

Texas Game and Fish

JULY

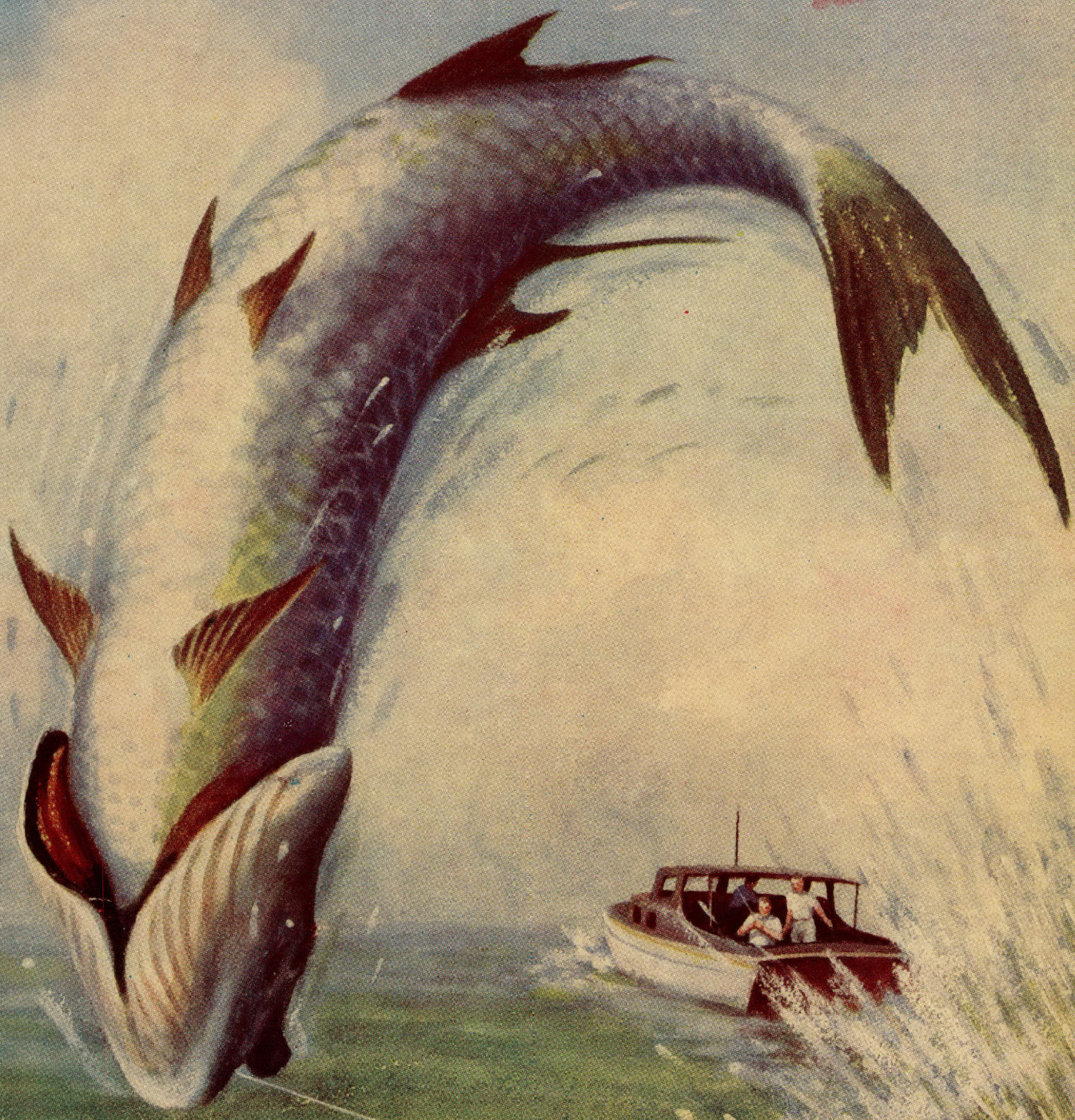
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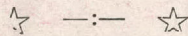
Here's the

INSIDE STORY

of the

Texas Game and Fish Market

Inside this great State, studded with streams, rivers, lakes, forests, and 1100 miles of Gulf of Mexico coastline . . . abounding in game and fish . . . is a dependable, responsive market. The far flung limits of this well-defined market and the vastness of its hunting and fishing wealth combine to provide a land of opportunity for advertisers. This market can be reached effectively and completely only from the inside—through TEXAS GAME and FISH, a monthly hunting and fishing magazine which already has a paid circulation of more than four times the combined circulation and newsstand sale of all the other hunting and fishing magazines in Texas, and which is adding new subscribers at the rate of better than 500 a month without the use of premiums . . . high pressure solicitors . . . or a club rate.



TEXAS GAME and FISH

WALTON BLDG.

AUSTIN, TEXAS

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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COVER—By Orville O. Rice

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In This Issue

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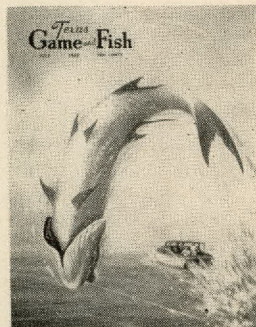
July 1949

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ROGER M. BUSFIELD
Editor



The Cover

There is a whirl in the water and a large fish comes flashing out in a splendid, verticle leap that ends in a welter of flying spray. That's the Tarpon, one of the greatest game fish known to salt water anglers. In his painting Orville Rice has captured one of those fleeting moments when the Silver King, hook firmly set in his mouth, goes into the air in a desperate effort to shake the hook loose. A strike by a Silver King is an unforgettable moment in the life of any angler.

