do not doubt that this happened, but I do not believe that it would have been possible had the fish not been so engrossed in the pursuit of their feed (a school of small mullet) that they were oblivious to any danger.

Although such behavior is not unheard of among blues and jackfish, but one other case of this sort has ever come to my notice in connection with reds. In an outdoor magazine of a few years back a very clear description is given of a school which had surrounded a mass of menhaden and forced them into a

★ Continued on page 27

# What Predation Means

**Every Wild Creature Hunts, or Is Hunted By Some Other Creature, to Kill or to Be Killed for Food**

**P**REDATION is the act by which one animal gets all or part of its food by killing and eating other animals. When any creature gets most of its food that way, it is called a predator. Many animals—birds, mammals, fish, and others on a lower scale of life—are predators for all or part of their lives. This is a natural way of living, for all nature is geared to the principle of “eat, and be eaten.”

Yet we don't often think of predators and predation in this way. The popular idea is that the only predators are things like hawks and wolves and foxes, and that predation is the killing of game, poultry or livestock by such animals. This belief makes it easy to think that any predator is harmful; that the bad habits of an individual are shared by the entire species, and that the only good predator is a dead one.

In the same way, the common idea of predator management (often called “control”) is that it means killing certain wild animals to keep them from destroying other creatures that we value more highly. It is true that this is sometimes necessary, but killing predators to control damage is a very small part of good management. Much more important is that fact that by far the most of the predators are of great value to us, by far the most of the time. Good management of game and livestock must take this fact into consideration. This is because predation is one of the fundamental laws of life. Like all natural laws, we can work with it to our advantage; working against it can bring only disaster. To preserve the benefits of predation, and at the same time to control those aspects of it that might cause us trouble, we must first understand it and know its place in nature's plan.

The first thing we should know about predation is how universal it is. Every wild creature hunts, or is hunted by some other creature, to kill or be killed for food. This struggle for life is going on every minute of every hour, day and night, in the woods and fields and streams that lie outside our doors. Man takes part in it when he hunts or traps or kills to protect his tame animals from attack by wild ones. Thus from the tiny, one-celled bits of life sought by minnows in a pond, to the large animals hunted chiefly by man, no living thing escapes the shadow of this struggle. *Predation is a universal law of life.*

The next thing we should know about



**THE ONLY WAY to reduce predator damage that we cannot avoid is to kill those individual animals that are doing it and the coyotes in the above picture were guilty of killing young livestock and sheep.**

predation is its importance to us. First and foremost, it is nature's counterbalance to the great reproductive power of most wild things. It is nature's insurance that no one species will crowd out all others and over-run the earth. We need this insurance: The reproductive power of most species is too great for us ourselves to control; the destructive power of any species out of control is too great for us to stand.

The common rabbit provides a simple example: There are ordinarily about 6,000,000 rabbits in Missouri's fields and woods. That is 3,000,000 pairs, and a normal crop of young is 18 per pair each year. If they all lived, next year the population would be 60,000,000. In two years, the figure would be 600,000,000—in three years, six billion rabbits would be a gray living blanket over fields and woods where not a single spear of green vegetation could grow.

Things seldom go quite that far, but they have come dangerously close to it.

Rabbits introduced in Australia found few natural enemies. As a result, they increased so fast that in spite of every effort to control them, they caused much greater damage to crops and all palatable vegetation than they ever have in America. They are still doing so, because all the trapping, shooting, and poisoning that has been tried cannot keep their numbers down.

This is just one example of the fact that predators are useful and necessary. Rabbits are but one of many wild species that man could not control without help from nature. What happened in Australia could happen in Missouri: It could happen with rabbits, and with mice and rats and a host of other species that by becoming too numerous would endanger our crops, our health, and our very lives. The main reason it has not happened here is found in nature's automatic traps—the predators—which account for most of the young of these species before they ever grow up.

There is another way in which predation is important to us. It is nature's way of getting rid *usefully* of the weak, the stupid, the stunted and the diseased



**By W. O. NAGEL**

★ *Continued on page 28*

# The Spotted WARRIOR

**Houston Fishermen Know Spanish Mackerel Are Running When Uncle Charlie Bering Makes His Annual Offer: "A Dollar to a Nickel They Catch a 'Mack' Before Easter"**

**By JACK BOWMAN**

SPANISH mackerel are eagerly awaited each spring by Houston's salt water fishermen, and one of the surest signs of the season among the angling fraternity is when Uncle Charlie Bering comes out with his perennial offer "A dollar to a nickel they catch a mackerel before Easter."

He is not often wrong.

This spotted warrior of the great waters generally turns up on our coast about the middle of March or the first week in April, and from that time on may be present as late as December, although catches in the last three months of the year are rather small. A large and showy fish, which may reach a weight of 25 or 30 pounds, it appeals to the lover of beauty with its gold-flecked, silvery sides, which enhance the metallic blue of the back, and may stand as a typical example of the mackerel tribe, represented in Texas waters by the wahoo, the bonito, and king fishes, and the tuna.

Over a century ago a New York writer spoke of the "blew fish or hound fish, 2 tiful fish—comes in July." Even earlier than that we find John Josselyn, Gent., speaking of it in that famous work "New England's Rarities Discovered in Birds, Beasts, Fishes, Serpents, and Plants of that Country, etc." This was published in 1672, and in it Josselyn spoke of the "blew fish or hound fish, 2 kinds, the speckled hound fish and the blew hound fish, or horse fish," which, according to Goode, could have been none other than the Spaniard. Prior to 1850, however, little was known of them, and at about this time Mr. Robert Lloyd, trolling for blue fish, secured quite a number of Spanish Mackerel, the first he had ever seen. Carrying them with his blue fish to one of the New Jersey hotels with which he had an agreement for the sale of his fish, the proprietor, knowing nothing of mackerel, refused to take them at any price. Even as late as 1880 dealers on the North Carolina coast refused to buy several thousand pounds which were brought in to Wilmington, supposing them to be of no use for food.

Distributed from Maine to the Argentine Republic, mackerel have even been reported from as far north as the Gulf of St. Lawrence in Canada, and is especially abundant in the Gulf of Mexico and the West Indies, but up to a few years ago had never been reported from Cuba. Earll says it spawns during the entire summer, and spawning grounds on the east coast center about Chesapeake Bay, where some effort has been made to propagate these fish artificially. On the Texas coast, although fish are present throughout the entire summer, very small mackerel do not seem to occur, although considerable effort was made during the past year to obtain some for the Rice Institute collection of fishes.

A close relative of the Spanish Mackerel is the spotted kingfish, also called king mackerel, and so closely does it resemble the Don that it is hard to distinguish between them. However, the black on the first dorsal of the Spanish mackerel extends clear down into the groove in which the fin folds, while with the kingfish, or king mackerel, the black is found only on the tip of the fin.

Reported as an inhabitant of tropical seas, ranging from Massachusetts to the Argentine, and from Texas to North Africa, this fish was first described in 1695 by Bloch, an old German naturalist, whose writings have a strangely modern sound. This fish, he says, occurs in "both the East Indies and in the West Indies near the Antilles, and it is reported that it ordinarily lives between the islands where the current is very swift, that it is very voracious, that it bites on a hook baited either with bacon, or crab meat on a piece of wood; that it swims very rapidly and can overtake a boat from a considerable distance when it perceives the hook. It will break the line if it is weak and has no iron wire.

It is eaten either fresh or salted or pickled. The sea is its ordinary habitat. Nevertheless it migrates into the rivers.

Another member of the tribe which is common on the Texas coast is the king fish found at the snapper banks. This is the largest of the immediate

family (being outdone only by the wahoos and the tunas) and it grows to 6 feet in length and has reached a weight of 105 pounds. Its range is similar to the other two, extending throughout the tropical Atlantic and occurring in immense numbers, both about the Florida keys and off the Texas coast, and ranging south to Africa and Brazil. Some are caught on the Alabama and Mississippi Coasts also, but does not seem to frequent Louisiana waters to any extent, probably because of their muddiness, all mackerels being blue water fishes.

This fish is common off the Texas littoral during the summer frequenting reefs at Port Arthur (Sabine Bank), Galveston (Heald Bank) and various reefs at Freeport. So far at Aransas Pass it has been reported only from around the jetties, but it is probably also present on Hospital, Baker, and Aransas reefs in that locality. The Mexican Servicio de Pesca say that this fish occurs on the Campeche Banks, and off the coast of Quintana Roo. Mr. Martinez, a resident of Merida, Yucatan, says that it is present in those waters throughout the entire year, and that much trouble is occasioned by fast sailing Cuban fishermen who seek the kingfish for the Havana markets. They are also caught at Belize, British Honduras.

The earliest appearance on the Texas coast during the last three years was at Freeport on April 18, 1939. The same day in 1939 one was caught. May 2, 1940, one was reported from 4 miles offshore at Aransas Pass. The heavy run started at Port Isabel on May 14, 1940, and on June 3, a school estimated to cover a square mile was reported from the same area.

Fish caught on June 2 were full of spawn, not quite ripe, but so far it has not been possible to obtain specimens throughout the season. No immature fish have been taken, the average being from 24 inches to 30 inches in length, and 5 or 6 pounds in weight, especially early in the season. Towards the latter part of the season larger fish are apt to be taken.

Mr. John T. Connell, who operates a fleet of charter boats out of Gulfport, Mississippi, and who for many years has kept records of our Gulf fishes, believes that there are two runs, one up the West Coast of Florida, which follows the coast towards Texas; the other originating in the region of the Yucatan peninsula and following the west coast of the Gulf, but having no connection with the Florida run. This is conjecture, but probably not far out. Mr. Connell believes that the kingfish spawn off Yucatan, but this does not seem to be correct. The great proportion of the Texas catch consists of adult females very nearly in spawning condition as early as June, and while they appear to be migratory along most of our coast, the schools keeping to the open sea, at Galveston, Freeport, and Port Arthur they congregate in such huge schools about the reefs that thousands may be caught in a single day by

★ Continued on page 25

TEXAS GAME AND FISH

# Federal Aid for State Hatcheries

EVER since the enactment of the Pittman-Robertson Act providing federal aid for State game projects it has been the dream that a similar law would be passed for State fishery restoration projects. The late Frank Buck, a California Congressman, introduced such a bill about six years ago and later Senator Clark had a companion measure in the Senate.

Neither one of these bills received the approval of Congress—the first because of opposition from the fishing tackle manufacturers and the second because of the intervention of the war.

Recently Congressman A. Willis Robertson, diligent chairman of the House Select Committee on Wildlife Resources, introduced in the House H. R. 7104, which again brings this important subject before the Congress.

This new Robertson bill is similar in philosophy to the Pittman-Robertson Act. The new bill provides federal aid for State fishery projects while the old act gives the aid to game projects.

Section 2 of the bill provides that "fish-restoration and management projects" to which federal aid may be applied are those "which have material value in connection with sport or recreation in the marine and/or fresh water of the United States," and includes (a) research into fish management and culture, (b) the acquisition of facts needed to guide and direct the regulation of fishing, (c) restocking waters with food and game fishes and (d) the rehabilitation of and improvement of fishing waters.

In order to provide the necessary federal funds to pay its 75 per cent share of the cost of any project approved by the Fish and Wildlife Service the bill earmarks the present excise tax of 10 per cent on "fishing rods, creels, reels, and artificial lures, baits and flies," imposed by section 3406 of the Internal Revenue Code, effective October 1, 1941. The law now does not tax "lines," and to include this item would necessitate amending the Revenue Act. What amount of revenue this will produce is speculative. Some estimates place it at \$500,000, others at a million dollars or more.

Each State which gives its consent to the law will participate in the fund in an amount arrived at by the formula set up in the bill as follows: 40 per cent in the ratio that the area of the State bears

to the total area of all the States and 60 per cent in the ratio that the number of fishing licenses issued by the State annually bears to the total of such licenses in all the States.

No State, however, shall receive more than 5 per cent of the total fund nor less than \$4,500 if it puts up \$1,500.

Eight per cent of the fund is set aside for federal administration of the Act.

Any project proposed by the State fish and game departments must be approved by the Fish and Wildlife Service before federal aid will be given.

In case any allocation is not taken up or fully used it reverts to the Fish and Wildlife Service for carrying out its fish-research program.

Engineering items and expense can-

## NEVER A HOOT HOOTS HE

The owl is a gentleman  
Of downright fascination;  
He opens his eye and shuts his  
mouth  
And gains his reputation.  
—Iowa Conservationist.

not exceed 10 per cent of the cost of the project.

The Federal government pays 75 per cent of the cost of the project, the State 25 per cent.

After July 1, 1950, maintenance of projects heretofore completed may be considered as projects and not more than 25 per cent of the State's annual allotment from the funds shall be available for this maintenance.

The Secretary of the Interior is given authority to make the necessary rules and regulations for carrying out the provisions of the Act and must make an annual report to the Congress giving detailed information regarding projects.

The above are briefly the essential details of the Robertson Bill. The Pittman-Robertson Act has worked well for game within the States and there is no reason to believe that this bill aimed at fishery restoration should not work equally well.

The only fly in the ointment is the attitude of the fishing tackle manufacturers' association. When Frank Buck

introduced the first bill on this subject there was no excise tax on fishing tackle. The bill, itself, imposed such a tax. It was bitterly fought by the tackle manufacturers. By resolution of their organization and by appearance of their officers at the hearings conducted by the Merchant Marine and Fisheries Committee of the House the bill was condemned and the specious plea for the barefoot boy was used as an argument. It was shown by one of their own members that the average purchase of the average fisherman for "rod, line, reel and lure" was 89 cents. A tax of 10 per cent on this would be just under 9 cents—not a heavy burden on any sportsman. Of course it was pointed out that many—a great many—spend far greater sums annually. This would, perforce, reduce the amount purchased by the "barefoot" boy to a still smaller sum. In spite of much support in favor of it the Buck Bill was allowed to die in Committee.

In 1941 a ten per cent tax was placed upon the several types of fishing tackle mentioned above by the Ways and Means Committee of the House in the Internal Revenue Act of that year. This the manufacturers of tackle paid directly into the United States Treasury for credit to the general fund. This tax later carried a proviso that it should be effective for the duration of the war and six months thereafter. Officially the war is still on.

Sometime after the tax became effective the Associated Fishing Tackle Manufacturers at a meeting in Chicago passed by an overwhelming vote a resolution to earmark this tax for federal aid to State fishery restoration projects in a manner similar to the earmarking of the excise tax on sporting arms and ammunition for game restoration projects. This was in 1944.

In December 1945, the tackle manufacturers met again in New York, at which time this proposal was brought up on a motion to rescind the resolution passed in 1944 at Chicago. However, in spite of considerable discussion in its favor it was finally agreed that the whole matter of earmarking the excise tax for fishery restoration or wiping out the tax entirely be left to the annual meeting to be held in June 1946.

At the June meeting the tackle manufacturers, realizing that the official end of the war must come within a matter of months and that the 10 per cent on tackle would automatically go off six months thereafter, again brought up the 1944 Resolution. A motion was made to rescind the Resolution of 1944 favoring the earmarking of the tax and by a bare majority the motion to rescind was carried. The Associated Fishing Tackle Manufacturers "now go on record as not favoring the passage of a bill (earmarking a tax) on fishing tackle similar to the Pittman-Robertson Act of 1938" for game restoration.

That is the situation as it stands today. The people who would receive the greatest amount of good from such an

# A Miniature World as Witnessed in a Museum

By J. G. BURR

WHEN the Egyptologists opened the tomb of King Tut-Ankh-Amen in the year 1922 they found there a dire curse pronounced on anyone who would disturb the repose of his mummified majesty. This did not deter the scientists from going ahead with their investigation of all the secrets contained in the sepulcher of the ancient monarch. The curse on the daring participants of the exhumation was, of course, ineffective. They went their way with only the usual vicissitudes in the life of a scientist. The king's hyphenated name, as reported by the newspapers, was usually shortened to "King Tut" and is rightly pronounced "Toot."

There would be no point, ordinarily, in going back 3,000 years to obtain information when so much potential knowledge is lying around loose and going to waste. Instead of the practice of preserving mummies our taxidermists preserve present day species for the expansion of studies in natural history, and that is why nature studies in and out of schools have become more and more attractive.

In all great movements there is usually a man or woman, or a group of men and women of vision and initiative who take the lead. Such groups, if they are interested in that particular phase of nature, promote policies for the preservation of wild species. Important as it may have been in Texas to employ a force of game wardens to protect game, the original pistol-toting variety were not of the type to promote the all-round practice of conservation. There had to be a crusade, not only for game but for the preservation of all wildlife resources. I think it is worth while to look back and note a few of the instances when the vision went into action. Among the early protagonists in nature study were four persons working together who were responsible for a definite start in the scientific study of the wild animal kingdom. The plan had its inception in the schools and museums. As long as men regarded wild animals as merely a target or something to shoot at, there was a decline in species. When they began a study of species, the animal began to have something more than ballastic value, and in this discovery was found the genesis of the thought of conservation. In the over-all picture many persons in the State have made their contributions to these studies, and

some names will later be called, but the four persons referred to have a unique place and a priority in this story.

We live largely in a hearsay world, but this is to be a downright recital of what came under my own observation. Downright, yes, but with a little softening of the details. St. Paul saw and heard things in a vision that were unlawful to utter. Sometimes a mere human is confronted with an enforced reticence concerning things long over-due to be told. Such may be the case now.

In 1922 a graduate student of the University of Texas, George Finlay Simmons, was engaged in writing a book on "Birds of the Austin Region" which was later published by the University. During the summer months he did research work for the Game, Fish and Oyster Commission, exploring the habitats of birds and mammals and dragging seines in the bays to see what was down under

## Exhibits in Major Cities Have Removed Perils and Hardships of Field Trips for Students of Wildlife

the sea. He was an insatiable investigator and was ready to sit up all night, or most of it, to discuss his work. The animal kingdom was his domain and his enthusiasm was infectious. It overflowed, and to put it rudely, he "slopped over and stood in the slop." I asked him one day how it was possible and what was the key to becoming so interested in those subjects, particularly birds. His reply was: "Oh, I suppose the thrill of discovering new species and then blow about it."

Along in 1922 there was a vacancy and Simmons was appointed Chief Deputy of the Game, Fish and Oyster Commission. There was no game board in those days and the executives were appointed by the governor. Hon. Pat Neff was governor at the time and doubtless had heard of the jibe that the game department was a joke. In appointing Simmons to the Chief Deputyship he expressed dissatisfaction at the way things were going. From here on, according to Simmons, he wanted performance stepped up. He wanted results and far better and bigger results than ever before.

Under this mandate Simmons entered

upon his new duties in a hammer and tongs style that put ginger into everybody. Like a crusader he went the rounds and when anything needed tightening he had the wrench. In these rounds he had met Warden R. D. Camp of Brownsville, a naturalist and a man he greatly admired. Camp was a New Englander and a graduate of Harvard. He was also in charge of the nearby bird islands leased by the State to the Audobon Societies, and a collector of birds and mammals for museums.

Why couldn't the game department have a little museum as a public exhibit of wildlife? Mrs. Ellen S. Quillin, a teacher in the public schools of San Antonio, had been thinking along the same line. Her husband, Mr. Roy Quillin, was an outstanding authority on bird life and they were warm friends of Simmons. They were not long in getting together and formulating a program. Camp would supervise the collecting and mounting of birds and mammals. A duplicate set of the mounts was made; one set for the game department and the other for Mrs. Quillin and the public schools, the expense to be on a 50-50 basis. Approximately 40 cases of specimens were produced.