Game License Law Provides Numbered Tags for Slain Deer

Texas deer and turkey now are classed as big game and Texas sportsmen who hunt either deer or turkey, or both, next fall must have a big game hunting license.

Possession of a big game hunting license for deer and turkey hunting is made mandatory under provisions of House Bill 146 which Gov. Beauford Jester signed into law last month.

The big game hunting license will cost \$2.15. It will go on sale about August 1 and will be valid for the year beginning September 1 and ending August 31, 1950.

Besides deer and turkey, the holder of a big game license may hunt all other game and game birds, including white-wings, mourning doves, quail, ducks and geese. However, a federal duck stamp must be attached to the big game hunting license when hunting migratory waterfowl.

Each big game hunting license will have two deer tags attached to it. Each tag will bear the serial number of the license. Immediately upon killing a deer the hunter must attach one of the tags to his kill and it must remain on the carcass until it is finally processed or disposed of.

But before attaching the tag to his slain deer the hunter will have some data to put on the deer tag. The data will include such information as the date on which the deer was killed, the county in which it was killed, and the lease on which it was killed. This information will be invaluable to game biologists in analyzing each season's deer kill.

The use of deer tags will materially reduce the illegal taking of deer because a hunter will be courting an immediate date with a justice of the peace if he uses a tag not issued to him, or if he attempts to use the same deer tag on more than one deer, or if he is in possession of a deer without a tag.

Youngsters under 17 years of age are exempt from purchasing a big game hunting license as are citizens who hunt deer and turkey on land on which they reside. However, those under 17 years of age and those who hunt on land on which they reside, must obtain from the

Game, Fish and Oyster Commission an exemption big game license. That is, they will register with the Commission and then be issued a big game hunting license plainly marked "exemption license." There is no fee for the exemption license.

Provisions of the big game hunting license law also require bow and arrow hunters to purchase a big game hunting license if they hunt deer and turkey, because that is the only way they can obtain the deer tags which must be attached to every deer killed, whether the buck goes down under the impact of a rifle bullet or the paralyzing power of a hunting arrow.

Still in effect is the \$2.00 residential hunting license. This license will permit the holder to hunt all game and game birds EXCEPT DEER AND TURKEY

for which the \$2.15 big game hunting license will be required starting September 1 of this year.

The difference in cost of the two hunting licenses, big game and resident, is only 15 cents. One, the big game license, permits the holder to hunt any and all game and game birds, while the other, the resident hunting license only permits the holder to hunt game and game birds other than deer and turkey.

Of course, the smart sportsman will purchase the big game hunting license and be on the safe side.

The new big game hunting license law makes no provisions for non-resident deer and turkey hunters but they will be permitted to hunt on a \$25.00 non-resident hunting license. Non-resident hunt-

• Continued on Page 20

Features of Big Game License Law

There are six important features of the new big game hunting license law which become effective on September 1. The important features are:

1 Every sportsman who hunts deer and turkey must have in his possession a big game hunting license, costing \$2.15. These licenses may be obtained from the State Game Department, State Game Wardens, County Clerks and license deputies.

2 The resident hunting license, costing \$2.00 is still in effect but holders of this license cannot hunt deer or turkey. This license is good on all other game and game animals.

3 Citizens of the State must attach a tag on all deer killed. These tags, two in number, are attached to each big game hunting license and bear the same serial number as the license.

4 Citizens under 17 years of age and citizens who hunt deer and turkey on the land on which they reside do not have to buy a big game hunting license. They

are exempt under the new law. But they must register with the State Game Department and an "exemption license" will be issued to them without cost.

5 Citizens who hunt deer and turkey with bow and arrow must be in possession of a big game hunting license as each deer killed must be tagged and deer tags are obtainable only with the purchase of each big game hunting license.

6 Out of state sportsmen may hunt deer and turkey on a non-resident hunting license costing \$25.00. Those killing deer on a non-resident hunting license will not have to tag their deer, as deer tags are attached only to the big game hunting license, and under provisions of the new law only citizens of the State may purchase big game hunting licenses.

A Break for Anglers

All special lake fishing licenses, except the special license for Lake Texoma, are invalidated by new law which provides for one license good anywhere in the State.

Only one fishing license will be required after September 1 to fish in any of the inland waters of the State. That licenses, known generally as the universal fishing license, will cost the angler \$1.65. It may be obtained in the same manner as the artificial lure license is now obtained.

All residents of the State over 17 years of age must have a universal fishing license if artificial bait is used, or if fishing with live bait outside of the county of residence, or if fishing is done in waters of counties not adjacent to the county of residence. The new law permits residents of a county to fish with dead bait all waters of counties adjacent to the county of residence but when live bait is used in those waters then the angler must be in possession of a universal fishing license.

Citizens under 17 years of age may fish anywhere in the State without a license even if artificial or live bait is used.

Also exempt from obtaining a universal fishing license are holders of commercial fishing license.