One-half of the cases were lodged with the game department and for the other half Mrs. Quillin had procured the use of an old school house as a temporary museum. A few years later, 1926, the present Witte Museum was established in Brackenridge Park, Mayor John Tobin having obtained from the

city of San Antonio an appropriation of \$75,000. To this was added a like sum in a bequest from Alfred G. Witte for whom the museum was named. The present structure is now full to overflowing, says Mrs. Quillin, the curator, and more space is needed for expansion. A good work has been done, demonstrating how the enthusiasm of a small group can kindle great movements into flaming action. Further endowment is now needed to promote future growth of the institution.

Meanwhile, the little museum in the game department continued to be a show place for visitors until 1936 when the mounts were cleaned up by Walter Weber, and moved into the Texas museum on the University of Texas campus.

While Simmons was thus active as an originator of museums, he was much more than that. As chief deputy of the department he was a ramrod of no mean ability, as already mentioned. His work in taking up slack culminated in a scathing denunciation of Commissioner W. W. Boyd himself. It was evident that the two men could not remain under the

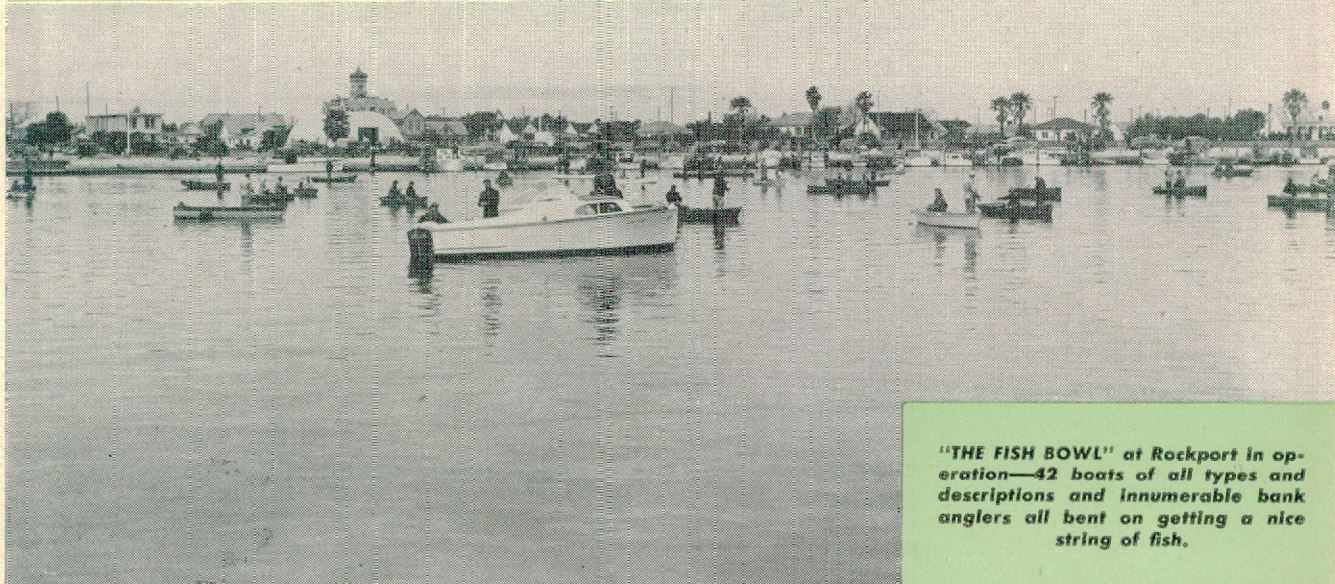
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TEXAS GAME AND FISH

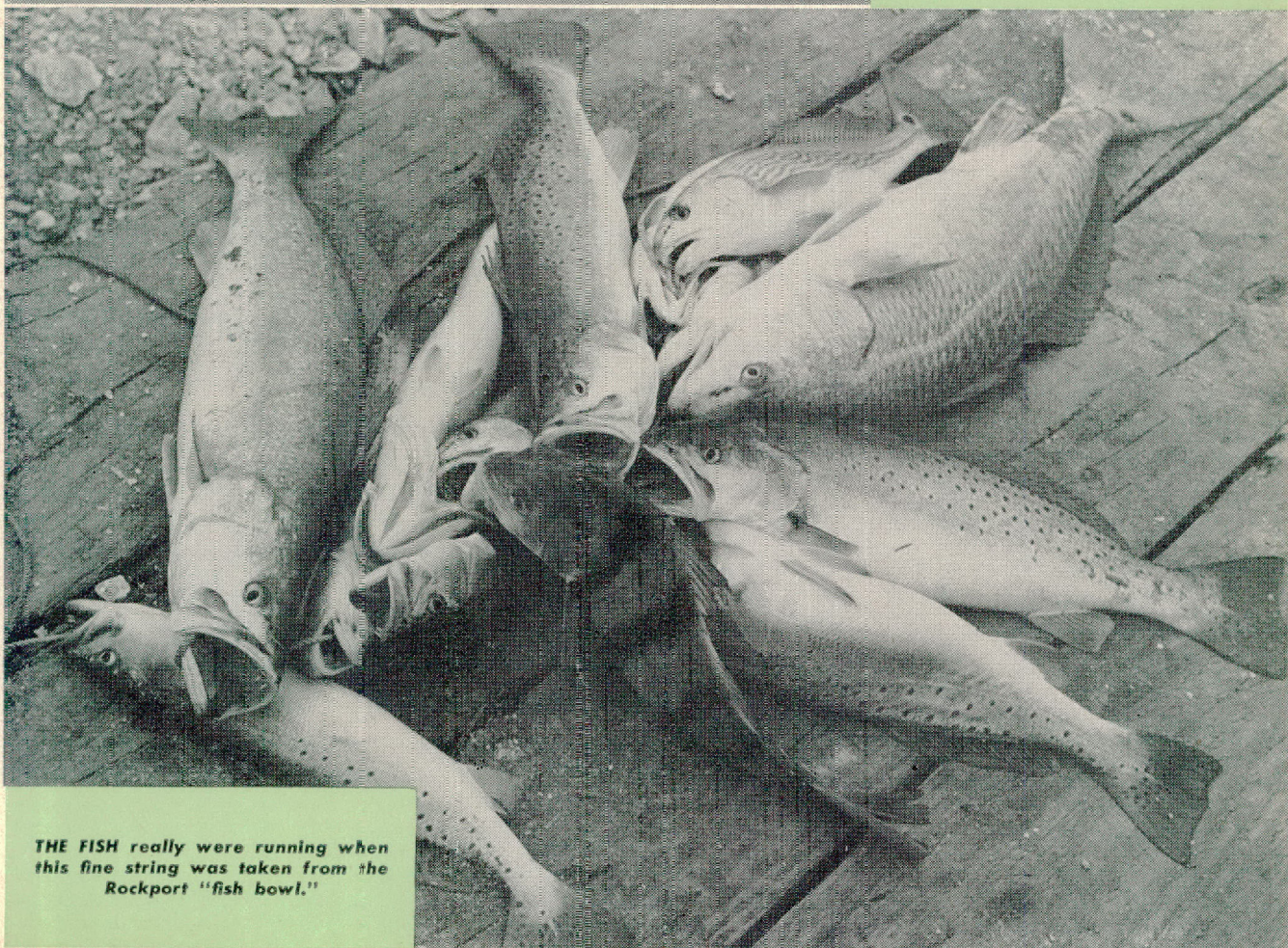


# The Rockport Fish Bowl

Photographs By Jack Blackwell



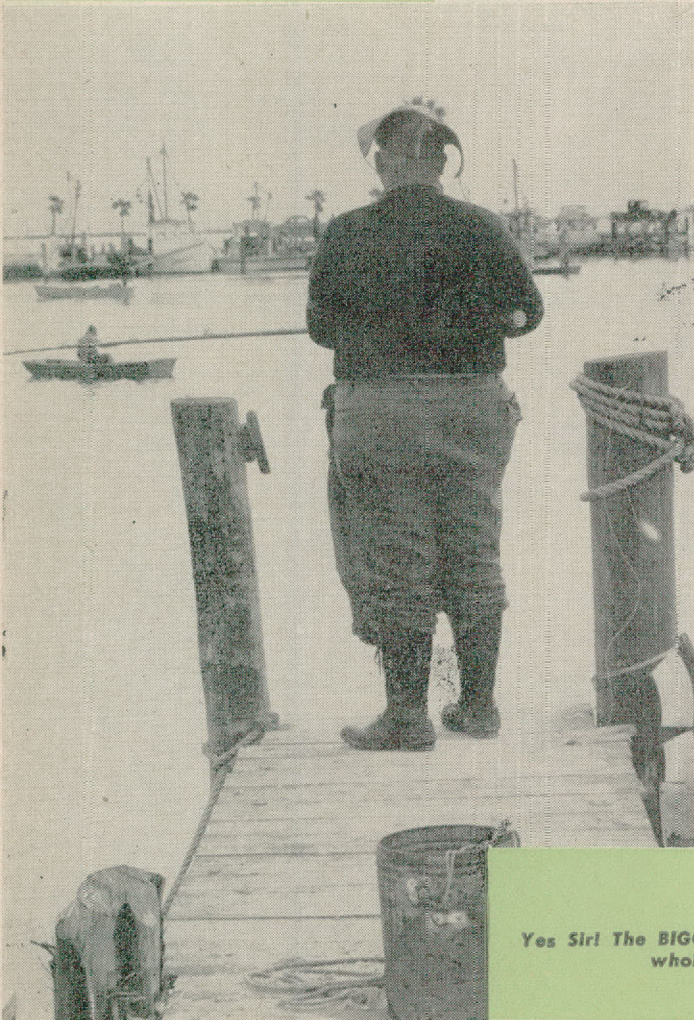
**"THE FISH BOWL"** at Rockport in operation—42 boats of all types and descriptions and innumerable bank anglers all bent on getting a nice string of fish.



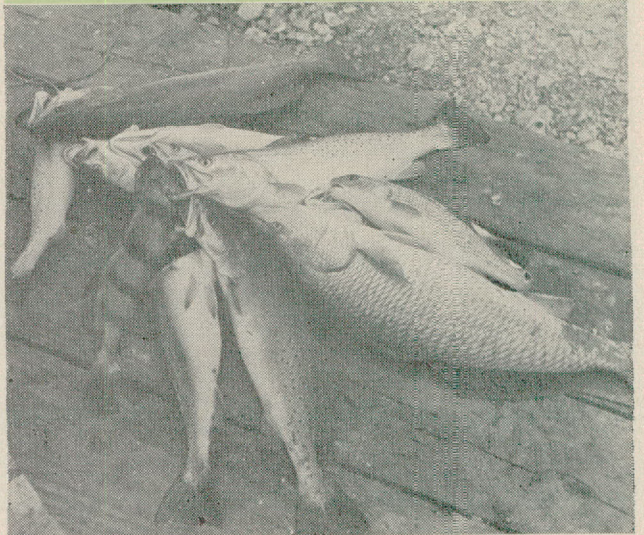
**THE FISH** really were running when this fine string was taken from the Rockport "fish bowl."



**ANGLERS** without boats lined the banks when the fish started running in the "fish bowl" and their efforts were amply rewarded.



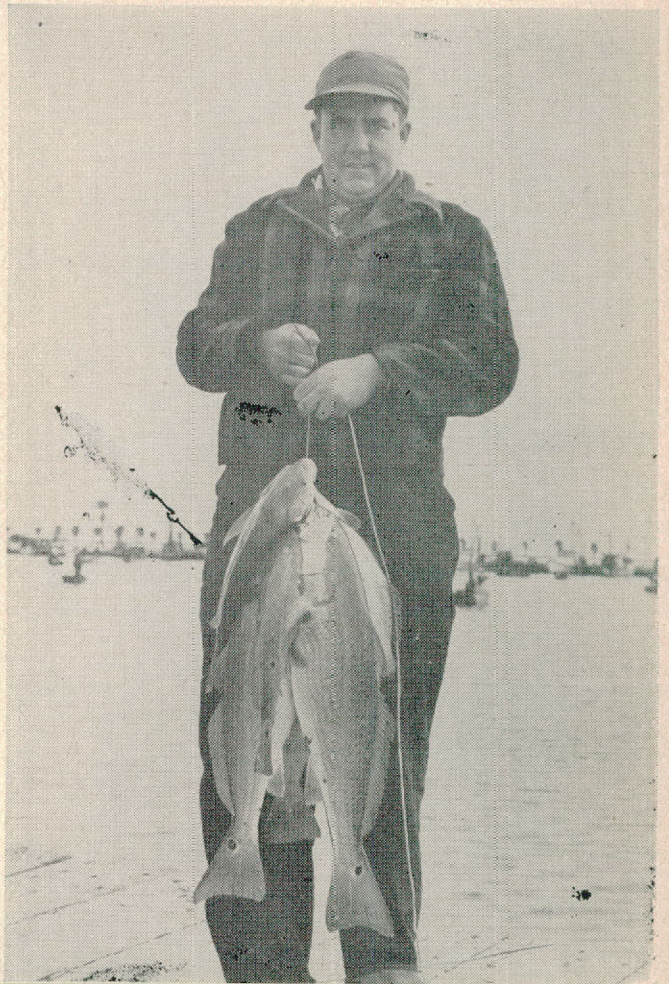
**ANOTHER STRING** of beauties taken from the "fish bowl."



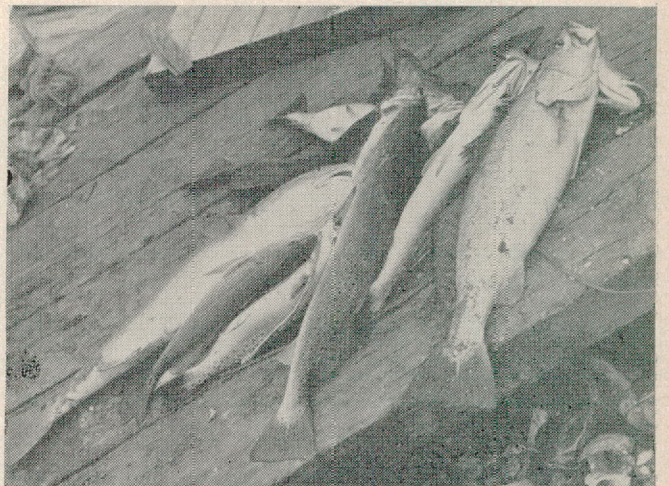
**Yes Sir!** The **BIGGEST** angler of the whole lot.



A. C. STONE, left, of Dallas, and "RUSTY" CROW, right, manufacturer of White torpedo fishing lures, also of Dallas, appear real satisfied with their catch as they paddle toward shore. Their string of trout and reds from the "fish bowl" (lower photo) tipped the scales at an even 300 pounds.



THIS GENTLEMAN is a fisherman—if you don't believe it, just look!



ANOTHER STRING of fish taken from the waters of the Rockport "fish bowl."

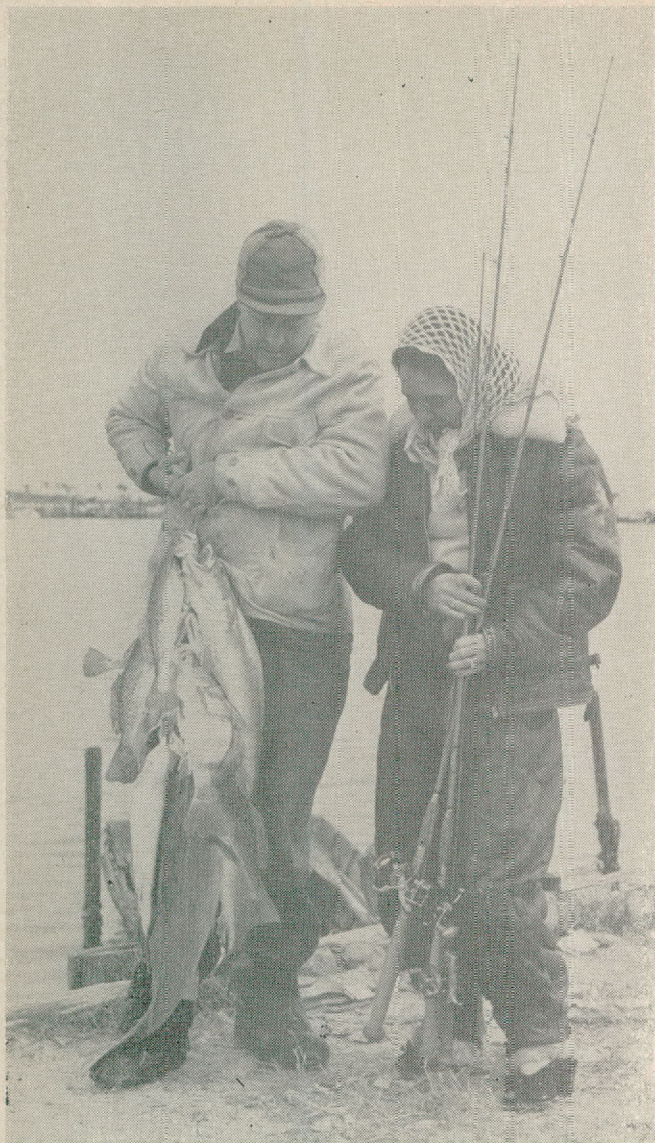
## Loss of Fish Due to Freeze

By J. L. BAUGHMAN

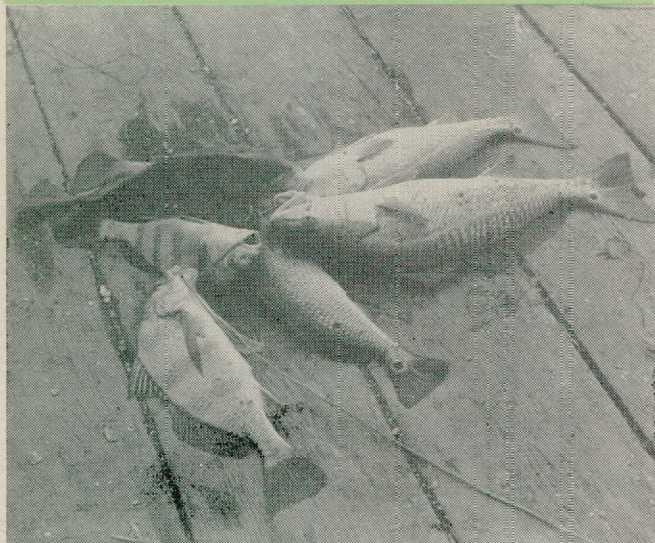
**T**HE Texas Fishing Industry suffered a tremendous blow in January when fish estimated in excess of 8000 tons were killed by cold. Trout, Redfish and Drum littered the shore of the bays for 300 miles. From San Antonio Bay in Texas to the 8th Pass of the Laguna Madre in Mexico fish by the millions littered the shore in windrows. The bottoms of bays and the Laguna were covered with fish that had never come to the top and for miles in the upper Laguna Madre, a boat was never out of sight of floating trout, huge sows, 20 inches to 2 feet in length.

Some idea of the devastation may be gathered from the following figures. At Bird Island in the upper Laguna in ten paces there were 10 one pound Trout, two of 24 inches that would weigh probably seven or eight pounds, and one thirty-inch Red. In another 10 paces

★ Continued on page 31

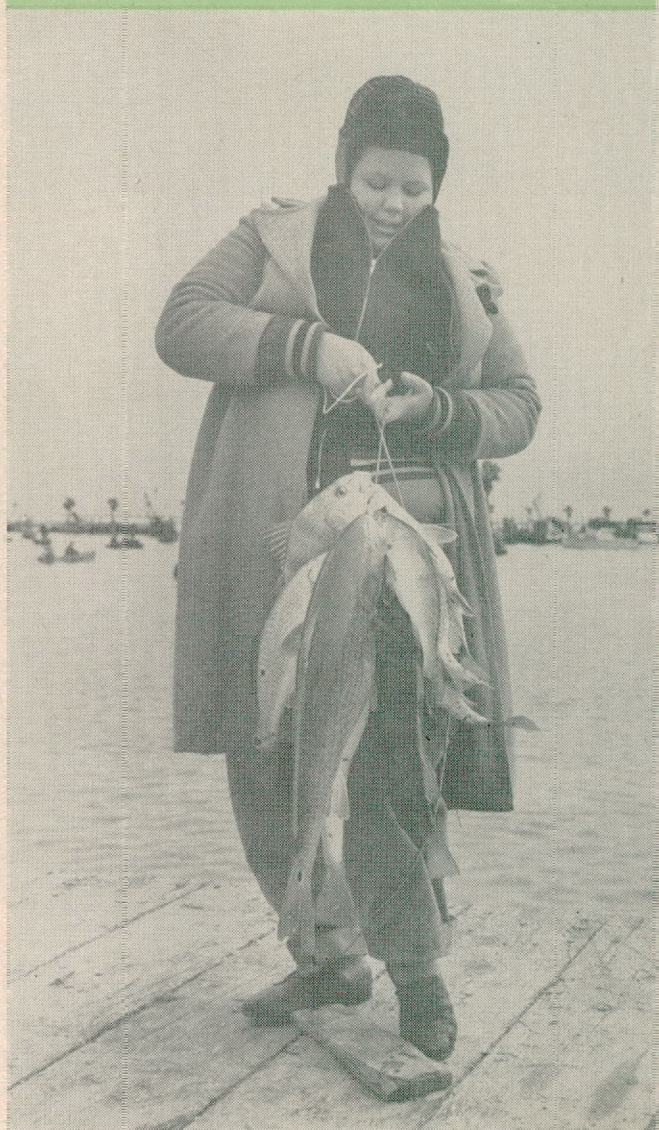


MR. AND MRS. GIBBS MEADOR of Houston after a day's fishing at Rockport.



WHAT ANGLER can resist the urge to reach for the tackle box when his eyes fall upon such a string of beauties.

A LADY ANGLER and the result of her morning's engagement with the Rockport "fish bowl."



**DESPITE** the severe January freeze which killed millions of fish the Rockport "fish bowl" still paid off in a big way. All these photos, by Jack Blackwell, Rockport photographer, were taken the day after the killing freeze.



# What happens in the Laguna Madre

By JOEL W. HEDGPETH

THERE have been many articles in Texas Game and Fish about the Laguna Madre, and with reason, for this narrow coastal bay, which extends from Corpus Christi to Port Isabel, produces 60% of the annual catch of redfish, drum and trout. In spite of this production, the Laguna Madre is a victim of circumstances. Because it lies in a semi-desert area, and has no river drainage into it, it becomes much saltier than sea water. In some years, when rainfall is inadequate and the summer is especially dry and hot, the Laguna, especially the upper half, becomes excessively salty because of evaporation and the fish die in large numbers.

In the past the Game, Fish and Oyster Commission tried to alleviate this condition by cutting passes into the Gulf of Mexico. These did not work because they were on such a comparatively small scale, and could not be kept open against the action of the wind. The story of the Commission's experience with passes will be found in an article by Dr. Gordon Gunter, which was published in Texas Game and Fish for October, 1945.

It was not until the summer of 1946, however, that any real attempt was made to study the salinity of the Laguna Madre in such a way as to shed light on the reasons why passes would not improve its salinity conditions. It is easy to predict, on theoretical grounds, what will happen in the Laguna when circulation is cut off, but many are unconvinced by such theoretical discussions.

Beginning on July 19 of last year, a series of six salinity samples has been taken every week in the upper Laguna Madre. The six localities or stations are so located that they indicate the salinity conditions in the Laguna from Riviera Beach at the head of Baffin Bay to Corpus Christi Bay (See Fig. 1).

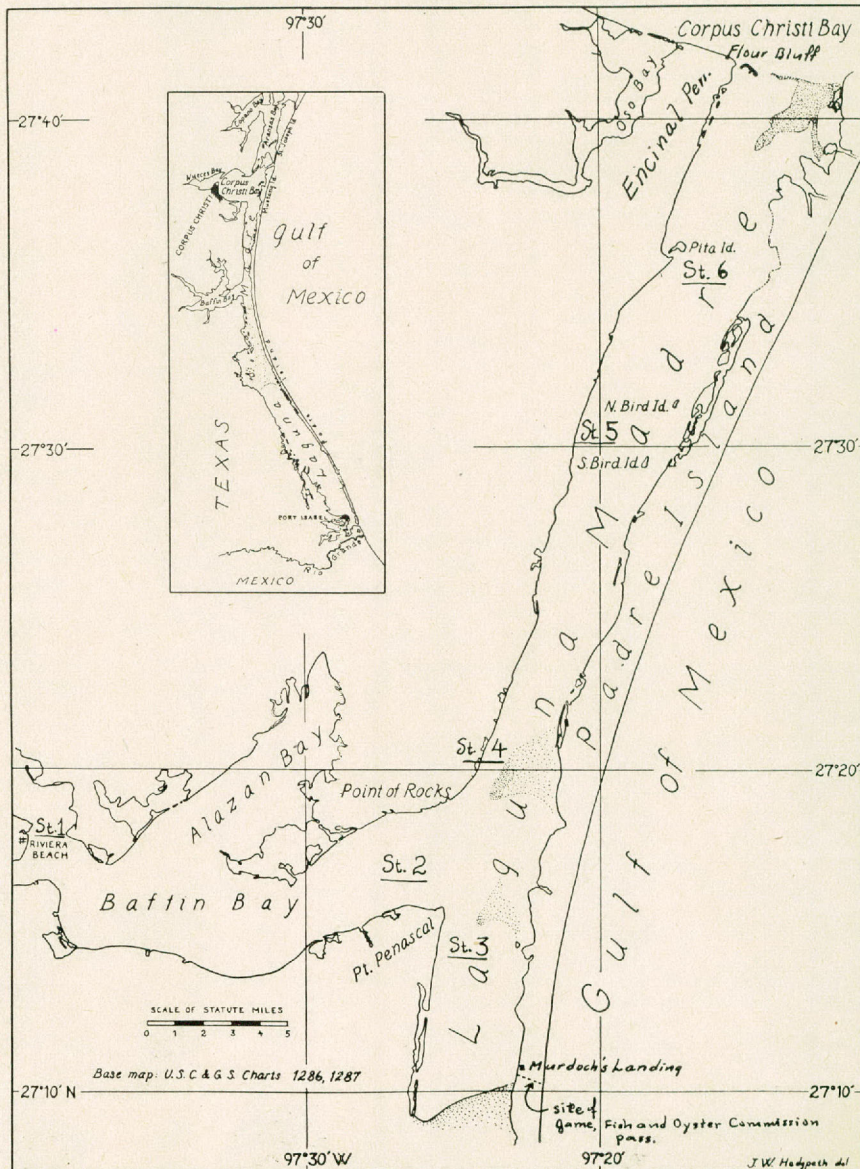
The salinity samples are taken by Captain Bob Tanner, flying warden for the Commission, in his Piper Cub plane. Since the samples are taken within an hour or two, they represent an almost

simultaneous record of the salinity of the entire Upper Laguna. Thus the effect of currents has been eliminated.

In order to understand the meaning of the salinity changes revealed by this continuous series of samples, it is necessary

to review briefly the geography of the Laguna Madre. The entire Laguna is about 130 miles long, and on the charts it is still indicated as a single, continuous body of water. In 1919, however, the severe hurricane which caused so much damage and loss of life in Corpus Christi cut the Laguna in half a few miles below Baffin Bay by shifting sand from Padre Island. Thus the Laguna Madre is divided in half by 35 miles of sand, which is covered by water only during very high tides. Thousands of cattle from Padre Island were buried alive when the storm divided the Laguna.

Since 1919 the salinity conditions have been especially dangerous in the upper half of the Laguna because the bottom of the Laguna rises gradually northward to Corpus Christi Bay, forming a shallow bar just below Corpus Christi Bay which is almost dry during the summer. The greatest depth of the Laguna, incidentally, is about eight feet, near Baffin Bay. There are also shoals and exposed bars in several other parts of the upper Laguna. The most important of these is opposite Point of Rocks, and



MAP of the upper Laguna Madre showing geographical features and salinity stations.

**THIS GRAPH shows the salinity changes in the Laguna Madre during the critical period of the fall tides.**

the effective width of the Laguna at this place is about one mile.

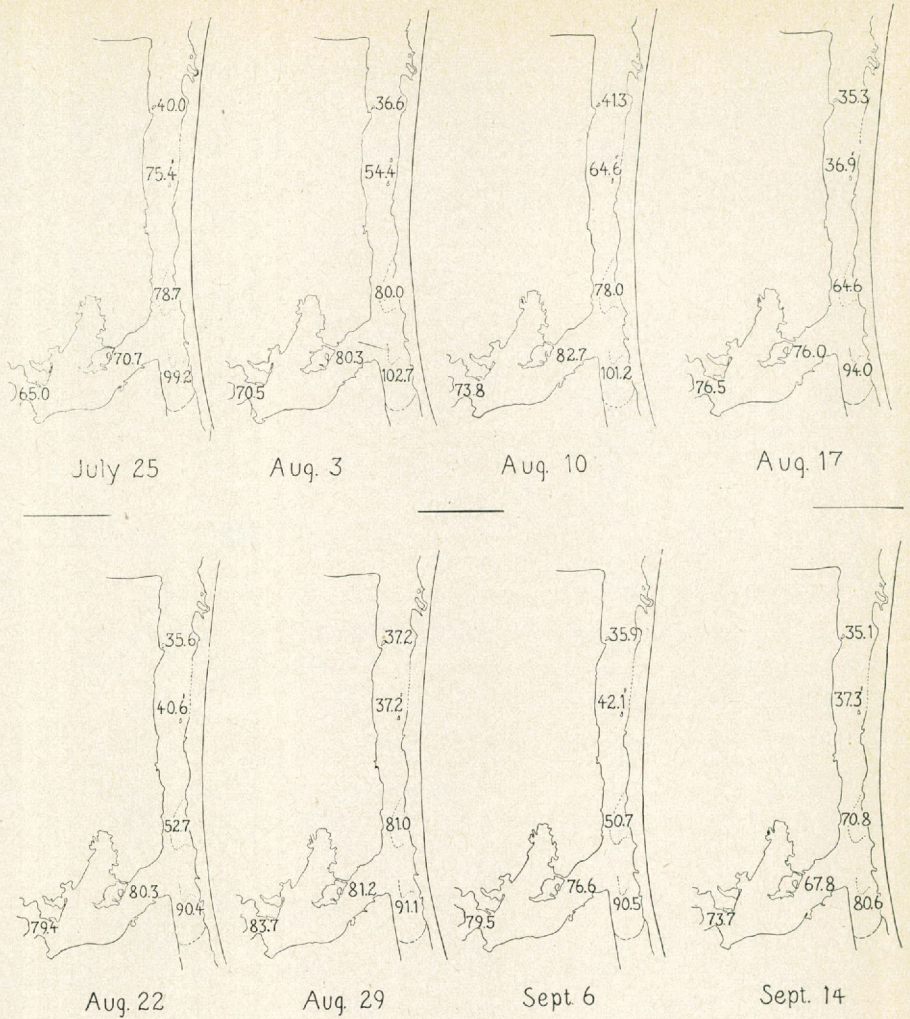
By a fortunate chance, the salinity samples caught the Laguna Madre at the critical time when the high summer salinities are reduced by the high tides of late August and early September. The pattern of these salinities is illustrated in figure 2. In order to understand more completely what these different numbers, which represent the concentration of salt in the water, actually mean, it is necessary to plot them on a graph. This graph is figure 3. It shows that on July 19, when the record began, the salinity of the Laguna was fairly uniform, except for the topmost line, which represents the salinity of the blind end of the Laguna just above the site of the unsuccessful pass at Murdoch's landing.

A week later there occurred a significant drop in the salinity of the station at Pita Island, nearest Corpus Christi Bay. The salinity at this station fell from 74.3 to 40.0 parts per thousand. The record of the tide in Corpus Christi Bay shows that at this time the tide began to rise as indicated by the dotted line through the tidal graph at the bottom of figure 3. As the tide continued to rise, the next station down from Pita Island began to fall. A week later, a slight sag in the tide caused the salinity at both stations to rise again, but on the following week, on August 10, a further tidal rise made its effect felt as far south as Point of Rocks. In them meanwhile, the salinities below Point of Rocks remained high.

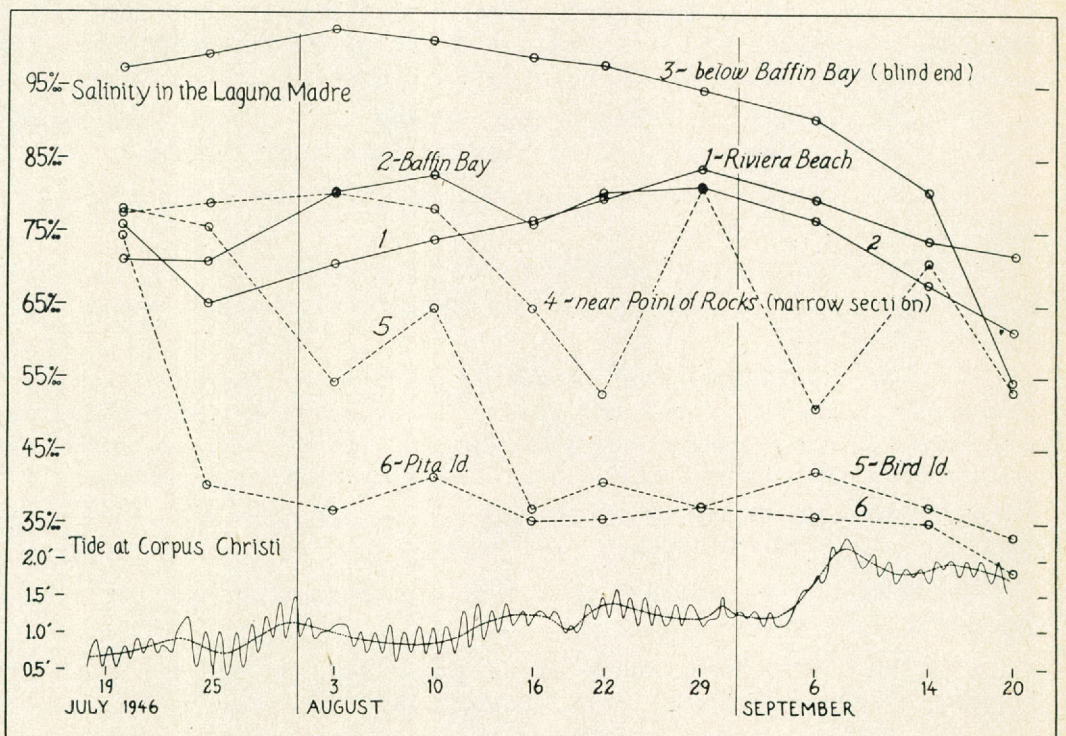
After August 22, an interesting thing began to happen. The tide stopped rising, so there was no pushing of water from Corpus Christi Bay until the tide began to rise again after the first of September. During this time the salinity at Point of Rocks, where the Laguna is about a mile wide, increased. Then, as the tide rose or fell, the salinity of this narrow region began to rock back and forth. At the same time, the salinities in Baffin Bay and the blind pocket began to decline. Finally, in October, the salinities in the Laguna became divided in two parts, with the salinity in the Point of Rocks area joining the higher group

★ Continued on page 30

**THIS GRAPH shows the relation between tide and salinity changes in the Laguna Madre. Note how rises in tide cause lower salinity and how fall or absence of low tides cause salinity to rise.**



Salinity exchange in the Laguna Madre, 1946



# THE LEGISLATIVE FRONT

Newsletter

for

March, 1947

## FOR YOUR INFORMATION:

### NEW GAME AND FISH LAWS

H.B.271. Sets the number of hooks on a trotline in San Saba County at 20.

H.B.123. Now lawful to kill javelina at any time in Dimmit, Frio, La Salle, Medina, McMullen, Starr, Uvalde, Webb, Zapata and Zavala Counties, but sale of javelina is prohibited.

H.B. 70. Fox can be killed at any time in Guadalupe County.

S.B. 99. Closes the season on turkey in Comal and Guadalupe Counties for a period of five years, beginning February 19, 1947.

### BILLS INTRODUCED

S.B.135. By Carney. This bill would give the Game, Fish and Oyster Commission regulatory powers to fix open and closed seasons, set bag limits, etc.

H.B.222. By Gilmer and Willis. Would provide for a universal hunting license to cost \$2 to residents and \$25 to non-residents; would exempt those under 17 years of age; and would provide for tags to be attached to all deer killed.

H.B. 39. By Willis. Provides for a fishing license for both fresh and salt water to cost \$1.65 for residents, and \$5.25 for non-residents. Persons under 14 are exempt. No license would be required for fishing in county of residence.

S.B.136. By Carney. Would consolidate all special Game Department funds into a single fund to be known as the special Game and Fish fund.

H.B.153. By Overton and Fleming. Would increase the price of non-resident hunting license to \$50.

H.B.127. By Harley Sadler. Would give Commissioners courts authority to pay a \$5 bounty on jaguar, cougar, ocelot, jaguarondi, bobcat, wolf, coyote, fox, javelina and rattlesnakes.

H.B.267. By Tippen and Teague. This bill would make it unlawful to fish in Fort Phantam Hill Lake in Jones and Taylor Counties except with pole and line, rod and reel, artificial lures, and a throw line with not more than two hooks. No person would be permitted to have more than 100 minnows in their possession.

H.B.200. By Wiseman. Would make it unlawful to take fish in the Neches and Angelina Rivers with either traps, seines or nets, in the limits of Cherokee County.

H.B.224. By Overton. Would close the season on deer in Anderson County for a period of five years.

H.B.189. By James. Would close the season on squirrels in Hill County during January, February, March, July, August and September, with daily bag limit of six.



H.B. 89. By James. Provides that minnows caught in McCulloch, San Saba, Gillespie, Llano, Kendall, Blanco, Lampasas, Mason, Parker, Jack, Young, Burnet, Williamson, Travis, Hill, Palo Pinto and Stephens cannot be transported out of the above counties. Possession of more than 500 minnows would be evidence of violation of the provisions of the bill.

H.B.128. By Spencer. Provides for the taking of fox at any time in Henderson County and the sale of hides and pelts.

H.B.330. By Thomas. This act would require any person hunting quail outside of the county of his residence upon the private lands of another person in Van Zandt County to first obtain a written permit of the land owner.

H.B.340. By Hydrick, Jr. This bill is in three sections. The first section would make it unlawful for a period of two years to trap any fur bearing animal in Harrison County, except when fur bearing animal is in the act of destroying or about to destroy personal property. The second section would permit anyone controlling as much as 600 acres for the propagation of game birds to trap raccoon, mink and fox upon their premises. The third section of the bill would set an open season on squirrels during May, June, July, October, November and December, for a period of two years.

H.B.366. By Sharp. Provides for an open season on deer in Panola County and would legalize the use of dogs in hunting and trailing deer.

H.B.368. By Gandy and Chapman. Would close the season on turkey in Hopkins, Franklin and Delta Counties for a period of three years.