None of the present special fishing licenses needed to fish in the waters of certain counties, or in Possum Kingdom, or in Lake Worth and Eagle Mountain Lake, will not be required after September 1. The special Medina Lake license already has been repealed.

Residents of counties bordering Lake Texoma will not be required to have a universal fishing license after September 1 when fishing in the Texas waters of the Lake with dead or live bait. But if artificial bait is used then residents of those counties must have a universal fishing license to fish in the Lake Texoma waters lapping the shores of the county of their residence.

A special license, however, will be required of all Texans who fish in the Oklahoma waters of Lake Texoma. Details of that special license are now being worked out.

The full text of the new universal fishing license law follows:

"Section 1. Resident Fishing License.

It shall be unlawful for any resident of this State to fish in any of the fresh waters of this State, outside of the county of his residence and adjacent counties thereto, without first having procured from the Game, Fish and Oyster Commission, or one (1) of its bona fide employees or a county clerk or an authorized agent, a resident fishing license, the fee for which shall be One Dollar and sixty-five cents (\$1.65). Of this amount, the officer issuing same shall retain fifteen cents (15c) as his fee for collecting same. No fee or license of any kind shall be required of a person for the right to fish in the county of his residence and counties adjacent thereto except as provided in Section 3 of this Act.

"Section 2. Non-resident Fishing License. It shall be unlawful for any person who is a non-resident of this State, or any person who is an alien, to fish in the fresh waters of this State without first having procured from the Game, Fish and Oyster Commission, or one of its bona fide employees, or a county clerk or an authorized agent, a non-resident fishing license, the fee for which shall be Five Dollars and twenty-five cents (\$5.25). Of this amount, the issuing officer shall retain twenty-five cents (25c) as his fee for collecting same. Provided that such non-resident may fish

Special Licenses Out

Here are the special fishing license which will no longer be required after September 1 when the universal fishing license law goes into effect:

1. The resident fishing license now required in 21 counties.
2. The artificial lure license.
3. The Lake Worth and Eagle Mountain Lake special license.
4. The Possum Kingdom special license.
5. Medina Lake special license.
6. Lake Texoma special license for fishing in Texas waters of the lake.

in said waters under a five-day license, the fee for which shall be One Dollar and sixty-five cents (\$1.65), and which shall be valid for only five (5) consecutive days, including day of issuance, the date on which shall be stated thereon. The issuing officers shall retain fifteen cents (15c) of said amount as his collecting fee.

"Section 3. Exceptions. No person under seventeen (17) years of age shall be required to possess any of the licenses provided for in this Act. No resident fishing license shall be required of a resident citizen of this State who hold a commercial fishing license issued in this State. Provided that all residents of this State over the age of seventeen (17) years shall hold a resident fishing license when using artificial bait or lure. Provided further that all residents of this State over the age of seventeen (17) years shall hold a resident fishing license when using live bait outside of the county of residence.

"Section 4. Definition. 'Non-resident' as used in this Act shall mean any citizen of the United States of America who is not a citizen of the State of Texas and who has not continuously, for six (6) months next preceding issuance of the fishing license to him been an actual bona fide resident of the State of Texas.

"Section 5. Duplicate License. In the event the holder of a license provided for in this Act shall have lost such license, or same shall have been destroyed, such license holder may file with the Game, Fish and Oyster Commission or its bona fide employee, or a county clerk, or an authorized agent, an application, in the form of an affidavit as to facts of such loss or destruction, which affidavit shall contain the serial number of the license so lost or destroyed; whereupon said Commission, or its bona fide employee, or a county clerk, or an authorized agent, may issue to such person a duplicate fishing license, the fee for which shall be fifty cents (50c). Of this amount, twenty-five cents (25c) may be retained by the issuing officer as his fee for issuing same.

"Section 6. Form of License. Each license issued under the provisions of this Act shall have printed across its face, the year for which it is issued, and shall bear the name and address and residence of the person to whom issued, and shall state the approximate weight, height, age, color of hair, an dcolor of eyes of such person, in order that proper identification may be had in the field. Such resident, non-resident and duplicate fishing license shall be dated the date of issuance and shall remain in effect until, and including the last day of August thereafter. Non-resident fishing licenses shall have printed thereon the following: 'This license does not entitle the holder thereof to fish upon the enclosed and posted lands of another

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The Mottled Duck Is Constantly Contending With a Host of Wild and Domestic Foes