H.B.367. By Sharp. Would limit the number of minnows to 100 which can be taken in one day in Panola County.

H.B.389. By Cox, Teague, Collie, et al. Would close the season on deer and wild turkey in Palo Pinto, Stephens, Jones, Shackelford, Erath and Eastland Counties for a period of two years.

H.B.360. By Latimer. Would make it unlawful to use a seine, strike net, shrimp trawl, gill net or trammel net in any of the waters of Copano Bay, Mission Bay and connecting waters west of State Highway 35 in Aransas, Refugio and San Patricio Counties. The bill, moreover, would make it lawful to fish with a pole and line, rod and reel, and trotline in these waters and would legalize the use of a seine for bait with a minnow seine not over 20 feet long. No provision in this bill, however, would prohibit the use of a bait shrimp trawl of not over 10 feet in length and equipped with trawl boards of not more than 18 inches in width or 36 inches in length.

H.B.411. By Hughes. Would make it lawful to kill wild fox at any time in Newton and Jasper Counties and would permit the sale of pelts taken in those two counties during the trapping season.

H.B.423. By Gandy and Chapman. Would open the season on squirrels in Hopkins, Franklin and Delta Counties from June 1 to July 31, and November 1 to December 31 and would set the daily bag limit at six.

H.B.442. By F. Jones (of Hunt). This measure would create a year round open season on fox in Hunt County.

H.B.474. By Lightfoot, Wilson and Sharp. This bill would suspend all laws and parts of laws prohibiting or regulating the killing or possessing of wild fox or the pelts of wild fox in Panola, Sabine, San Augustine and Shelby Counties for a period of three years.

H.B.473. By Sterling Williams. This act would make it unlawful to take or kill wild quail or mourning doves for a period of five years in Borden County.

S.B.122. By Winfield, Tynan, Keith Kelly. This bill would make it unlawful to operate a motor boat while under the influence of intoxicants, or with an open exhaust, or in a reckless manner.

# Take Your Camera Along



By **CHARLES W. SCHWARTZ**

*Missouri Conservationist*

ONE of the most enjoyable features of a hunting or fishing trip is to be able to live it over again. Some sportsmen prefer to have the trophies of the chase mounted to adorn their dens; others content themselves with just reminiscing about their pleasurable hours afield. Neither of these methods graphically presents the thrills, the scenery, and highlights of the adventure as well as good pictures do. In order to get these pictures there is one prerequisite—carry your camera with you. This is something few sportsmen do, even though most of them own cameras.

Elaborate camera equipment is not necessary. The fewer gadgets there are the easier a camera is to operate but, regardless of the type, you should be extremely familiar with its operation. Your camera should be compact and small enough to be conveniently stowed in one of the cleaner pockets of your game coat or tackle box or fitted in a strong leather case which can be worn on your belt or slung over your shoulder without any inconvenience.

I use a 35 mm. camera and recommend it if you are willing to process

your own film with the care it requires. In addition to the added feature of compactness the 35 mm. camera offers numerous exposures on a small amount of film in either black and white or color. Projecting your color transparencies provides a fine evening's entertainment for the gang when it's their turn to meet

at your home or for their annual banquet.

If you don't do your own processing of film, I suggest a camera using larger film such as the popular 620 or 127 size. Flash equipment, normally bulky, can sometimes find space in the duffle bag for use at your camp. Care of equipment is essential to good pictures. Don't let your camera lie out in the hot sun as this will not do the film any good. Keep it clean. Don't drop it or place it in sand on the beach. With a strong wind blowing, sand will soon percolate into the mechanism or pit the lens. Also keep your camera dry and protect it from dampness at night.

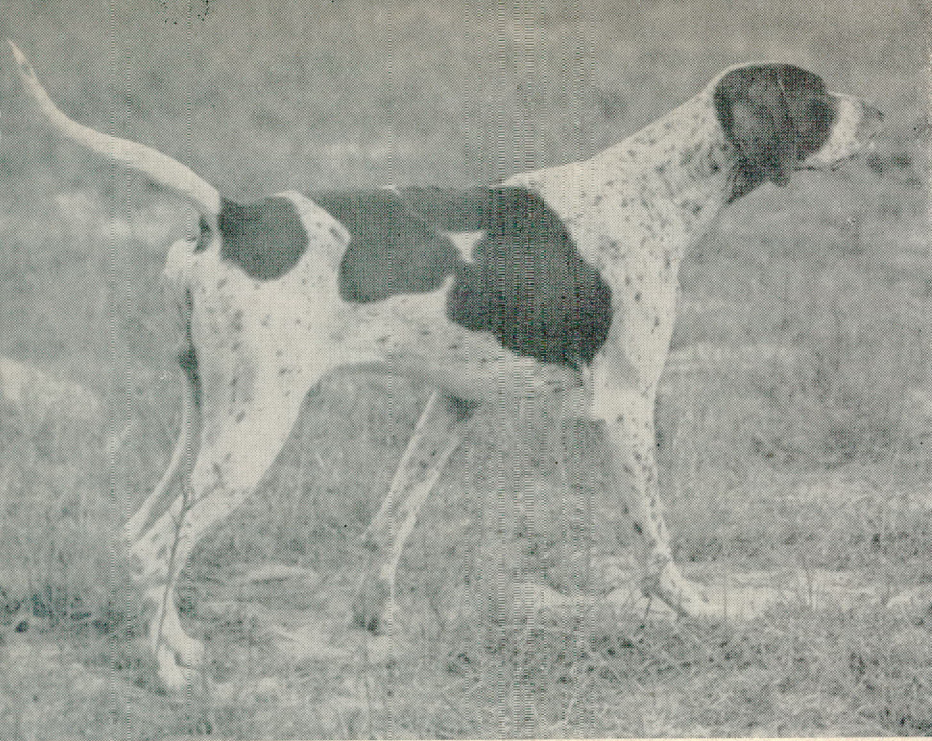
Let your previous experiences afield help you plan the photographic record of each trip. Mentally make notes of the scenes you wish to portray, then keep your eyes open for key pictures that will help you and your partners remember this trip. Each picture should tell a story.

The preparations for a hunting or fishing trip are, as a matter of fact, some of the most pleasurable parts. To make your sequence complete record some of these activities. The duck hunter spends many hours overhauling his decoys; for the fisherman who ties his own flies, a picture of him at his work bench will recall happy times.

A good shot of the members of the party is essential. Rather than line them up in the usual posed "reading-from-left-to-right" picture, a camp scene showing the various members going about their chores is a good opportunity. Or better still get the party as they are grouped around the evening campfire. For this, flash equipment will have to be used. Arrange your light source so the flash will be reflected into the faces of your subjects from a low angle approxi-

**SOARING GULLS** are easily photographed and pictures of these graceful birds make a welcome addition to any album of outdoor pictures.





**ONLY A CAMERA can recapture that thrill which comes when your dog is on a perfect point and you bag a double.**

of a few birds placed on a carpet of marsh grass or fallen leaves and attractively arranged with a gun and a shell or two makes a more pleasing presentation. Before the end of the day anticipate this so that some choice birds whose plumage has not become messed or soiled can be used for this picture. Get as close as the focusing of your camera will permit. Fill your viewfinder and eliminate all non-essentials. Backgrounds should always be appropriate and fulfill the setting of the hunt. However, if you wish to show your partner and his bag, make the picture at least look casual.

To photograph your fishing trips the same formula should be followed as hunting. A well-planned vista framed in by a dark mass of overhanging foliage makes a perfect setting in which to silhouette the members of your party against the bright surface of the lake or stream. A record of your partner actually playing and landing a fish is always better than the time-worn posed view of someone netting a fish which has already been on the stringer for several hours and is obviously quite dead. Fast shutter speeds and anticipation of the fish's movements as well as

★ Continued on page 22

mating the light from the camp fire.

Scenes showing your partner silhouetted against the early morning sunrise as he sets out the decoys are easy to get and make beautiful, strong, contrasty prints. As a matter of fact, this formula of silhouetting your subject against the skyline seems particularly appealing in hunting pictures. Action shots are better than most posed ones. If you want to get a picture that will long be remembered in your hunting circle, hide yourself in a blind behind the main one and record the action when the boys in the front blind rise up and cut into a flock of mallards decoying in.

Perhaps you have as a guide one of those old market-hunters who can make a duck call talk enticingly enough to bring in those high fliers that won't stop otherwise. Get his weatherbeaten face up against the marsh grass as he pours out those enchanting notes.

There's nothing that makes a bird hunter's heart beat faster than a faultless point or retrieve by his favorite dog. Instead of having to tell your cronies what a wonderful job that promising pup did in finding birds, why not run the risk of losing a shot at one covey and record that staunch point on film? A slow shutter speed will work for this type of picture because the dog is relatively motionless but it will be necessary to use at least 1/200th of a second when recording the dog's retrieve. A picture of the gunner bending down accepting the bird from the dog will help recall those mellow days of autumn. Don't overlook a portrait of the dog holding the bird he has just brought in. Shoot from a low angle with the dog's head

silhouetted against the sky so that no shadows or background will detract.

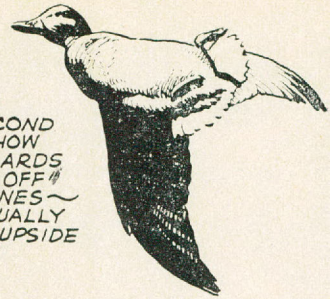
There's more than one way of showing the results of a day's hunt. The usual but monotonous method is the hunter holding the bag up for all the world to see. Personally I think a still-life study



**YOUNGSTERS** always are ready to have their picture taken, especially when they have caught some fish, and they will enjoy the record of a childhood fishing trip when they have outgrown their rompers.

# They Swim ~ They Walk But The AIR IS THEIR TRUE ELEMENT.

SPLIT-SECOND  
PHOTOS SHOW  
HEN MALLARDS  
"PEELING OFF"  
LIKE PLANES  
AND ACTUALLY  
FLYING UPSIDE  
DOWN!

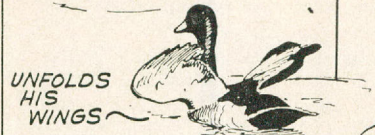


NEW LIGHT WAS SHED ON  
THE FLYING ABILITY OF OUR  
WILD DUCKS BY EDGAR M.  
QUEENY'S BOOK "PRAIRIE WINGS"  
FROM WHICH THESE SKETCHES  
WERE TAKEN.  
FAST-ACTION PHOTOS ARE  
ACCOMPANIED BY EXPLANATORY  
DRAWINGS BY DICK BISHOP  
WATERFOWL ETCHER.  
THE BOOK IS PUBLISHED BY  
DUCKS UNLIMITED.

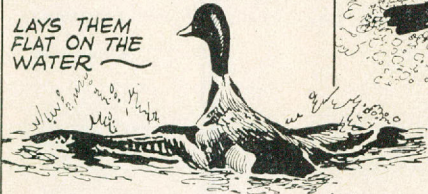
MALLARDS DON'T JUMP ~  
THEY FLY OUT OF THE WATER.



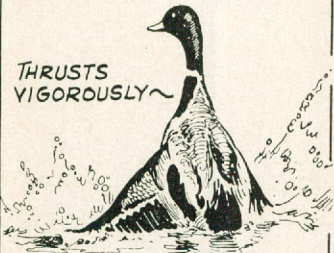
AN ALARMED  
DRAKE ~



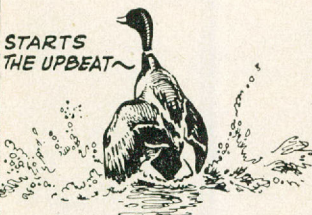
UNFOLDS  
HIS  
WINGS



LAYS THEM  
FLAT ON THE  
WATER ~



THRUSTS  
VIGOROUSLY ~



STARTS  
THE UPBEAT ~



AND IS  
AIRBORNE ~  
ALL WITHIN  
ONE HALF SECOND  
OF TIME.



AND LIKE ALL  
FLIERS ~ THEY  
CRASHLAND  
TOO!



THE BRACE OF MALLARDS ABOVE  
BOTH STRUCK "AIR POCKETS" JUST  
AS THEY TRIED TO SETTLE.  
THEY TUMBLED IN ~ BUT  
SWAM AWAY UNHURT.

THEY KNOW  
ENOUGH ABOUT  
"TRIMMING THE  
SHIP" TO RECOVER  
LOST BALANCE ~  
LIKE THIS RIS-  
ING DRAKE.

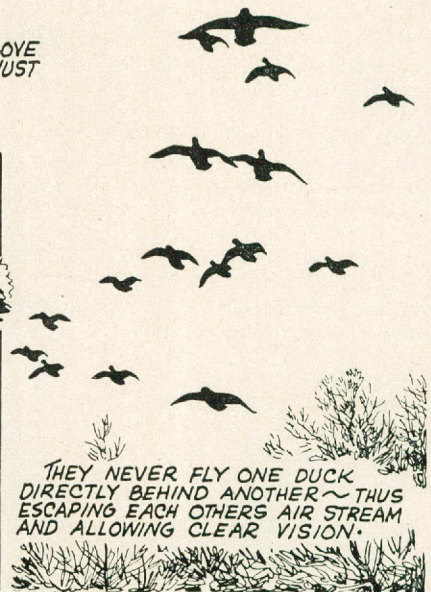


WIND RESISTANCE  
IS DECREASED ON  
THE UPSTROKE OF  
THE WING BY  
TWISTING THE  
PRIMARIES ON  
EDGE. "VENETIAN  
BLIND" SHADOWS  
ON THE BODY SHOW  
THE MANEUVER  
CLEARLY.



THIS WARY GREENHEAD ~  
PITCHING IN ~ HAS DROPPED  
A WING JUST TO SEE THE  
CAMERA AND BLIND.  
ADD THIS FRACTION-OF-A-  
SECOND MANEUVER ~ AND  
YOU KNOW WHY NOT TO  
MOVE WHEN A DUCK IS  
COMING IN.

Bob Hines.



THEY NEVER FLY ONE DUCK  
DIRECTLY BEHIND ANOTHER ~ THUS  
ESCAPING EACH OTHERS AIR STREAM  
AND ALLOWING CLEAR VISION.



# The Last Man

A HOT wind swept out of the west, densely saturated with fine yellow dust. It was not a straight wind but one that swirled and twisted, searching out the few patches of top soil that still remained scattered over the earth. The wind was angry and harsh. It whined through the pock marks and pot-holes of wasteland, sucking away at red clay and hurling blasts of sand against jagged rocks, wearing them down into more sand to be sucked away.

In early morning, the sun lifted itself out of the abyss of the east and shone like a huge copper ball, casting a glow of red throughout the firmament. At noon, it was the same—at eventide, the same, except for dusky purple shadows colored like giant fingers stiffening in death.

Beneath this sun, two men staggered aimlessly onward. They were miles apart—one traveling toward the east, the other to the west. Each shielded his eyes with the knotted knuckles of wasted hands. Otherwise, they were different.

The westward traveler was short and coarse. Beneath the tattered edges of leather pants, his large knees swelled like car-buncles between portions of legs that were the same size beneath and above. He wore no shoes and, as the wind whipped up his tracks, little spots like scabs were left in relief where blood-moistened particles resisted for awhile. He wore no garments above the waistline except a sandy beard and hair that grew together like a great burr. Gaunt arms groped out, one at a time, the other holding the knuckles over his eyes. Around his rusty body, protruding ribs circled half-way around to a sunken sternum.

The other was tall and fully clothed in remnants of cloth. His skin was a blistered white, stretched tight over frail bones. Neither of these men carried food because there was no food—neither carried a weapon for there was nothing to kill. It was destined that they meet and each trudged on with a hopeless heart.

THERE was no green upon the earth. Trees had withered—died and split away into gray rampikes standing like sentinels of desolation. Long ago, the grass had been parched and beaten away by the winds. No flowers colored the sides of the gulches where, years before, cancerous flood waters ate away the soils and belched them into the sea.

No crickets chirped at eventide and the call of the birds' songs had long ago died from the earth.

Each man passed through deserted towns and saw buildings slanting shabbily on sunken foundation stones. Weather boarding curled away from splintered studding in ashen gray troughs. Door-yard gates squeaked and bumped in the wind.

Their road lead against ancient farmlands. Here giant barns had fallen away at the ends and sat on their haunches like tired beasts. Now and then the mummified carcass of some animal lay half-buried in drifting earth with open eye sockets

peering toward the copper sun. No decay had taken place for there was nothing to rot except entrails and blue gums. Starvation had used up all flesh, leaving only a taut hide to cover the skeleton—nothing to rot.

Endless and forever stretched the eternal marks of erosion and out of the west blew the relentless wind with its burden of sand.

FINALLY, the travelers met. There was no enthusiasm at their meeting. Each sank beside the road without complaint, but nursing the sores and bruises of his body.

The man from the east spoke first. "Are there any others?" he asked in a broken brogue that was hard to understand.

"No," answered the man from the west. "They are all gone. Are there others to the east?"

"None! I am the last," came the despondent answer.

Simultaneously they both questioned: "Water?"

"None" was the dual answer.

Despondent silence then prevailed and each man laid down, facing the bleak space toward the sun. Two vultures circled high against the wind—waiting.

The men and the vultures were the last living things on earth. The men would pass first—then the vultures would pick their bones and live until this final sustenance was gone. They, too, then would die, leaving the earth to the sun and the beating wind.

Man had failed—failed to conserve and replace the natural resources that he harvested for his comfort. In the beginning, there seemed enough for all men for all time to come—fertile soils—verdant forests—never-ending waters—teeming wildlife—abundant minerals. Wealth was there for the taking, but it must be taken fast lest another would take and the riches would be divided. Forests were unscrupulously cut away and the undergrowth destroyed by fire. Then hungry floods were given a chance to carry away the soil that produced more trees. Grasslands were plowed and exposed to the wind which swept away the germ of more grass. Wildlife was driven into concentrated areas because of dwindling habitat, then shot away by those who cared not for the future.

Minerals were taken for instruments of war until the bowels of the earth could give no more.


Last were the waters which failed because there was a lack of earthly moisture to create rain.

Man had failed—utterly failed.

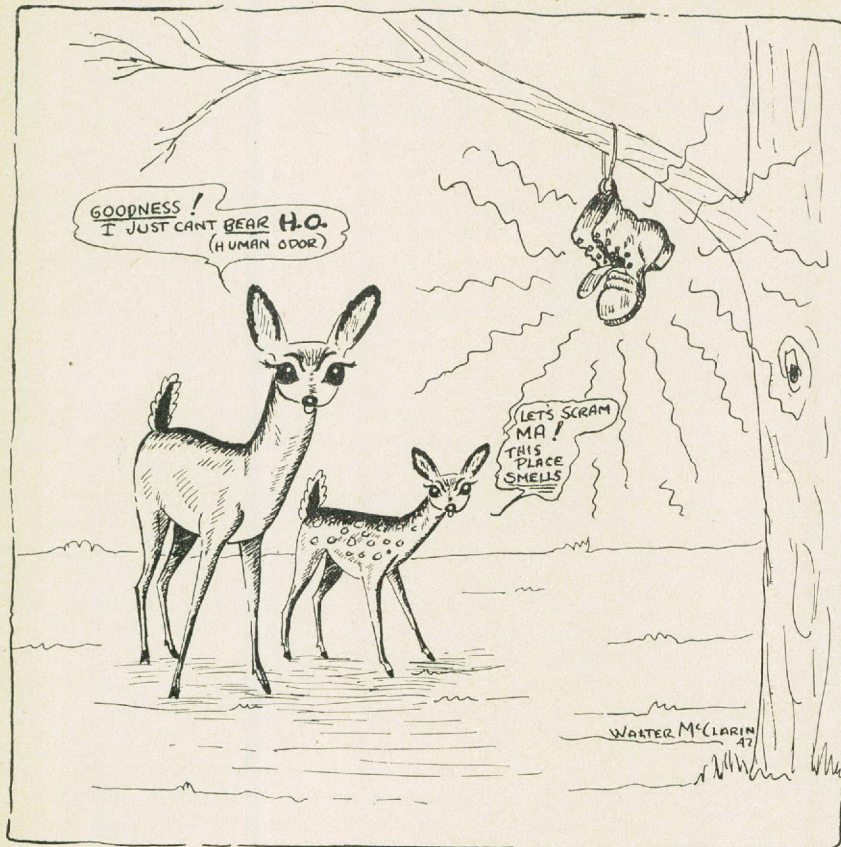
Over the prostrate forms the vultures swept lower and lower. Short gasps were carried away by the wind. Clenched hands, with finger nails biting into the flesh, gradually relaxed and straightened out on the parched earth. The vultures settled down—greedy and squawking.