By Gus A. Engeling*
Wildlife Biologist

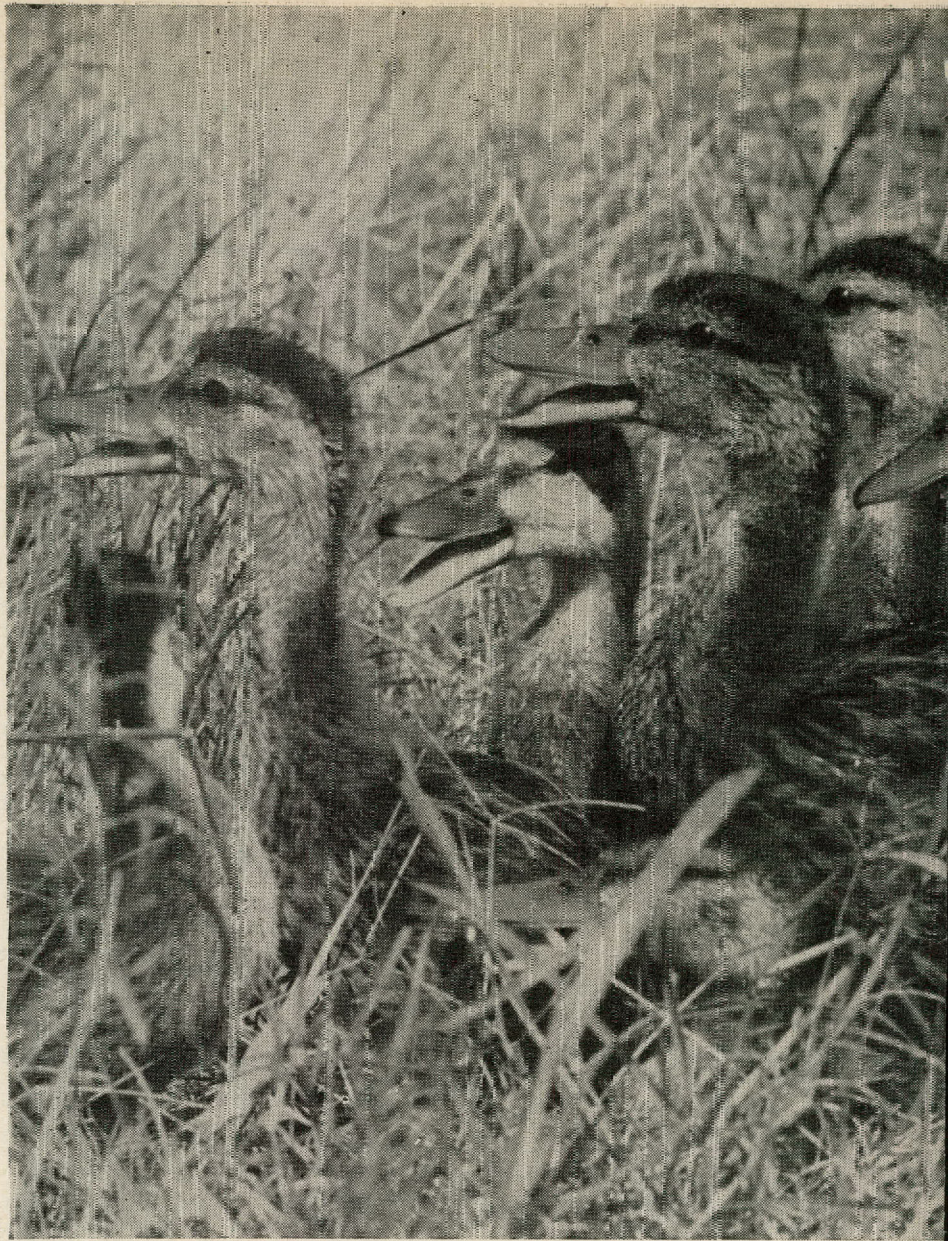
Each spring along the Texas coast there occurs an intensely interesting chain of events, the courtship, mating, and nesting of our resident mottled duck. Scenes for these activities are extensive salt marshes, wide coastal prairies, native bluestem meadows and fallow rice fields.

Few people other than keenly observant ranchers and farmers ever realize that this wise old member of the mallard family is even present. Fewer still have any idea as to the bird's habits, family life, and traits.

On quiet afternoons and still mornings in February and March, the early rising rancher or farmer may hear the loud, clear quacking of mottled hens announcing their claims to nesting territories. Occasionally, observers may see a pair in courtship flight high over the prairies, twisting and turning in a superb game of follow-the-leader, with white wing underparts flashing in the late evening or early morning sun.

Civilization, as with so many other wildlife species, is making inroads on this one-time abundant inhabitant of the Texas coast. Old timers say that the summer duck, a common local name, was far more abundant in years gone by than it is today. As late as twenty years ago, most of the coastal prairies were covered with tall native bluestem, and overgrazing was the exception rather than the rule. Nesting cover was abundant, and during the breeding season most of the ponds, potholes, and sloughs were occupied by nesting pairs.

Today, overgrazing is the rule and not the exception. Therefore, early nesting



The Mottled Duck - A Deter

mottleds are forced to the roadsides, turnrows, and fences for their nest building activities, the only places where nesting cover in sufficient quantities is available. Here they run the gauntlet of concentrations of predators such as the skunk and opossum, and worst of all, free ranging domestic dogs. It is not until mid-May that the meadows and fallow fields provide sufficient nesting cover for the ducks to utilize them, and not until this time do nesting efforts meet with any degree of success.

Fortunately, the mottled duck is a

persistent critter. It keeps trying until a brood is hatched. I observed one pair build five nests in succession and lay a total of 34 eggs before finally hatching a brood of nine ducklings. Of forty-six nests kept under observation during the 1949 nesting season, twenty were destroyed by predators, five flooded by heavy rains in April, one trampled by cattle, nine deserted because of human disturbance, ten hatched successfully, and the last two were still active on June 12. Of the twenty destroyed by predators, seventeen were traced directly or indirectly to domestic dogs. In spite of such startling information, we still find that the mottled duck kill of coastal

Few people know that this wise member of the mallard family is a year 'round resident of Texas.



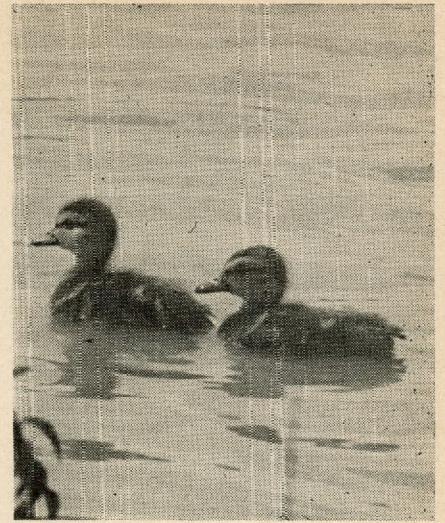


A baby mottled after having been in the wild for a week or more, remains wild. In captivity, it usually dies within a week from starvation or from injuries received while trying to escape from a pen. It is fortunate that the young ducks are adept at escaping from people in the wild, or many more would be lost.

Free ranging domestic dogs and cats also take their toll of baby mottled ducks. In one day of careful observation, I have come upon domestic dogs destroying duck, quail, and dove nests, as well as catching and eating several young ducks from a brood that was approximately four weeks old. It is difficult to estimate the yearly loss to this one arch destroyer of wildlife. If many ranchers and stockmen did not take measure to control such dogs, the loss would be higher still, not only in wildlife, but in cattle and domestic fowls as well.

Other enemies of the baby duck include the racoon, fox, wolf, skunk, o'possum, mink, snapping turtle, and bullfrog. Not enough information has been gathered to quote definite figures on mortality of young but it is known to be considerable. The average mottled duck brood at hatching time contains about eight or nine ducklings, but by the time it reaches flying age, has dwindled to five or six, frequently even fewer in number.

The mottled hen sometimes builds her nest a considerable distance from water. Soon after the eggs hatch and her young ducklings are dry, the hen takes them to water. The baby duckling is far from helpless; it learns to escape and hide almost immediately. Only on rare occasions is a complete brood seen together. In most cases, the brood has already scattered when an intruder comes on the scene.



This pair of goslings is out for an early morning swim in the inviting waters of Eagle Lake.

The hen's actions almost always betrays the presence of a brood of young. If the young are approached too closely, she flops in the grass just out of reach, and flutters off in a perfect crippled act. If she is pursued, she will continue her act until the intruder is led away from the young, or until they have had time to escape in the grass and weeds.

Young mottled ducks grow rapidly, and during the first three weeks feed largely on insects. At about three weeks of age they begin feeding on grass seeds, crayfish, and other food items, as well as insect. Feathers first begin to show up in scattered patches on the body at four weeks of age. At six weeks, the ducklings weigh over a pound each and are almost

• Continued on Page 19

mined Nester

East Texas is high during the first part of the hunting season.

Even after the eggs have hatched, the young mottled duck has a host of enemies. One of the saddest mortality factors of baby mottleds results from the curiosity of so-called wise human beings. The first thought of many persons chancing upon a brood of young is to catch them, and attempt to raise them in captivity. A few of these attempts are successful, but by far the majority meet with failure.

Perhaps the little fellow at the right came in late or perhaps he is shirking some of his household duties but whatever the cause he is getting told off in no uncertain tones.



Twilight for Wildlife?

By Ira N. Gabrielson

President, Wildlife Management Institute

Many students of the problem are convinced that some forms of wildlife are facing the greatest crisis since the white man arrived in North America. This crisis is due entirely to human activity. Many now believe that man's industrial and agricultural development of this country has become a geological force effecting wildlife and wildlife habitat in vast areas as much if not more than natural factors.

The white man found here a virgin continent. Indians were few in number. They lived directly by hunting and fishing and had little if any more effect upon the abundance or scarcity of other forms of life than any other predator. They prospered or failed to prosper as other life did, and all were tied into a community in which biological and physical factors directly affected both man and beast.

In a few hundred years the white man has changed this picture—first by his increase in numbers from a few straggling colonies to a nation of 148 million people. There is a well-known biological axiom that the total life that can be supported by any territory is limited. The amount of that life varies according to changing conditions. Therefore, the mere fact that additional millions of individuals occupy the land means that other living things must be relatively less abundant.

Also influencing the abundance of wildlife has been intensive use of land for agriculture as well as for cities, roads, manufacturing plants and other exclusive uses which man now makes of space formerly available for other creatures.

The first human activity which interfered with other creatures in the New World was killing for food and clothing. As long as this killing was not too severe, it acted more or less as a cropping system exactly as had Indian activities. But as populations increased, as guns and equipment became more effective, and as heavy traffic developed in furs and hides, killing began to affect total wildlife stocks. Thus hunting and fishing to feed and clothe greater populations, followed by a growing number of recreational hunters and fishermen, undoubtedly continue to have a great effect upon many living things.

Beginning with settlement on the Atlantic seaboard, the clearing of land for agriculture use had only local effect until human demands caused the clear-

ing of vast areas of forest. When settlers reached the grasslands and land could be converted to agricultural use by the breaking plow, the change in environment proceeded even more rapidly. Even if there had been no slaughter of the grassland herds of buffalo, deer, elk, or antelope, they were doomed by the destruction of their habitat. There was no place for them and eventually they would have vanished, though perhaps somewhat more slowly than before the guns of the insatiable market hunters.