The copper sun looked down and the relentless wind whined on. The last man was gone—gone because other men had failed.

E. W.—Kentucky Happy Hunting Grounds.



# A Place for Human Odor



**W**ILDLIFE men have long sought an effective, harmless repellent that would steer hungry deer away from farm crops to which they sometimes do considerable damage. With the knowledge gleaned from years of field experience and observations on the habits of the whitetail, M. D. Hart, executive secretary for the Virginia Game Commission, states that "of all known odors that deer are mortally afraid of, it is the human odor." With this in mind, some investigating has been done to find a

chemist who has manufactured the human odor and can supply it for use in sections where deer damage occurs. Replies so far have been negative, but a simple substitute used to keep deer out of orchards in New York has been suggested. There, freshly worn-out old shoes tied to apple trees are said to have the desired repelling effect. This may be a practicable solution for controlling deer depredations here in Texas and the results of some experimenting will be interesting.

## Federal Aid

★ Continued from page 7

Act, after twice resolving to support it, now give it the cold shoulder and offer nothing in return. The sportsmen are interested in more and better fishing waters. They contribute many millions of dollars in license fees for the present administration of the fisheries. They have not objected to this tax.

Let us hope that when Congressman Robertson reintroduces this bill next session the fishing tackle manufacturers (only a bare majority are opposed to it) will see the light and get behind this measure which will do much for them—and for the sport.

This program has been sponsored since its inception seven years ago by the National Wildlife Federation and has drawn to its support many conservation groups.

## Resume Shell Making

Good news for U. S. sportsmen. Winchester will resume manufacture of trap and skeet shot shell loads and .22 short cartridges early this year, it was announced recently in a statement by W. S. Allen, sales manager.



The brain of an adult elephant weighs about eight pounds.

# Take Your Camera Along

★ Continued from page 19

the fisherman's reaction make these pictures hard to get but well worth the effort. Under 20 feet a leaping bass won't be stopped with speeds less than 1/200th of a second, though 1/100th will show the action.

A close-up view of the prize catch of the day looks a lot more appealing when arranged next to the fisherman's battered hat with its crown of flies placed on the gravel beside the stream with the rod and reel or landing net added to give it scale. Because the surface of a fish is shiny, select an angle with a minimum of reflection. A No. 12 yellow filter will help bring out some of the color pattern which would be lost in the ordinary monochromatic rendering of black and white film. A river or lake-fishing scene that is different is one showing the fisherman casting in the early morning mist which rises from the cool waters to meet the sunrise. Expose for the high lights and let the shadows remain subdued.

There are other little incidents which add zest to a photographic hunting or fishing trip. Maybe it's a close-up view of steaming coffee being poured from a thermos jug into a cup held by a hand you will recall was shaking so much from the cold that you had to use a fast shutter speed to keep from blurring the picture. Or maybe it was the pause on that hot August afternoon at the little spring branch where watercress grew in the clear cold water and where ferns trailed in the current which might otherwise be a forgotten detail. Don't overlook the camp scenes with the lucky nimrod's deer hanging from the rack or even the close-up of the blackened coffee pot and the liver from the freshly-killed buck sizzling in the fry-pan.

There is no technical skill or trick necessary to get the types of pictures mentioned here. The only essentials are having your camera with you, recognizing the picture when you see it, and taking the time to compose and snap it. There's more to the chase than getting your limit as these types of pictures will show.

## QUAIL HUNTERS

Make permanent food and cover units for quail with one planting of bicolor or bush lespedeza. Grows shoulder high, drops large seed all winter, does not require replanting. Considered by quail specialists the best planting for quail in southern states. Plantings in East Texas last two years are growing fine. Suggest trails in western half of Texas. Best results from setting seedling plants two feet apart in strips or spots in winter or early spring. Instructions with shipments. Plants with vigorous roots 100, \$5; 1000, \$30, F.O.B. Beaumont.

Texas Wildlife Nurseries  
Rt. 3, Box 162, Beaumont, Texas



# IT ISN'T ALL Luck

IS YOUR neighbor "lucky" at fishing? Does he usually come home with fish when you are unable to catch any? Fishing, like hunting, isn't always luck. There is a know how, a know where, and a know when to this sport likewise. Don't call him "lucky" if he invariably comes home with the stringer full. A good fisherman resents being called lucky because he has heard the old adage: "In order to catch fish, you must be smarter than the fish," and this is true to a great extent.

Fish aren't nearly as stupid as we claim. If they were, we would all get our limit every time we went fishing. But let's see why our neighbor usually gets some fish. First of all, he no doubt knows some of the habits of fish: the kinds of food they prefer, the type water they inhabit, etc. The experienced fisherman would not fish for bass with doughballs nor would he fish for bluegills with artificial plugs or spoons. If fishing for catfish, the experienced fisherman will fish tight line (without a cork), or if using a bobber, will set it deep enough so the bait lies on or near the bottom.

Crappie fishing is popular in most of our inland lakes, especially in the spring and early summer, and our experienced fisherman friend, using small minnows as bait, will fish the shallows around cattails, reeds, etc., where crappies usually spawn. As the water warms the crappies will move into deeper water and our experienced neighbor fisherman will drift fish. If our friend is a fly-rod fisherman, he eagerly awaits the coming of May and June because these are the months when the bluegills are usually on a rampage, making ready for their new offspring—it is spawning time and the blues are hungry. When a spawning bed is located, and if the fly is presented in the correct manner, our friend will quickly fill his fish bag.

Our "lucky" fisherman friend catches bass too. Using four primary types of lures: surface plug, underwater plug, spoons and spinner, he first tries to locate the bass. After the bass are found,

he settles down to work, fishing with gusto and never becoming discouraged—expecting to catch a bass on each succeeding cast. If the fish are found in very shallow water, which is often the case in the spring, our lucky neighbor will use a spinner type lure or shallow running plug. Should they be found in heavy cover such as water lilies, moss, etc., the spoons will no doubt fill the bill. Deep open water is fished with best results by using either a spoon, a deep running plug, or even a spinner type lure retrieved very slowly. A fisherman isn't lucky if he happens to make a cast toward a stump or log he is passing and catches a bass. Good fishermen always fish every stump and log. This is a natural place for an old lunger to hang out. If you are an old-timer at this sport, you will cast beyond the object—not right at it—then retrieve the lure past the log or stump, keeping the bait as close as possible without becoming fouled.

ABOUT this time of the year many tips and advice have gone forth pertaining to the care of tackle, so that we may get our two bits worth in for those who are under the spell of Spring

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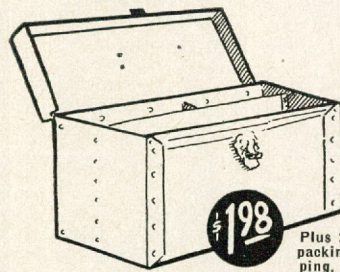
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## DO YOU HAVE A

# Dipsy-Doodle?

and the thoughts are back on the big 'un that got away last year, we will not deviate Tackle care.

### Rods

Just a little warning to youse guys who store tackle in aluminum cases during the off-season, don't do it! Moisture collects inside of the case causing serious damage to bamboo rods. The best method is to hang rods, cloth case and all in a dry place away from moisture and steam heat.

If you are in a habit of waxing bamboo rods get out of the habit. Wax has a tendency to soften the culm and hence weakens the rod action. It is advisable to take a dry cloth and wipe bamboo rods periodically, in fact the more you wipe the better it is. When a touch-up job is needed, take a small piece of very light steel wool, rubbing the worn or cracked spot carefully, then dip the end of your finger in a good grade of varnish applying it to the spot by vigorous rubbing. If the rod is in need of varnishing, take a razor blade and scrape off all the old varnish, then with light steel wool polish the culm carefully. Saturate a cloth with genuine turpentine and wipe the rod thoroughly, then dry with a clean cloth.

Have you ever used a spray gun for varnishing your rods? It is an ideal way to do a clean job and it is a matter of seconds and the job is done. One thing is certain a rod secures an even amount of varnish which does not cause erratic compound bend action while casting due to sloppy varnishing. If the fixtures are left on the rod it is a simple procedure to mask the guides and ferrules.

Sometimes rods get a "set" in the bamboo. If this is the case, borrow your neighbors alcohol lamp, keep the flame away from the rod at the point of the "set" sufficiently to permit enough heat to soften the glue seams. When it is soft apply pressure to straighten the "set." This will not injure the culm if you are careful not to get the rod too hot.

## Miniature World

★ Continued from page 8

same roof, and as Boyd was not disposed to resign, Simmons decided to leave.

The Cleveland Museum of Natural History was looking for a man to head a two years expedition in the South Seas, and the place was offered to Simmons at \$4,000 per year. Simmons did not immediately accept as he was still busy on his doctorate degree, but he finally yielded and accepted the appointment. His book on "Birds of the Austin Region" and his work for a museum were his best contributions. Recently Simmons was made president of the University of Montana where he served with distinction.

Meanwhile, other natural history work had been going on over Texas. At Baylor University, my alma mater, there is a long record that reaches far back into

## Fishing With a Thermometer

By L. D. LAMB

**A**TENTION has recently been called to the fact that fish are more likely to cooperate when the temperature is right and therefore a check of the water temperature tends to give indications as to fishing success.

There have been a number of ideas advanced on this subject but the most logical one has been developed by Dr. Jack S. Dendy, who is an Aquatic Biologist with the T.V.A. at Norris, Tenn. Dr. Dendy has found the fish in Norris Lake to bite best when the water temperature is about 80 degrees F. They will be found near the bottom where 80 degree water is the deepest. In other words one must locate the greatest depth where the water on the bottom is 80 degrees. The experimental work along this line has progressed, in the T.V.A. lakes, until the Biologist is able to check the water temperature on Thursday and publish information on Friday that will enable the angler to have a better chance at catching fish on Saturday and Sunday. The success of this method depends on the ability to predict sudden changes in weather, as rain will tend to change the water temperature.

The Dendy method is based on the tendency of fish to seek a depth at which they are most comfortable. The knowledge of which depth is the most favorable enables the angler to fish at that depth without spending the time hunting for the fish. This is not a magic formula that will produce fish at all times but it does enable the angler to have the odds in his favor since he will know where not to fish.

There have been a number of people requesting information as to the best type of thermometer. The type of thermometer needed for this work is a "deep-sea reversing thermometer" and is rather expensive. The above method of locating fish has been worked out for the spring, summer and early fall but as yet nothing has been determined for the colder months where the water is not warmed to a temperature of 80 degrees.

the ante-bellum days of 1856. The early beginning of the present splendid museum at Baylor consisted of a cabinet of minerals. In 1866 they had begun to add shells and petrifications to the collection, but there was no indication of any interest in birds and mammals. Why, indeed, should a museum of that time be concerned about the preservation of animal species of which there was such an abundance? The abundance of wild animals was too commonplace for com-

ment. The literature of that time did not contemplate the passing of or extinction of species, unless it was the buffalo. It was the meridian effulgence of wild animal life.

Professor O. C. Charleton in 1893-99 was probably the first curator of the museum but there is no record of mounted specimens of Texas fauna until 1900 when J. J. Carroll, as curator, began the work of reorganizing the museum. Details are meagre but mention is made of a trip to Colorado and other points in the interest of the museum. In 1903 John K. Strecker took over and remained curator for 30 years. He was the outstanding authority on Texas fauna and helped lay the foundation for studies of the natural history of the State. His book on the birds and mammals of Texas is out of print and should be re-issued. A conservationist by nature, he took a lively interest in all protective measures and was outspoken on matters of which he did not approve. He once remarked that he would like to go down to Austin and spank some of the officials responsible for the policies then in vogue.

H. B. Parks of A. and M., who made field trip with Strecker, was his ardent admirer. Said Parks, he would travel all day making observations and never take notes. On his mind was a photostatic picture of all that he wished to remember. When Strecker died, it was said at the University of Texas that there was no one to take his place.

When the mounts of the game department were moved over to the Texas Memorial Museum on the University of Texas campus in 1936, it was the Texas Centennial year. Exhibit material had been gathered prior to that as part of the Centennial Celebration, but the main building was not completed until 1939. The institution is a thing of beauty and is quite complete in setting forth the natural history of the State. It cannot be compared, of course, with the United States Museum at Washington or the American Museum in New York, or with other great museums of the north, but it is serving a great purpose as an aid and inspiration, not only to students in search of knowledge, but as a broadening influence to the general public.

The city of Dallas did not wait, but acted on its own in honoring the Texas Centennial with another museum of splendid proportions. However, as far back as 30 years ago, Dallas citizens had a museum organization, and a little museum of which Ed Sewell was president. He is said to have been the inspiration of the enterprise and when he died, the museum remained dormant until revived by the City Park Board for Centennial purposes. Robert Shields of the Board is said to have sponsored the revival and in 1935 new material was assembled and readied for a creditable exhibition in 1936.

In Houston a start has been made, but adequate quarters are yet to be provided before a great museum is possible. However, Houston has a Zoo, the Hermann Park Zoo, which is one of the



great show places which have made the Houston area famous. Not to be overlooked, of course, is the Dallas Zoo in Marsalis Park, and the San Antonio Zoo in Brackenridge Park. All these zoos have ante-dated the coming of the museums. They go well together, for with them, anyone can study both the living and the dead.

## Spotted Warrior

★ Continued from page 6

the charter boat fleet. In contradistinction to Schroeder who states that large kingfish are taken from muddy water close to shore in Florida the Texas fish

are essentially lovers of clear water; so much so that it is practically useless to look for them where the water is even slightly turbid.

For many years these fish have supported a most valuable fishery on the East Coast, and for the past year the catch, as recorded by the Bureau of Fisheries, was 3,807,000 pounds having a total value of \$150,000. There is a good local market for them in Florida, while Havana takes large numbers. The remainder are sold on the Baltimore and New York markets, being highly esteemed as food. In Texas the fish is taken only for sport, and for many years thousands and thousands of pounds were allowed to rot on the beach. Recently,

however, most of those caught have been consumed by the sportsmen and their friends. The meat is rather dark and somewhat drier than the Spanish mackerel which it resembles. However, baked with Sauce Creole, for instance, to relieve its dryness, kingfish are fairly good food.

☆

"Precocial" birds are those which are able to run about shortly after being hatched from the shell and are not cared for in the nest by their parents. Examples are the bobwhite, quail, ring-necked pheasant, Hungarian partridge, ruffed grouse, prairie chicken, woodcock, jacksnipe and killdeer.

# Field Trips Disperse Classroom Doldrums

By F. M. CHURCHILL

IT HAS been said that environment adds to effective teaching, and students enrolled in *Wildlife and Game Management* at Sul Ross State Teachers College find this especially true. Nestled in a beautiful valley of the Davis Mountains lies the town of Alpine, Texas, home of Sul Ross State Teachers College. This section is endowed with the beauty of majestic mountains and romantic splendor. It was such a setting as this that caused Mark Twain to so aptly state, "It is your human environment that makes climate." This was the thought that was prevalent when 16 students, representing all parts of Texas, assembled for our introductory meeting with Professor W. E. Williams, our instructor.

Course contests and activities appealed to the group because they afforded opportunity to study fresh water fish of Texas with special emphasis on stocking and managing ranch tanks and ponds. The first unit was to be followed by research activities concerning antelope, deer, prairie chicken, waterfowls, quail, wild turkeys, Texas bighorn sheep, elk, fur-bearing animals, predators, and exotic birds and mammals. Game laws and the organization of the Texas Game, Fish and

Oyster Commission made up a part of our management study.

Visual aids were incorporated in the teaching plan. Films were used to give a true-to-life study of birds and animals. These films were shown also, by class members, to the Public Schools of Alpine. Most of the movies were furnished by the Game, Fish and Oyster Commission.

As a part of our field study we were privileged to accompany sportsmen on the antelope hunt in Brewster, Jeff Davis, and Presidio Counties. In addition to observing these fleet-footed creatures in their natural

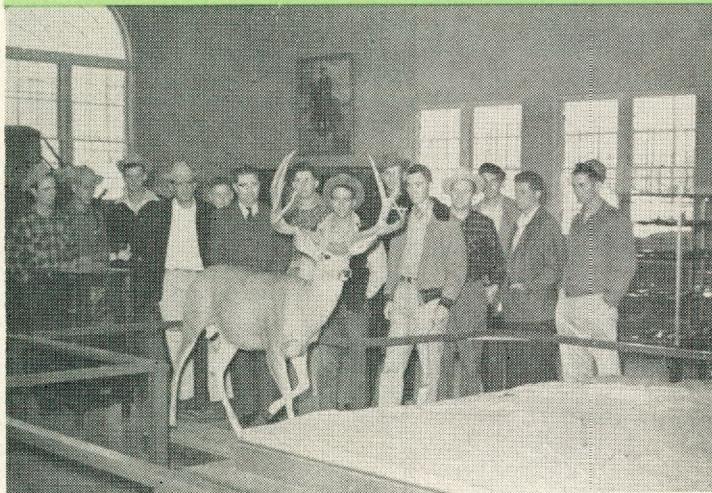
habitat we collected antelope stomachs to be used in future study by Helmut K. Buechner, graduate student in Wildlife, from Texas A. & M. College. Class members checked internal and external parasites and recorded these field notes for future study. Additional field trips were made to study habits of antelope.

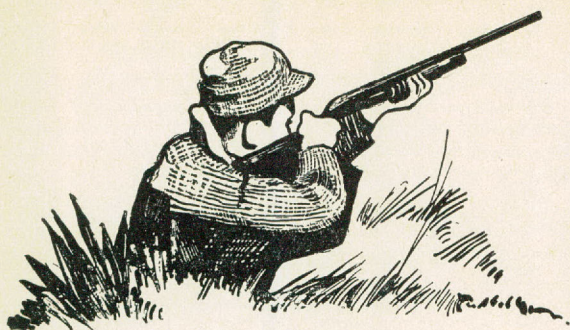
We agree that our climatic field trip was made in the Davis Mountains to observe deer in their natural surroundings. Prior to the opening of deer season we loaded our cars with our wives, dates, and an abundance of pinto beans and chili and headed for the deer country in the Davis Mountains. We found the Davis Mountains State Park very beautiful with the tree

bedecked in their autumn colors; and it was truly reminiscent of western paintings. Again, it was a perfect setting for the natural habitat of all types of wildlife. Our first glimpse of wildlife was of antelope near the base of Mt. Locke on which McDonald Observatory is located. Just as we started up the winding road to the Observatory, we realized that our trip was already a success, for there, not fifty feet away from us, stood eleven white-tail does and fawns. They stood and curiously watched us as we studied them. It was along the scenic drive that we understood what the power of observation really

★ Continued on page 29

**Wildlife and game management class, Sul Ross State Teachers College, Fall Term, 1946-47, studying in the college museum. The deer (mounted) was killed by Dean Seldon Robinson in 1940 on the Fowlkes Brothers ranch in Presidio County. It has 18 points, 32 3/4 inch beam, and dressed 218 pounds. Mounting was done by Caraway of Dallas.**





# ARMS AND AMMUNITION

Edited by ADAM WILSON III

## Wind Great Factor in Rifle Shooting

**M**ISSED by a Hair!" is a common expression among rifle shooters who hunt small game with a 22 caliber rifle or who love to engage in the sport of "plinking" with the same firearms.

These "misses," some of which are really "by a hair," are generally blamed on faulty aim, bad holding, improper trigger squeeze and numerous relative factors, and sometimes on the rifle or ammunition itself.

"There is another very important factor, however, which causes many of those 'hair misses,'" says Frank J. Kahrs, Remington's manager of rifle shooting promotion, "and which the average fellow who hunts with a 22 seldom considers. That is the effect the wind has on the bullet over various distances. Accurate or inaccurate judging of the force of the wind has caused many a championship to be won or lost and lack of wind consideration has caused many a deer to be wounded or missed entirely and many squirrels to escape unharmed.

"I have a friend who shot at a deer down in Texas. It was a long shot and a strong three-o'clock wind was blowing. He was sure he had killed the deer as it disappeared instantly, but when he got to the spot, all he found was the deer's tail! He took no time to consider the force of the wind but held dead on the target.

"A good many hunters are in too big a hurry to make allowances for the wind, but the most successful ones are those who carefully judge the wind's force before the target looms up and make allowances for it.

"There is nothing new about the fact that the wind will blow the bullet from its straight course from muzzle to target," continued Kahrs. "Perhaps the first time close studies of wind conditions and allowances therefor were ever made in rifle shooting competition was back in the seventies when the American rifle team, composed of such stalwarts as Bodine, Dakin, Fulton and Hepburn, won the world's championship from the Irish."

Wind force is measured in miles per hour of its travel. The higher the wind force or velocity, the greater the effect

on the course of the bullet. It is extremely difficult for the shooter to determine the exact velocity of the wind, but a few simple facts should be constantly borne in mind and if they are considered will be of great value as accuracy aids. A 3 miles per hour wind can hardly be felt and only smoke drift will show it. A 5 miles per hour wind can be felt on the face, leaves begin to rustle and it can be called a gentle breeze. A 10 miles per hour wind can be called "fresh," leaves and small twigs are in constant motion, and small flags are extended. At 15 miles an hour, the wind begins to raise dust and loose paper, small branches are moved and wind at this speed would be called strong. Small trees in leaf begin to sway when the wind is blowing at 20 miles an hour and you have to settle your hat tighter on your head. This wind is called "very strong." Accurate distance shooting with a 22 in a wind stronger than 20 miles an hour is pretty difficult.

The Technical Department of Remington Arms Company, has recently compiled a table of valuable information on wind allowances.

According to the figures of this table, which have been proved in practice, as well as by computation, and assuming you are standing in the position of the number six on your watch, a 20 miles an hour wind at 1, 5, 7 or 11 o'clock will

deflect a 22 caliber long rifle bullet as much as .92 inches at 50 yards. At 100 yards in the same sort of wind, the bullet would be deflected as much as 3.42 inches and at 200 yards as much as 12.92 inches.

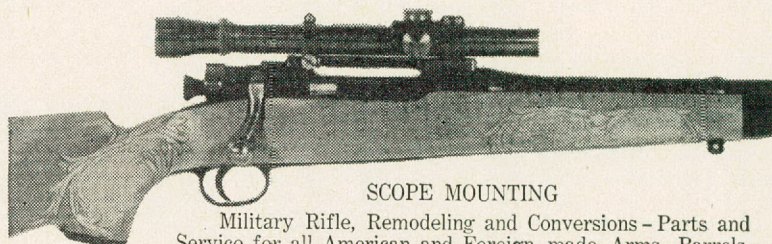
Winds at 2, 4, 8 and 10 o'clock have a greater effect on the bullet and 3 and 9 o'clock winds affect it still more. In a 3 or 9 o'clock 20 miles an hour wind, the 22 bullet would be deflected as follows: 50 yards, 1.85 inches; 100 yards, 6.83 inches and 200 yards, 25.85 inches.

These figures readily show the importance of careful consideration of wind conditions and the necessity for making proper sight or aiming adjustments. The table, which contains minutes of angle adjustments for 5, 10, 15 and 20 miles an hour winds at 1, 5, 7, 11, 2, 4, 8, 10, 3 and 9 o'clock and over distances of 50,

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100 and 200 yards, may be secured by writing Henry P. Davis, public relations division, Remington Arms Company, Bridgeport, Connecticut.

★

"Anything can happen" is the answer always given to novice shooters who ask, "What happens to a match rifle when the barrel is taken from the stock?"

A match rifle is a precision instrument and as such deserves to be treated with the respect due it. No novice or amateur gunsmith should undertake to change its adjustment for such well-intended efforts almost invariably backfire. The rifle barrel is "bedded" by experts at the factory and is set to produce the high degree of accuracy expected from the best match ammunition.

If an occasion arises which necessitates the removal of the barrel from the stock, the center of impact of the bullet will change unless the barrel is put back exactly as it was set at the factory. When a shooter complains that his rifle is "throwing them all over the lot" it is almost a dead giveaway that he has been tinkering with his gun. The average shooter is not familiar with the "bedding" of his rifle barrel and hence finds it extremely difficult to get it back just exactly as it was before it was removed from the stock.

The safest thing to do is to leave that barrel alone. If for some reason it must be removed, then it should be returned to the factory for reassembling. If this is not practical, the rifle should be taken to an experienced gunsmith *before* the barrel is removed from the stock. The gunsmith is then able to check the screws to see just how tightly or loosely they are set, how snug they fit and how much tension is placed where. In this way, he is enabled to "bed" the barrel down exactly as it was when it left the factory.

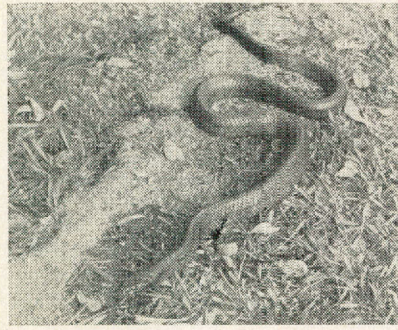
This is indeed no job for the amateur and only efficient and experienced hands should be allowed to touch the adjustments. Comparatively speaking, match rifles seldom need a change in barrel adjustment; so the best thing is to leave them alone.

**A BRISK NORTH WIND whipped across Lake Buchanan when Horace L. Roberdeau, of Austin, caught this 7 lb. 2 oz. black bass on a river runt.**



## THE INDIGO SNAKE

*Gopher, Blue Bull*



**THE INDIGO SNAKE (*Drymarchon corais erebennus*) five and one half feet long which was captured by Tom Moore of Uvalde and donated to the Fish and Game Department at Texas A & M College. The Indigo snake is found in Southern Texas.**

**D**UE to its limited range and distribution little is known to scientists about our Indigo snake, (*Drymarchon corais erebennus*). Latest reports place this snake within the bordering range of Del Rio, Dallas and East Texas southward into Central Hidalgo and Vera Cruz, Mexico. The Indigo snakes, comprising all species, are of tropical origin and considered among the largest non-poisonous snakes in the United States. The coloration is of an attractive iridescent shiny blue dorsally but slightly lighter throughout the ventral or stomach section with a light orange to brownish color near the head extremity.

The Indigo is known to feed well in captivity, some attaining a size of seven feet nine inches. They are very gentle, thus proving to be a favorite with "snake charmers."

While many snakes confine their food either to warm-blooded animals or reptiles and amphibians this species is omnivorous, feeding with voracity on small mammals, birds, frogs, toads, lizards, fish and other snakes. They are commonly found in the vicinity of farm homes, in haylofts or in corn cribs and are regarded as good ratters with some snakes remaining in the same area for many years.

The Fish and Game Department of Texas A. and M. College received a five foot six inch live specimen which was collected by Tom Moore, a Fish and Game student at A. and M., eight miles northwest of Uvalde, Texas.

Dr. H. M. Smith, herpetologist in the Fish and Game Department, Texas A. and M., says that information concerning breeding and feeding habits of the Indigo is limited and should offer someone interested an opportunity for extensive research.

—Joseph M. Vajdos

## King of Tackle Busters

★ Continued from page 4

semicircle against the beach. These fish were driving into the menhaden so ravenously that numbers of them were carried ashore by their own impetuosity, and the sand was covered with wriggling fish. The writer of the article estimated that at one time over a thousand reds were stranded in plain sight, victims of their own gluttony.

Food is varied. Blue crabs probably head the list, with shrimp a close second, especially in the south. However, redfish by no means confine themselves to these alone. Mullet, silversides, menhaden, skip-jacks and gobies all form welcome additions to their bill of fare, as do pig-gies, and on the Atlantic coast they add such delicacies as squid and clams to their already miscellaneous diet.

Due to the difference in feeding habits between the larger and smaller fish, the rats feeding often in such shallow water that their backs may be exposed, while the bull reds stick to the sloughs and inlets, two different types of fishing are called for.

If you can remember these things, and if you travel slowly enough and use your eyes and ears hard enough, you have a good chance to locate your fish.

Occasionally you can hear them, for like all croakers they sometimes make a drumming noise while feeding, and this is sometimes the first indication that you will have of their presence. Then again you can sometimes spot them through their wake. This is not quite as complicated as it sounds, for when the fish are feeding and sight a small crab or other tid-bit, they make a quick dart in that direction. This movement may either show as a distinct and fast traveling hump upon the water, as it is shoved up over their backs, or in a spreading trail of little ripples like the wake of a boat.

Once you have located your fish, get your bait to him with as little fuss as possible, and if you're lucky you'll get your strike. Often another bait dropped in the same vicinity will produce another fish, for these reds are apt to run in pairs. Alcide, market fisherman, guide, mentor, friend, and coffee-maker extraordinary on many a Bayou Terbonne trip, used to say—

"Those fish, she brother and sister. You catch one by 'n' by you another. No?"

And catch another we did, many a time.

A refinement on this method is the use



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of a bait casting outfit. It may be even more successful than the pole, because you can stay away from your fish, and at the same time get your bait or plug before him with a minimum of disturbance. Incidentally, a rat red of two or three pounds on an outfit designed for black bass will make you wonder whether the maker had included lightning bolts in his calculations, or not.

For bull reds in the deeper water the same methods used for channel bass anywhere are applicable.

Though there are places where too many of these bronze warriors are present (I'll tell you of one, presently), yet such spots are scattering and the prime requisite for catching them ordinarily is an accurate topographical knowledge of the bottom where you customarily fish, or, failing that, the company of someone who has such knowledge. These big reds feed in the sloughs and holes cut by the tidal currents along the beach. Especially good is deep water with surf on the shore side of it and though at first glance all water looks alike, yet to one accustomed to it, such places are comparatively easy to spot by their difference in color, the deeps appearing very much as dark shadows upon the surface. A little exploration in a swimming suit at low tide will sometimes serve to locate holes not apparent at higher stages, and which will repay attention later. Trolling with a spoon off the mouth of an inlet is occasionally productive, depending on local conditions and the type of food which is present, and then again the feeding places may be far enough offshore that an anchored boat is the best method of reaching them. The end of a point, or a submerged bar where currents sweep, are excellent locations also. The reds lie with their heads to the currents, waiting for the food that the waters will bring them, and should be fished for accordingly. Incidentally, where there are jetties, as at Galveston, deep fishing alongside the rocks will often produce some very large fish.

Tackle is a matter of personal preference, some mighty big reds having been taken on light outfits, but as a general rule it is well to be equipped for heavy fish, as the grab-bag of the sea may easily produce a big hammerhead or stingray at any minute.

Rods are of all types, but here on the Texas coast the most common is a one-piece Calcutta bamboo, from eight to twelve feet long, of a stiffness to suit the personal taste of the owner, and having, instead of the usual single surf guide, from five to six of the barrel type. Most of these rods are home-made, and I have seen some really nice ones, fit to take a place in anybody's collection. My three are eight, nine and eleven and a half feet respectively, but for surf work the nine foot one seems to suit me slightly better, both because of the tremendous kick it puts behind the cast, and because it balances slightly better than the others. A split bamboo of the usual surf type I reserve for those friends who can see no

virtue in a rod that is not "bought." Lines are ordinarily of twelve or fifteen threads and are rarely more than one hundred and fifty yards in length. Reels, like the rods, are as individual as the men who own them, but the general type and size are comparable to the Pflueger Capitol, or a light Penn of medium size, which will hold a hundred and fifty yards of fifteen thread line when it is wet. Hooks are generally O'Shaughnessy's or Cincinnati Bass, 5/0 or larger. Several two or three foot piano wire leaders (in case of sharks) and a number of pyramidal sinkers of various sizes, along with the necessary swivels, complete the outfit, and, reel and all, it shouldn't cost over \$35 for a good one. One thing that should be mentioned; be absolutely sure to get a reel with a free spool for casting, and then, no matter whether it has a star drag or not (and it should have), equip it with a leather thumb drag, just for good measure. In the first case this thumb drag makes casting a little easier, and in the second, that of a large fish, it sure does come in handy. One of my pet possessions is such a drag, with deep grooves that look as though they had been burned in it. That fish skidded a two hundred pound man (me) across a rock jetty on the seat of his pants, and with the star drag screwed tight, still took line so fast that the leather drag felt hot. This wasn't a red, however.

Baits can be almost any of the above-mentioned foods, but probably the best are shrimp, blue crabs, and mullet, or menhaden. Piggies are good, also. Shrimp should be hooked through the hard shell just back of the head. This seems to hurt them very little and they remain quite lively on the hook.

Reds are often light biters, and have a habit of mouthing the bait before taking it. For this reason a fish finder comes in handy, as there is no tell-tale drag on the line to cause the fish to reject the bait. Some fishermen even advocate a certain slackness of line, also, but practically all that seems necessary is that which the action of the waves normally gives you. Often if you have had no strike and you know (or feel) that the fish are there, a quick take-up of a few feet of line will induce them to take, as they seem to like a moving bait. In striking, for Heaven's sake don't yank. An easy, firm lift of the tip of your rod should do all that is necessary. Remember that a big red can do a little yanking himself, and that any effort to horse your fish is likely to result in smashed tackle and lost fish.

And now for that story.

Down in Old Mexico, south of Brownsville, Texas, is a place where no rules apply; where fish strike at banana peels, match boxes or what-have-you; where anything goes; and where fishermen catch so many reds that they cuss 'em out for taking baits intended for other fish. Incidentally the fellows who haven't—but I have seen the fish and the photographs to prove it.

Parties from Brownsville going there in a sea-going hack, a remodeled truck

that travels on land when it can, and takes to the water when it can't. And the fishing—well, Jimmie Lingan, sports writer of the Houston Chronicle comes right out in print:

"By the time we had located the trout and caught six or eight each, the redfish had found us. That was lots of fun for the first two or three times, but after tussling with several big fish WHICH YOU DO NOT WANT (Imagine that!) for half an hour or so, you are willing to compromise on something smaller. THESE REDS ACTUALLY DROVE US FROM PLACE TO PLACE IN OUR SEARCH FOR TROUT AND PIKE."

And so to the end. But remember this. Whether you fish for him in the bays where he's only a rat; or whether you fish for him in the surf, or by the jetties, where he's a bull; or whether you have to fight him off your hook so that you may catch something else; he's a game and gallant gentleman, ready to fight at the drop of your hat, and he doesn't know the meaning of the word quit.

Gentlemen, I give you Old Man Sciaenops Ocellatus—King of the Tackle Busters—Himself!

## Predation

★ Continued from page 5

creatures in all species. If such animals lived to breed, the poor offspring they produced would make the race continually more useless, unfit or dangerous. Sick animals or those of poor quality are of little value to man. Some of their diseases like rabies or tularemia or blackleg may infect man or his livestock. Yet through predation, the unfit are killed before they can breed; through predation, they die before they can spread much disease; through predation their death is not a waste, because it provides food for those that are fit, strong, and valuable to us.

Predation is nature's way of doing for the wild creatures what culling, sanitation, and selective breeding do for tame flocks and herds. This is true of game as of other species. It is the way by which game maintains the sporting qualities of strength and wildness that make hunting and fishing so worthwhile.

This is the real meaning of predation. In nature, it is a normal and necessary working of a basic law that benefits all life, including man. We are never harmed by this law when it is working naturally.

Sometimes, though, the law is kept from working to our benefit. This may happen in several ways: It happens when we use the land so that the natural food supply of the predators is destroyed, which causes them to kill more of other species. It happens when we fail to do our part in harvesting the surplus of the larger predators, that do not have enough natural enemies to keep their numbers down. It happens when we make tame poultry and livestock out

of wild birds and mammals, thus taking away their power of defense, and then fail to protect them ourselves. It happens in another way when we take what used to be predatory creatures out of the wild and make them into dogs and cats around the house, teach them to kill the wild creatures for us, and then leave them free to kill for themselves.

This does not mean that we should not use land, or keep livestock or dogs. These have become a necessary part of our lives. It does mean, however, that in doing so we are coming up against the natural law of predation, and that whether the results are good or bad depends for the most part on how we use these necessities. They can all result in a destructive kind of predation, and it is then that we must think about predator control. The important thing to remember is that only by understanding and working with the principle of normal predation can we control the damage that results when predation is not normal. It is only when we understand that predator damage is due to an upset in nature's scheme, that we can correct the damage without causing further upsets. There are two ways of doing this: We can *avoid* predator damage by providing protection from predators; when this is not enough, we can *reduce* predator damage by killing the individuals that are causing it.

Management to avoid predator damage is by far the better plan. This is done through good land use, protection of livestock, regulated wildlife harvests, and control of our own tame predators—the dogs and cats.

These things must all work together, for no one alone of them will do the job. Through good land use, valuable small wildlife becomes abundant and predators get enough food by weeding out the surplus or unfit of these species. Through the use of barns, poultry houses, fences and dogs, man gives livestock protection from predators; these are insurance that few farmers fail to provide. Through regulated harvests, man keeps predators from becoming too numerous by taking the surplus for food, fur or sport. Through control of his dogs and cats, man keeps them from taking daily unnecessary toll of the wild creatures, whose death in this way would be a waste.

Good management of land, wildlife and livestock is the best way to avoid the damage and enjoy the benefits of predation. Normally that is all that is needed; it is only in emergency cases that this is not enough. Such emergency conditions arise when something causes a shortage of natural food; when this happens, some of the predators must find other sources of food or go hungry. Also, it sometimes happens that a predator becomes to old or crippled to catch wild animals, and turns to the tame poultry or livestock that is more easily taken. This is especially true of foxes and coyotes, for in Missouri these species have no larger predators to weed out their old and unfit. That leaves the

job squarely up to man, and when such animals become destructive, direct action is needed to reduce the damage.

The best way to reduce predator damage that we cannot avoid is to kill the animal that is doing it. The farmer has every right to destroy any predator that is molesting his flocks or herds. If he does not know how, his County Agent will help him get training from expert trapper-teachers provided by the Conservation Commission of the U. S. Fish and Wildlife Service. In past years, these professionals themselves did the trapping, but experience has proved that the most effective predator control is done by the trained farmer himself.