Drainage did not seriously affect wildlife until the supply of good free land decreased.

Drainage directly affects fish and aquatic mammals and birds which depend upon marsh and water habitat. It has a profound influence upon the numbers, the movements, and the distribution of waterfowl. It has affected fishery resources and has been a major factor in the decreased abundance of valuable fur bearers, particularly the muskrat. Drainage, by lowering water tables and reducing storage facilities of the natural marshes, has an indirect effect upon wildlife as well as upon agricultural and industrial affairs.

Land drainage is not only of historic importance. Many such projects are still being promoted. A bill in the 80th Congress authorizes the study of fifty-seven million acres in the Southeast to determine how much of it can be drained for agricultural use. One and a half million of these fifty-seven million acres include coastal marshes which are the last remaining East coast wintering grounds for waterfowl.

As to the "dam mania" which is now sweeping the country—the building of great dams for power, irrigation, flood control, or navigation has reached such a peak as to have an important influence upon the relative abundance and distribution of living creatures. However good or bad these works may be, they do profoundly affect wildlife populations. They always disturb local biological patterns.

It is obvious that each big, impoundment floods land that produced certain forms of life. It is not true, as many unthinkingly believe, that wildlife can be abundantly produced in wastelands. Wildlife is a product of soil and water. It can be produced only in meager amounts in unfertile lands or sterile waters. It can be produced in abundance only in productive environment. Therefore, these projects may take the key

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**It All Depends, Says This Authority, on the Pattern
Of Land Use We Follow, Especially in Farming Areas**

Wildlife Training at Texas A. and M.

By George Petrides

In Ohio, a detailed survey disclosed that during 1947 alone their hunters and fishermen spent nearly \$72,000,000 in pursuing their sports. This sum was split about equally between hunters and fishermen. It included costs for transportation, guns, tackle, boats, clothing, room, board, refreshments, dogs, leases, licenses, club dues, decoys and other expenses incurred while on hunting and fishing trips (1). Further values of furs and game brought the total measurable business turnover due to wildlife to over \$85,000,000 per year.



Graduate student John Wood (left) and Unit Fellow Matt Whisenhunt (right) check over some of the more than 15,000 specimens in the Wildlife Management collections.

No comparable figures are available for Texas, but consider these facts: Ohio and Texas have about equal populations; each has nearly 7,000,000 inhabitants. Ohio lists 610,000 licensed hunters and 775,000 licensed fishermen, while Texas has only about 240,000 registered hunters and 150,000 licensed fishermen. Since many Texans hunt and fish legally without licenses and since many more Texans live in towns and on farms and ranches than is true in Ohio, however, it is probable that

Dr. George A. Petrides, of the U. S. Fish and Wildlife Service, is the new Leader of the Texas Cooperative Wildlife Unit at Texas A & M College. He replaces Dr. Walter P. Taylor who held this position for many years.

the total number of sportsmen in the Lone Star state is at least as great as in Ohio. Furthermore, Texas is more than six times as large as Ohio, has a long coastline which is scarcely present in the Buckeye State, and considerably more money must be spent in travel by Texas sportsmen than is true there. Also there is relatively little opportunity for big game hunting in Ohio and comparatively fewer sportsmen own rifles or spend money for game leases there.

Everything considered, there is no reason to think that the annual volume of hunting and fishing expenses is any less in Texas than in Ohio, and there are some announced estimates of consider-

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Plans for More and Bigger

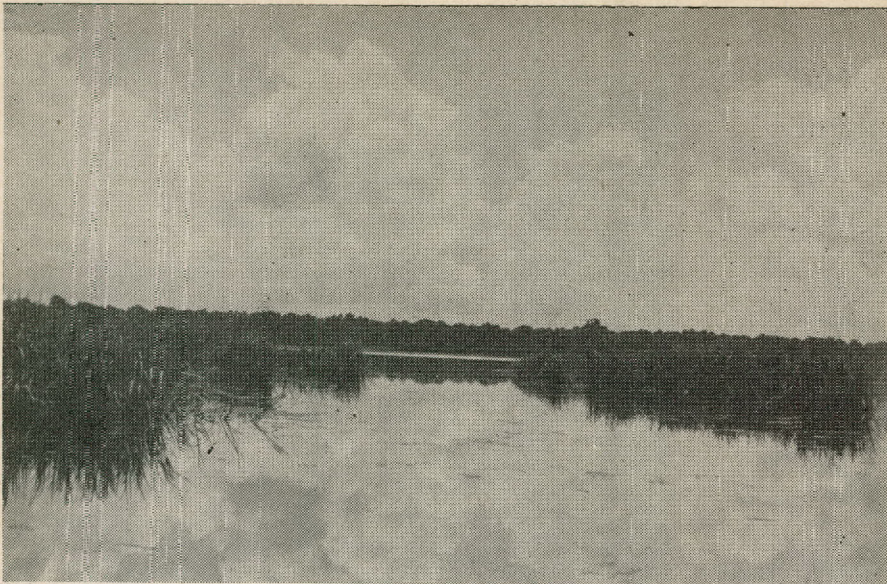
Lakes

By

Over large parts of the United States Nature's balance has been upset at the way from hill and mountain top to valley floor, and despite large scale costly measures the toll of flood and sediment damage has mounted steadily and in recent years has averaged some \$300,000,000 annually on property, business and crop losses alone.