An important part of the training is the idea that the damage can be stopped only by killing the particular predator that is doing it. When one fox is raiding a chicken-house, it does no good whatever to kill ten or fifty other foxes. When a coyote is killing lambs, it is that particular coyote, and not the ones digging out mice over in the back woodlot, that must be killed to save the remaining lambs.

The reasons for this are plain. For the most part, predators prey on wild species. Normally, they fear and avoid man. It is the exception, and not the rule, when a predator overcomes this fear and risks death to prey on tame stock. The only thing that can make him do it is failure to get enough food in a safer way. When this exceptional individual is killed, the damage stops and predation resumes its natural course in the wild, where it is needed.

There is a lesson for all of us in this story. It is one that cannot be repeated too often or made too plain. Widespread and serious predator damage is a danger signal: It is a sign that something has happened to throw nature off balance. Most often this is something that we have done to the land—a kind of use that in addition to depleting the soil for production of crops has made it unable to produce enough natural predator food. Predator damage is as much a sign of land abuse as are the scarred trees left by a forest fire, or the bare earth and raw gullies following overgrazing and abusive cultivation. It is another example of the fact that we cannot hope to benefit by working against nature, but only by understanding and working with the great natural laws.

Thus, to avoid and reduce predator damage, we must first understand that the management of predators, like the management of game and of crops, is a part of the management of the one basic resource from which all others stem—the land.

Good predator management is, first of all, wise land use.—Missouri Conservationist.



#### Rats for Pouches

The skins of rats are used to make pocketbooks and tobacco pouches.

## Field Trips

★ Continued from page 25

means. Thirty-three more white-tail does and fawns were counted within six miles, with the bucks conspicuous by their absence. As it was getting dark, and our appetites were whetted we built our campfire to heat our chili and beans and to make camp coffee. After the meal the group discussed the activities and observations of the afternoon. It was a contented but tired group that finally left this spot, that only God could have made, and headed back for Alpine.

Our semester is nearly over, and it seems to us just a few short days since our class first met. At this stage, we are all of one mind; that the power of *observation* and of *doing* is ninety percent of education. Today, if observation and care were practiced, there would be far fewer accidents in hunting. A good slogan for all hunters would be, "Be sure its game before you shoot."

Man's existence depends upon the soil, regardless of his status and profession in life. The conservation of not only wildlife, but also of the natural setting for its habitat, must be observed if man is to live a happy and prosperous life. Every farmer and rancher should be cognizant of the fact that they should control grazing for both domestic livestock and wildlife. Deferred grazing, rotation of pastures, and determining the correct carrying capacity should be fundamental in establishing a range where there would be a sufficient supply of food for all wildlife and livestock. There will be game for all sportsmen, if the sportsmen themselves will cooperate with all agencies connected with wildlife conservation and restoration. Remember that Texas is the largest state; and she also has an abundance of wildlife resources; and if these are used wisely an adequate supply will be insured.

It would be good if all could participate in a wildlife conservation study similar to the one that has been ours to enjoy. It has been a distinct revelation to all of us, and has made us conscious of the problems facing the Texas Game, Fish and Oyster Commission. Without the help and cooperation of all it will be difficult to accomplish the desired results. In the foreword of *PRINCIPAL GAME BIRDS AND MAMMALS OF TEXAS*, Texas Game, Fish and Oyster Commission we read . . . "The more we know of our wildlife the better we will appreciate its cultural and material value. The greater security we provide for it, the more security wildlife will contribute to our nation and the happiness and vigor of its people." This will be our motto as we go out in the world to teach others.

# Laguna Madre

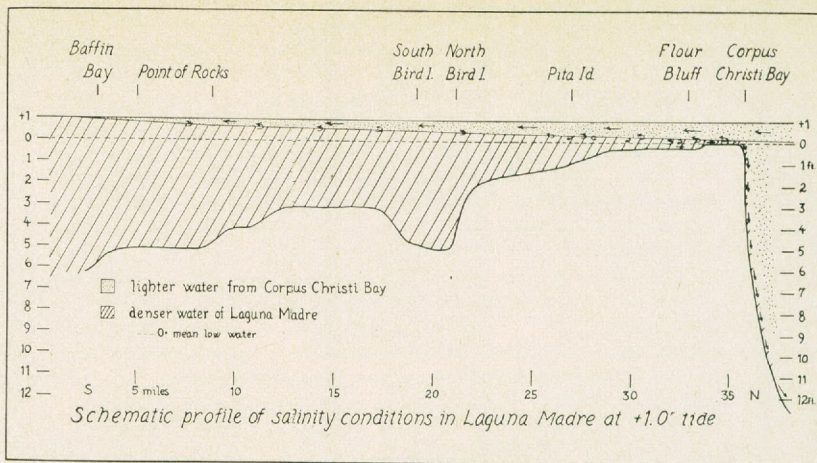
★ Continued from page 15

of the lower end. (Fig. 4). This situation is now stabilized for the winter months.

The action of the salinity at the constriction at Point of Rocks is very important, for it explains why a channel cut into the Laguna from the Gulf of Mexico does not cause an exchange of salinity, and why the damming of the Laguna by a solid fill causeway with less than a half mile of open space will ruin the Laguna. Here we have a block in the Laguna, reducing its effective width to about a mile, and as a result, salinity exchange, even during periods of high tide, is effectively blocked.

The reason for this is that salinity exchange occurs over broad open areas rather than in channels. Furthermore, waters of different salinities are of different densities, and tend to slide over each other without mixing. This happens even in the open ocean, and for this reason oceanographers can trace currents by analyzing salinities and temperatures without making direct observations of the actual water movements.

When water of lower salinity is pushed into the Laguna from Corpus Christi Bay by the rising tide, it slides over the denser water of the Laguna as a long wedge (See fig. 5). When the tide recedes, this water slides back again, leaving the more saline water of the lower end almost unchanged. Thus, when there is a narrow channel, the salinities rock back and forth with the tide, as shown in figure 3. Salinity exchange, therefore, does not occur until a high tide over the whole width of the Laguna is sustained long enough for lateral eddies to effect a mixing of the waters of Corpus Christi Bay and the Laguna Madre. Then as the tide recedes, it carries some of the more saline water back with it to Corpus Christi Bay.



WHEN THE TIDE brings in water of lower salinity to the Laguna, that water slides over the heavy salt water of the Laguna as illustrated in this diagram.

It stands to reason, therefore, that any constriction in the width of the Laguna will block off this tidal action. The building of a solid causeway across the Laguna would be in effect a dam, and the inevitable result of the construction of such a project would be the conversion of the Laguna Madre into a brine pool. The whole width of the Laguna is necessary even for the present inadequate salinity exchange.

Some people have expressed the hope that the extension of the Gulf Intra-coastal Waterway through the Laguna to Port Isabel would set up a current and thereby bring about an exchange of salinities. But this waterway will be 130 miles long and only 200 feet wide, and there is no source of water at either end to set up such a current and keep it going. Water has to come from some where if it is to flow in a current. Probably the water in the ship channel will simply rock back and forth as it now does in the Point of Rocks area, where the Laguna is almost a mile wide.

The whole trouble with the Laguna

Madre is that it is dying. In terms of geological time its days are numbered although its days may be centuries as we count time. No rivers drain into it, hurricanes move more and more sand from Padre Island to fill it in, and eventually it will be nothing but dry land. What nature is doing to the Laguna, man threatens to hasten by proposals to build causeways and ship channels. The Laguna Madre is an object lesson of what can happen to other bays on the Texas Coast. Because of the water needs of the city of Corpus Christi the entire flow of the Neuces River may some day be cut off. When that happens, Corpus Christi Bay itself will go the way of the Laguna Madre. The forces of geology are irreversible, and throughout history man has done more than his share to set them in motion.

## What Is Buck Shot?

Contrary to popular belief "buck shot" is not one size of lead ball but today constitutes a term to designate five different sizes ranging from about a quarter to a third of an inch in diameter.

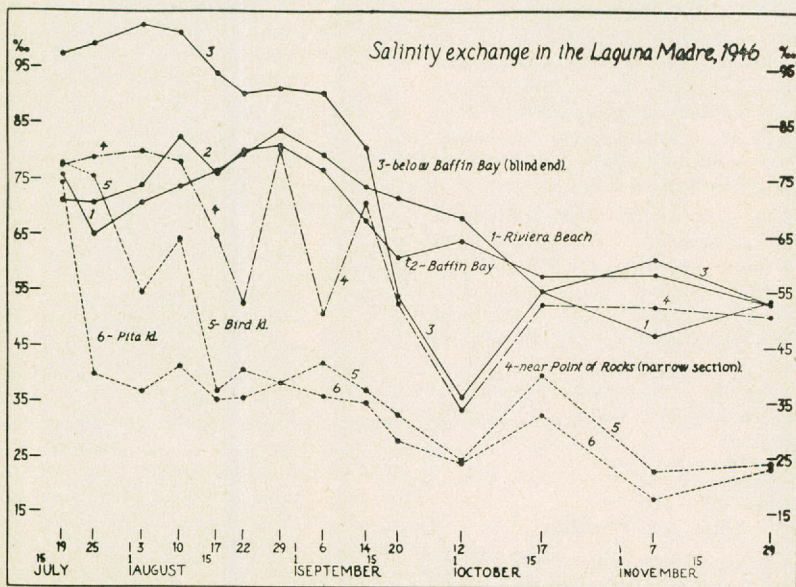
Thirty years ago there were seven different sizes, but two sizes have since been abandoned because experience shows there is no need for them.

Buck shot gets its name from the fact that it was once used primarily against deer. However, paper military cartridges of the later Eighteenth and early Nineteenth Centuries were loaded with buck shot or with a large ball and two buck shots.

Today's largest buck shot No. 00 is .33 inches in diameter and 135 balls make up a pound. The following table will make the distinction between buck shot sizes quickly understandable:

| SIZE | Diameter in Inches | Number to The Pound |
|------|--------------------|---------------------|
| 00   | .33                | 135                 |
| 0    | .32                | 145                 |
| 1    | .30                | 175                 |
| 3    | .25                | 300                 |
| 4    | .24                | 340                 |

THIS GRAPH shows how the narrowing of the Laguna at Point of Rocks divides the water of the Laguna Madre into two different salinity groups.





**MEMBERS of the hunting club which hunted on the Steinmann ranch in Lavaca and Colorado counties enjoyed a good season as the above photo shows. This picture was taken in the evening of Nov. 16, 1946. From left to right the hunters are Herbert Rudolph, Chester Jones, C. C. Wagner, Fred House, Leonard Steinmann, Joe Smith, Ed Steinmann, Rudolph Best, and Fritz Sicko.**

## Loss of Fish

★ Continued from page 12

there were eight 12 to 14-inch Trout one 12-inch Drum. In three more 10-pace areas there were 100 fish in each.

This destruction reached from San Antonio Bay on the north down through Copano Bay, the upper Laguna Madre, lower Laguna Madre, to at least 100 miles below the Mexican border. In the San Jose pasture of the Norias Ranch, Valgene Lehman, King Ranch Biologist, counted 553 fish in 100 yards. Among these were Redfish that would measure as much as 48 inches, and Trout up to 36 inches. However, the greater majority of them were trout from 14 to 20 inches in length. There were small tarpon, perch and drum. On the same ranch, on a section of the shore examined by the writer, another 32 paces contained 403 fish. This included several Trout that would reach 24 or 26 inches, numerous Drum and a few Reds. Below Brownsville, Mr. and Mrs. Eubanks, well known to sports fishermen of this area, estimated that there were well over 1,000,000 pounds in that section of the Laguna. They told me that they had driven for six miles along the shore and that for the entire six miles there were always the same huge windrows of dead fish. A man from the Lorino Fishery at Brownsville estimated that within a block it would have been possible to pick up 120 tubs, or 10,200 pounds of Trout, Redfish and Drum. One alligator, 20 feet long, was seen by these men.

A curious thing about these fish was that there were no small reds. On January 6th and 7th, when the first effects of the freeze became apparent, the shores were littered with yellowtails (or as many people call them Sand trout), sheepshead, a few small Drum, and a great many Trout from six to eight

inches in length. The larger fish did not begin to appear until the following week when decomposition was sufficient to float them off the bottom and allow them to be washed ashore. During both phases of the freeze very few rat reds were seen. However, once the large fish began to come ashore, I saw bigger Reds than I had ever seen in my life. These were not scattered evenly and to give you some conception of the appearance of the shore line it is hard. However, on the Norias ranch the beach was littered with millions of trout weighing from 1 to 1½ pounds. These were all along the shore for mile after mile, as far as we drove, and as far as we could see. Mixed with these were 14 to 20 inch drum, in huge numbers. In the surf at the waters edge still more trout and drum were floating, some of them very large. About every 10 feet were sows trout that would go from 20 to 26 inches and wherever the bottom had been suitable for sheepshead, there were drifts of this species. The Redfish occurred at intervals from 50 to 100 yards and were concentrated as though an entire school had frozen and later washed ashore. There were huge bulls up to 48 inches, although by far greater proportion of them would run from 24 to 32 inches. There were no small ones. The destruction apparently was greatest where the fish had been caught on the shallow flats and could not reach deeper water. Here the 29 degree drop in water temperature had numbed them, and in the case of the small fish they had floated ashore, their gills still struggling to give them enough oxygen to live. The large ones sank and smothered because of their inability to breathe. In Baffin Bay, I saw hundreds of huge trout that had first sunk and later risen to the top. These were big trout, six, seven and 10 pounders, brood stock that would have perpetuated the schools the following year,

and in an aerial photograph of one section of the area these floating fish were so thick on top of the water that they appeared like pepper on the white of an egg.

Great numbers of Pike were killed in the Brownsville ship channel and in the Rockport Boat Basin, a number of these fish floated to the top also. Appearance of these fish so far north is unusual, although they have been caught off Galveston.

Not only the salt water fish were affected, for in the Brownsville-Port Isabel area, I saw black bass floating on top of the canals and carcasses that would weigh as much as two pounds. Rio Grande perch were numerous, many of them very large, and the consensus of opinion among the local residents was that most of this species had been killed out.

What does this mean to Texas Fisheries? How many fish were killed?

Any estimate is only a wild approximation for there were almost as many large fish that remained on the bottom and never came ashore as there were that the waves brought in. However, it seems reasonably safe to estimate that the fish that could be seen averaged 5 pounds per foot over a distance of almost 300 miles. At another 5 pounds per foot for the fish that remained on the bottom, and you have a total of almost 16,000,000 pounds. This is more fish than were caught by all the commercial fishermen in Texas in the last three years, and at the present retail price of around 35 cents a pound, it means that Texas is \$5,500,000 poorer than she was last December before the freeze. Moreover, if we may judge by the 1940 freeze, it means that for the next two or three years, until the fish population has a chance to recuperate, the fishing is not going to be so hot.

☆

A dull hook will lose fish. Keep a small honing stone in your tackle box and check the tip of the hook barb from time to time. When fly casting on shale or sand, the back cast may allow the hook to touch the beach and dull itself. Clean, sharp hooks mean more hooked fish and less danger of infection to yourself if you hook the wrong creature.

☆

Mark the butt of your rod with a thin strip of adhesive tape six inches from the end and with another strip ten inches from the end. This will give you a handy ruler for measuring fish without marring the rod surface. And, if you remember the rod, you remember the ruler.

☆

The eyes of a whale are set far back and look in opposite directions. They cannot be moved to look straight ahead or behind. If Master Whale wants to see what's on the horizon, he must stand up in the water and slowly turn around.

## New Boats Are Ahead

At the start of another year we can look back and see many new products that have appeared on the boat market since the close of the war. Some of these are good, some fair and some just a passing fancy. Every war brings out new products in the marine world.

If my history is correct, steel ships appeared during the era of the Revolutionary War, submarines during the Civil War, fast destroyers and large speed boats in World War I and now we have boats of extremely high speeds. As compared with the automobile industry, the new cars have achieved great speeds, but there is one feature in their favor and that is modern four-lane highways, banked curves and safety markers, whereas, the boats still combat mother nature with the same rough water as the Pilgrims encountered on their voyage on the Mayflower.

Some of the new materials appearing in boats are plastics of all kinds. Along with the plastics, we have seen a boat made 50 per cent of glass. Different shapes, different designs have made their appearance within the last few months. Diving equipment with self-sustained oxygen units completely without hoses, hulls molded into shape from one piece of material, propellerless boats and other fascinating things have made their appearance. However, the old wind-jammers are still in a class of their own, which has existed throughout all the modern improvements from Fulton's steam engine to jet propulsion. Although the sail races continued throughout the most part of the war because they required no fuel to operate them, the sail regattas were very extensive this year. Believe it or not, the Newport-Bermuda race was the slowest since 1906.

Cornell University won the Lake Washington International Regatta, but didn't challenge the records set in 1924. The national outboard races were no better as far as speed was concerned, the water being so rough that the country's top drivers couldn't run. The boats that did participate were extremely heavy for the class of motors used and even some of these turned over because of rough water.

## How to Kill an Organization

1. Don't come to the meetings.
2. If you do come, be sure and come late.
3. Hold back your dues or don't pay them at all.
4. Never ask a friend to join.
5. Don't have anything to say when you are called on.
6. If too wet or too dry or too hot or too cold, don't think of coming to a meeting.



**E. F. BARTH, of Mercedes; T. S. BARTH, of College Station; and W. W. BARTH, also of Mercedes and father of T. S. Barth, closed the 1946 season with this successful bag near Laredo.**

Most of the old manufacturers are now back in high gear. The only thing that is keeping top production down is shortages of material.

The old reliables are building the standard merchandise that they have produced for a long, long time. These products are well known and will continue to serve the public in the same capacity in the future as in the past. They, of course, are incorporating new designs, new lines and some of the new improvements that have come out of the war, but most of them are sticking fundamentally to the same principles. The new products will have to be tried over a period of time before they are completely accepted. One thing for sure, dealers and consumers are looking forward to the best year yet in 1947.

## Clubs Promote Gun Safety

One of the best ways to institute a real community gun-safety program is to organize a junior rifle club. As the

average boy has a natural interest in firearms, the supervised shooting possible only in a rifle club will teach youngsters to have respect for guns.

Many high schools, Boy Scout Troops, Veterans' organizations, and even Police Departments are installing rifle clubs to satisfy the growing interest of youngsters in firearms and at the same time develop a healthy new competitive sport.

Shooting is probably the only competitive sport, in which boys, as well as girls, of all degrees of physical development and individual skill can meet on equal terms and in which individual skills can be matched on even terms. Instruction in shooting also teaches safe handling of firearms.

The National Rifle Association, 1600 Rhode Island Avenue, Washington, D. C., will provide information regarding the organization of a rifle club.

## Just a Fable

Once upon a time there was a farmer. He noticed that a lot of folks came to his place in the hunting season, never asked permission, and climbed fences and left gates open all over the place. He didn't say anything, being a very even-tempered man, but just noted who the guys were who hadn't stopped to ask permission to hunt on his land, which permission would have been gladly given. A few days later the farmer, and his six offspring and his better half, drove up to the prettiest places in town. They backed the farm truck up onto the lawn, got out and staged a picnic right on that feller's lawn. And, what do you know? . . . It made the guy mad. He thought it took a lot of nerve, to use his own words.