The above paragraph is quoted from an article in the current issue of the Scientific Monthly where it is asserted

Texas is dotted with numerous lakes and ponds and few of them have the same physical characteristics. The same is true of Texas rivers. Five Texas lakes and two Texas rivers are pictured on these pages. The upper left photo is a general view of Manor Lake in Brazoria county. Just below is a photo of the boat docks at Phantom Lake near Abilene. The bottom left photo is



Texas

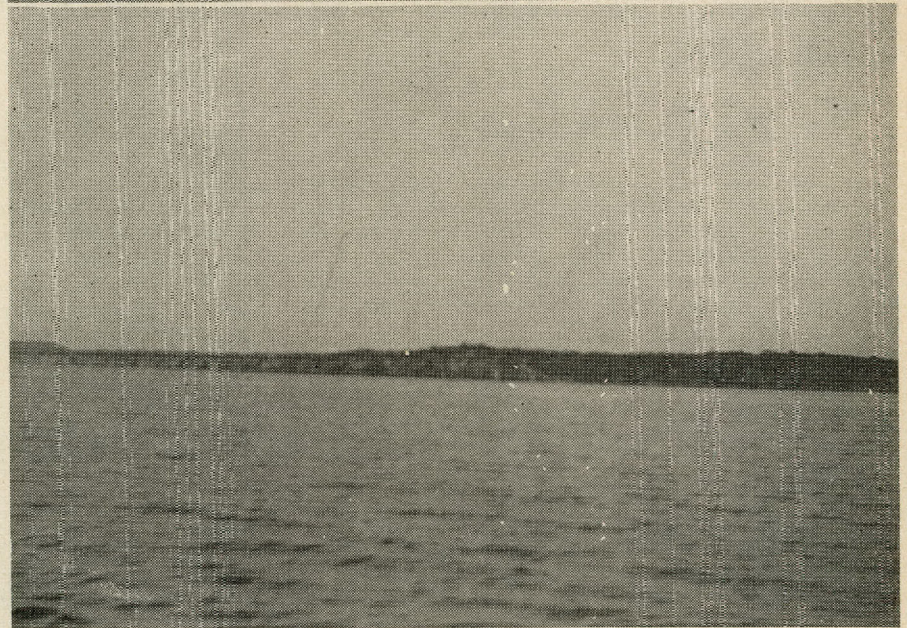
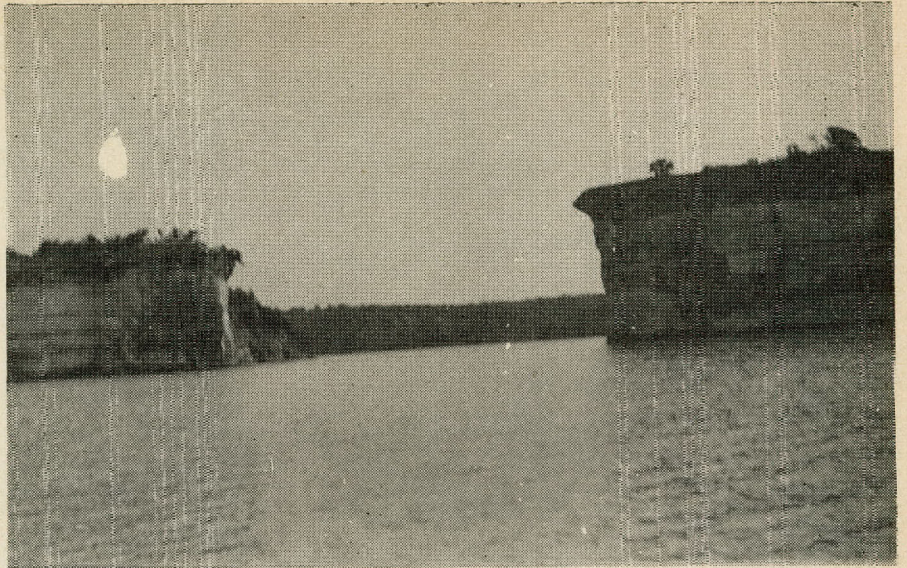
JRR

That the nation's preventable water problems are destined to increase if remedies are not applied on a unified watershed basis from the uppermost head waters to the mouths of the major rivers. *So far, not a single watershed of any size in the United States has been so treated.* (Italics mine.)

Possibly the contributor had overlooked the Brazos River, or did not count it among the major rivers of the country.

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A view of fabulous Caddo Lake. Possum Kingdom Lake is one of the most beautiful in the State as the two photos, upper right, show. The top photo shows picturesque Hell's Gate and the photo below shows the rugged bluff which ring sections of the shore line. Lower left photo is a view of the Brazos river near Hearne. The bottom photo is a striking picture of the Devil's River near the bridge.