# Coyotes Keep Game Down

By J. G. BURR

## OVEN FRIED RABBIT

- 3½ to 4 pound dressed rabbit
- 1 cup of flour
- 1 1/3 tablespoons salt
- ¼ teaspoon pepper
- ¾ teaspoon paprika
- ¼ cup melted butter of fortified margarine
- ¼ cup melted vegetable shortening

Cut off the fore and hind legs, separating the hind legs into 2 pieces at the joint. Cut the saddle into 4 pieces and then cut the 2 largest center sections in half by splitting them down the backbone. Wash the pieces of rabbit in lukewarm water, drain and dry. Mix the flour, salt and pepper and roll each piece in the flour mixture. Place the rabbit in a greased shallow baking pan and cover with the combined melted butter and melted vegetable shortening. Sprinkle each piece with the paprika. Roast at 375° F. (moderate oven) for 1½ hours. At the end of 45 minutes, turn each piece over.

## BARBECUED RABBIT

- 3½ to 4 pound dressed rabbit
- ½ cup butter or fortified margarine
- 1/3 cup grated onion
- 1 tablespoon salt
- ¼ teaspoon pepper
- 1 teaspoon sugar
- 2 tablespoons lemon juice
- 2 teaspoons Worcestershire sauce
- ¼ cup water

Cut off the forelegs and hindlegs of the rabbit, separating the hind legs into 2 pieces at the joint. Cut the saddle into 4 pieces and then cut the 2 largest sections in half by splitting them down the backbone. Wash the pieces of rabbit in lukewarm water, drain and dry.

Melt the butter and brown the onion lightly. Add the seasoning and water and bring to a boil. Place the sections of rabbit on the greased rack of a greased shallow baking pan and pour ¼ of the above mixture over the rabbit. Place in a 400° F. (hot oven) for 1 hour and 15 minutes, basting every 20 minutes with ¼ of the above mixture. When half done, turn the rabbit over.

## BAKED GROUNDHOG

The hog should be thoroughly cleaned soon after killing, care being taken to remove kernels found where legs join the body. All fat should be scraped from carcass. Hog should first be par-boiled in enough salt water to cover, with red pepper added to water during the boiling. When tender by testing with a fork, hog should be removed and placed in large baking utensil with cover. For 10-12-pound hog, use two pints of tomato juice and about the same amount of water, thickened with a little flour to a basting consistency. Melt one quarter pound of creamery or country butter

COYOTE and bobcat infestation in the counties adjacent to the Rio Grande is a complaint of long standing. Trappers that work those counties claim that despite the number of animals trapped, the population remains about the same, due to the fact that more predators are constantly crossing into those counties from Mexico. It is understood that no systematic control of predators is practiced on the Mexican side and, therefore, there is a natural overflow into Texas where competition for food is not so keen. The result is that game suffers. This sometimes happens to the extent that restocking is necessary; at least, that is what happened in Duval County. Some years ago the county was closed to deer hunting and this was followed by the planting of about 250 deer in the county.

In a recent interview with Mr. George Parr he stated that increases from the new stock had not been so good due to the great number of coyotes and bobcats. A glance at the map shows that the southwest corner of the county is only 45 miles from Mexico. On the west is Webb County, which lies along the Rio Grande, and near by is the County of Zapata. The pressure of predators against the survival of game has made conservation progress difficult.

By way of comparing restocking results in other parts of the State, where predators are under control, we find that in 1936 the Department planted 97 deer in Leon County with the result that, after five years, an open season was allowed. The kill of bucks that season was entirely satisfactory to the hunters and met with the applause of the farmers who

had begun to complain that deer were destroying crops.

Duval and Leon County comparison may not be the complete answer to the argument that wildlife can be left to the balancing processes of nature, but it strongly points in that direction. Where the predator is under control, livestock and game can prosper. Fortunately, in the more northern counties where infestation has been cleaned out, restocking has been slow in returning. Unfortunately, when counties are nearly clean, and few animals can be trapped, the trapper is disposed to move on to greener fields, and leave the seed for another comeback. It is at this point that the ranch and range rider takes over to aid in completing the job. He carries a rifle and shoots everything that is a menace to wildlife, and sometimes the unoffending hawk. I watched a rifleman pick off a coyote at 150 yards. He was standing on a road, a cattle road where little wobbly calves might be expected to come along. The first shot missed. The animal stood stone still until the second shot, which sent him reeling into the bushes.

Mr. Parr expressed appreciation of what the game department has been doing. He took note of the work of Valgene Lehmann who is in charge of the game interests of the King Ranch, and talked interestingly along a number of lines. He is a busy man of many activities and was rushed with callers at the time of my visit. However, he was ready to talk on any subject of importance whether ranching, game, or even politics.

into mixture and add two to three average size chopped onions. Baste with juice and add black pepper during the process. Bake until a rich brown color.

## When Is a "BB" Not a "BB"

When is a BB not a BB? In error, many hunters designate as BBs all of the many sizes of lead pellets used in shotshells. Actually, there are thirteen different smaller shot sizes of which about nine sizes are customarily loaded in shotshells.

The BB pellet is .18 inches in diameter and approximately 50 constitute an ounce. The pellet size known as "air rifle" is slightly smaller, .175 inches in diameter.

Shot sizes below air rifle sizes including 2, 4, 5, 6, 7, 7½, 8, 9, 10, 11 and 12.

Twelve, which is the smallest size now made is .05 inches in diameter and 2,385 No. 12 pellets make up an ounce.

You won't be tempted to call all shot pellets BB's if you remember that the range between an actual BB and No. 12 shot: 50 BB's to the ounce compared with 2,385 No. 12's to the ounce.

## Name of Kentucky Rifle a Misnomer

Even though it is the firearm that established the tradition that every American is a rifleman, there is probably no arm in the country about which less is known than that six-foot giant, the Kentucky Long Rifle.

Even its name "Kentucky" is a misnomer if we follow the usual custom of crediting the rifle to its originators,

according to an authority on firearms, Colonel Walter F. Siegmund, of Olin Industries, Inc.

The Long Rifle might better be called the "Pennsylvania Long Rifle," says Colonel Siegmund because it was developed by early Eighteenth Century gunmakers of Pennsylvania. The name Kentucky rifle has been generally applied to it because its earliest fame was won by Daniel Boone and other pioneers who carried it in their explorations of Kentucky.

The Long Rifle was the first firearm which justified the name of rifle. Although previous firearms had been rifled, the Long Rifle was the first really accurate rifle at relatively long ranges for its day, and it has owed its fame to the combination of three principal factors.

The first factor was its long barrel. Despite popular belief to the contrary, its accuracy, and range were not due to the length of its barrel. The "Pennsylvania" had a long barrel to permit the slow-burning black powder of its time to consume itself completely and thus exert its entire power behind the bullet.

The second factor was the reduced size of the Pennsylvania's bore. At its period, it was believed that a shoulder arm required a large bore and many contemporary firearms had muzzle diameters in excess of an inch. By reducing the bore, a backwoodsman could get a far greater number of lead balls from a pound of lead and would also gain economy in the use of powder.

Expressed in terms that made sense to a man who had to make his lead stretch, it is possible to get only 10 balls of .75 caliber from a pound of lead; whereas, 70 balls for a .40 caliber Pennsylvania Long Rifle was the average for a pound.

The third factor and the real secret of the Long Rifle was the discovery by the Pennsylvania gunmakers of the famous "patch" which made it possible to secure a gas seal behind the bullet. The Long Rifle being a muzzle-loader, it was necessary that the bullets be smaller than the rifle bore because the powder fouling left after each shot made it impossible to push home a tight-fitting ball. Since the bullet was smaller than the bore, the powder gas which propelled it from the barrel had plenty of room to pass the ball and leak out of the muzzle ahead of it. Realizing that this loss of gas reduced accuracy and range, the Long Rifle makers hit upon the happy idea of ramming home the ball with a greased or spit-lubricated patch of buckskin or cloth. The patch served the dual purpose of wiping the bore clean for each shot and of obturating or sealing the powder gases behind the ball. This was the real reason why the Long Rifle both out-ranged and out-shot every firearm of its day.

The Long Rifle was to the immigrants of the 1700's on their way to the country bordered by the Mississippi River what the Winchester lever action rifle was to the immigrants of the 1800's who pushed American civilization west of the Mississippi.



# BOOKS



**THE PUMA.** The Mysterious American Cat, by Stanley P. Young and Edward A. Goldman. 358 plus XIV pages. Illustrated with numerous photographs and figures. Published by the American Wildlife Institute, and now distributed by the Wildlife Management Institute, 822 Investment Building, Washington 5, D. C. Price \$4.

In this unique work, two outstanding American scientists, both senior biologists with the Fish and Wildlife Service of the U. S. Department of the Interior, join their talents to provide a fascinating monograph of this typically American animal, second in size only to the jaguar among the New World cats.

The true history of the puma is difficult to separate from the fiction and superstition passed down by the American pioneer and the Indian before him, yet the authors do an excellent job with this stiff assignment while managing through gripping tales of adventure, to preserve the romantic appeal which this mysterious animal has always commanded.

**SPORTSMEN'S GUIDE TO WILD DUCKS**—By D. P. Sheldon and Frederick C. Lincoln. 36 pages, full-color reproductions of 16 wild duck species, with maps showing range of each. Paper cover. Published by Wildlife Management Institute, 822 Investment Building, Washington 5, D. C. Price 25 cents. Special price for quantity orders, with or without imprint.

Rarely does the sportsman find reading matter that conveys so much information on such an important subject in such limited space and interesting form as this little wild duck booklet.

Colonel Sheldon eloquently describes our waterfowl, traces the history of these birds from ancient times right through the droughts of the 1930's, and extols the efforts of government and sportsmen, working together, to combat their threat to the ducks' existence. Contains a graphic explanation of the waterfowl flyways, the breeding and winter grounds, and describes the part played by banding in acquainting science with the migratory habits of the birds. The excellent color plates are by Fred Everett. Each is accompanied by a range map and a brief account of the habits of the duck pictured.

**HOW TO HUNT AMERICAN GAME**—By Robert B. Vale. 200 pp., numerous illustrations by George M. Sutton. Published by The Military Service Publishing Company, 100 Telegraph Building, Harrisburg, Pa. Price \$4.

This is a practical handbook designed expressly—to use Mr. Vale's own words—"to aid the hunter, to help in the study of the habits of wildlife, and to assist in the conservation of our stock."

The author has had wide experience, both in hunting of American game and in writing about it. His journalistic training is reflected in the clear and simple, yet interesting manner in which he presents his facts. This is no book of hunting fiction nor of colorful hunting memoirs, but a source of practical information helpful to the old-timer as well as the novice.

Mr. Vale analyzes the appeal that hunting has for the average American, discusses the habits of the various upland game birds, waterfowl and mammals, tells how to hunt them successfully and in a sportsmanlike manner, and presents clearly his ideas for the preservation of each of the various species.

**THE RELATIONS OF PHEASANTS TO AGRICULTURE IN THE YELLOWSTONE AND BIG HORN VALLEYS ON MONTANA**—By Robert W. Hiatt. 72 pages, illustrated with numerous photographs. Published by the Montana State Fish and Game Commission, Helena, Mont.

This is a publication covering work performed and conclusions reached under Montana Pittman-Robertson Project 1-R, based upon field work performed under the direction of William R. Bergerson.

The booklet describes the study area, its climate, geography, agriculture and pheasant population. It outlines the procedure followed and submits many interesting findings.

These indicate that pheasants are more beneficial than harmful to agriculture; that destruction of insects injurious to agriculture is valuable; that destruction of produce by pheasants is controllable; and that consumption of weed seeds is "probably insignificant" in its effect upon the next year's weed crop. The need for a better farmer-sportsman relationship is stressed.

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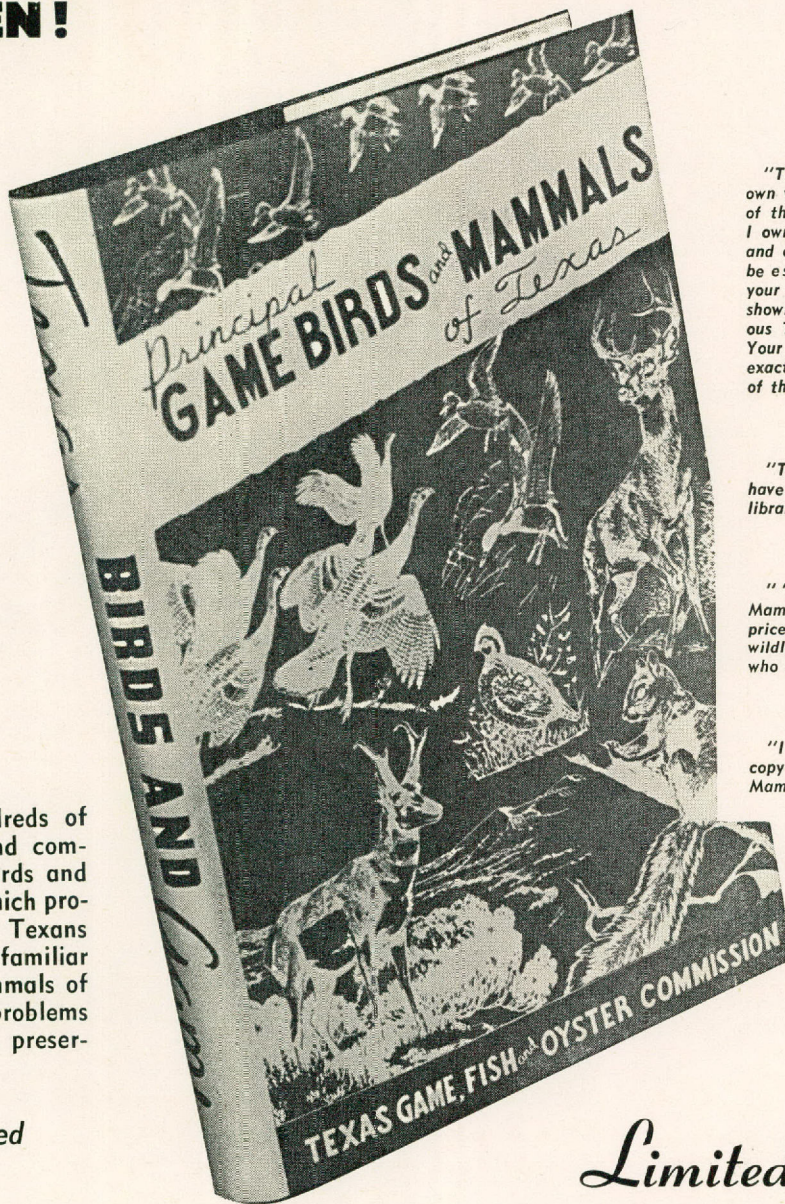
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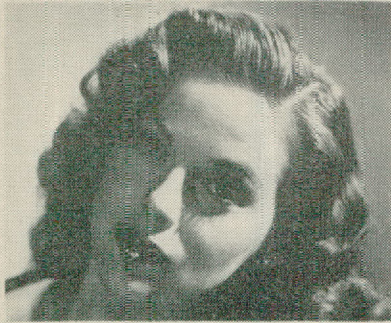
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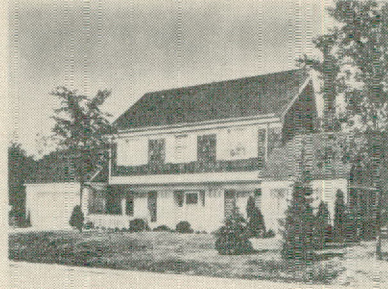
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# PHOTOQUIZ

Prepared by the Editors of LOOK  
Maaazine for this Publication



**1** Mighty easy to look at is blue-eyed:  
(a) Bette Davis (c) Marguerite Chapman  
(b) Jinx Falkenberg (d) Elizabeth Scott



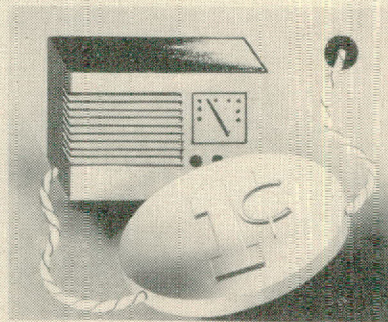
**2** Most payroll savers are saving for:  
(a) a yacht (c) a string of pearls  
(b) a home (d) a jet plane



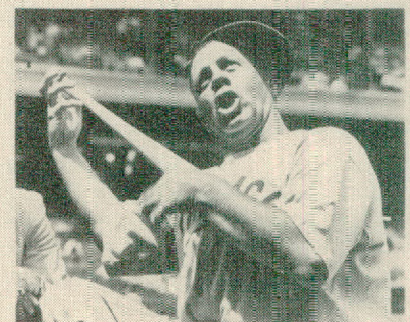
**3** Here's our new ambassador to Moscow:  
(a) James F. Byrnes (c) Gen. "Beetle" Smith  
(b) Admiral Blandy (d) General Marshall



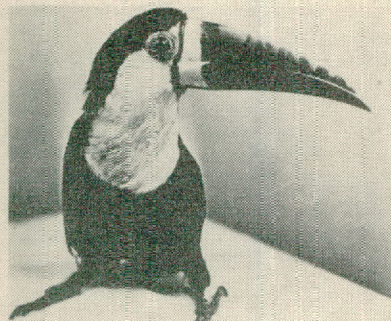
**4** John W. Snyder recently became:  
(a) Secretary of the Treasury (c) a Mayor  
(b) an Ambassador (d) Chief Justice



**5** A cent's worth of electricity runs a radio:  
(a) 57 minutes (c) 2 hours 30 minutes  
(b) 4 days 2 hours (d) 4 hours 26 minutes



**6** He's happy-go-lucky baseball manager:  
(a) Leo Durocher (c) Bill Dickey  
(b) Charlie Grimm (d) Joe Cronin



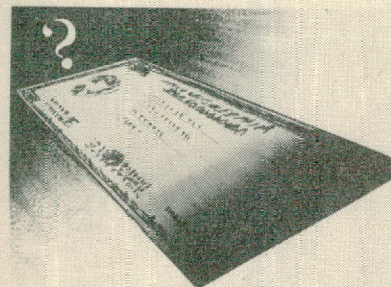
**7** Comical figure of the bird world is a:  
(a) toucan (c) hatch bill  
(b) macaw (d) cockatoo



**8** An excellent way to buy Bonds is:  
(a) by mail (c) at theaters  
(b) at railroads (d) thru payroll savings



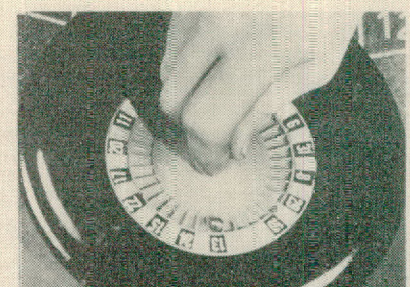
**9** She's playing beautiful music on a:  
(a) spinet (c) zither  
(b) harp guitar (d) balalaika



**10** The Payroll Savings Plan started in:  
(a) 1897 (c) 1912  
(b) 1941 (d) 1943



**11** Wearing her 18K gold hat is commentator:  
(a) Hedda Hopper (c) Mary M. McBride  
(b) Paula Stone (d) Lovella Parsons



**12** The spinning wheel is used in the game:  
(a) of chuck-a-luck (c) of roulette  
(b) of charades (d) of parcheesi

## PHOTOQUIZ ANSWERS

1—(c) Marguerite Chapman. 2—(b) a home. 3—(c) Gen. "Beetle" Smith. 4—(a) Secretary of the Treasury. 5—(d) 4 hours 26 minutes. 6—(b) Charlie Grimm. 7—(a) toucan. 8—(d) thru payroll savings. 9—(c) zither. 10—(b) 1941. 11—(a) Hedda Hopper. 12—(c) of roulette.