A Few Tips On

Surf Casting

The angler who works the beaches and seeks only a good outing, is good company and takes the sport with the same measure of success as the rifleman who fails to hit the "bull" but finds the near misses full of future promise,

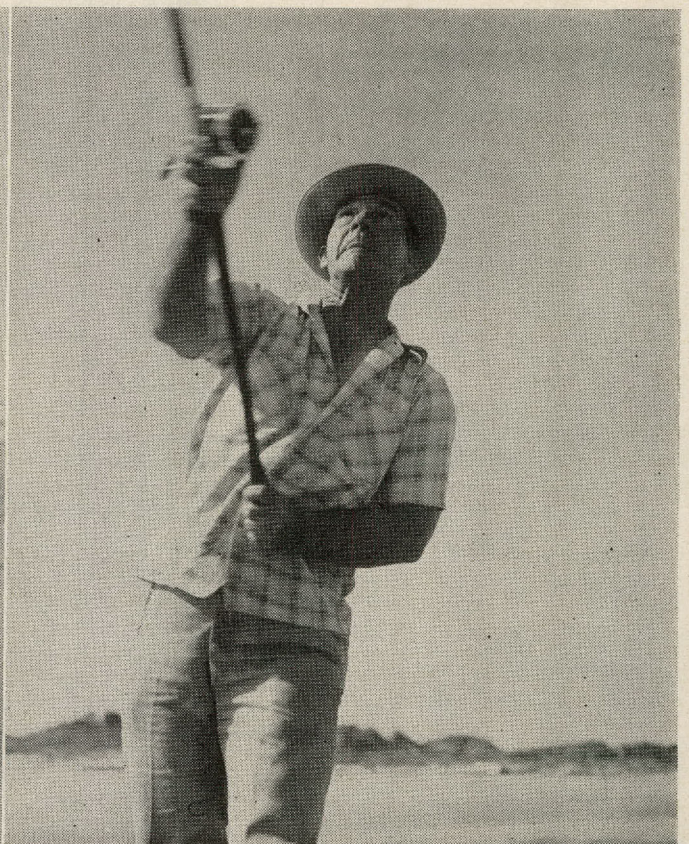
will find all the success he desires.

It is the "boomers" that break us up and the near misses that lure us back again and again.

The knowledge and satisfying ability of being able to use modern surf-angling

Upper left. Start of the cast. Upper right. The caster is beginning to get momentum to his cast and the line is straightening out for the flight seaward. Lower left. The right arm is furnishing the power to the cast while the left arm is held close to the body to steady the butt. Lower right. The follow through which is just as important in surf casting as it is in batting or golfing.

By George Wynne





**The line and
bait now
is well
beyond the
breaking
surf where
the
big ones
lurk.**

gear with efficiency makes the appeal.

To be able to place the bait on the spinner in your selected position is in itself the surety of your success.

Many avenues are open to the angler using modern tackle in his search for the delight of fighting a big fish and having a 50/50 chance of bagging him.

All this requires one fundamental accomplishment, to be able to cast. Therein lies the nucleus of the answer to difficulties the beginner can and does meet.

The raw novice to angling, if he learns to cast, is soon a novice no longer. This may seem a very contentious statement and the old-timers may feel somewhat hurt. Consider, however, these points:

Casting the spinner brings to the caster every wash and reef, deep channels far out of reach to the diehard who sticks to the old gear in water that is unfishable to many.

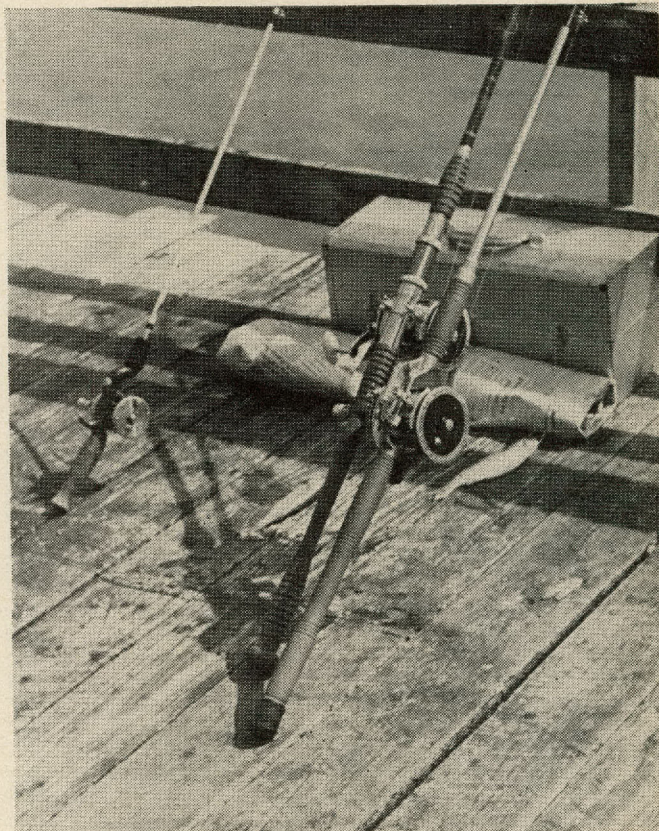
The spinners explore with a thoroughness that leaves no doubt about the habitation of fish within a wide range of the darting spinners. If the fish are there, they strike.

Casting the bait: With the old type rod and reel the bait anglers could look with only frustrated hope at the inviting surge or hole well out of range. He fished that spot once when the tide was out, but somehow the tide hasn't been so low since.

So, with his bait not just where he would wish to put it, he sits and waits for a roaming fish to take it.

Others just down the beach a little are casting. They place their bait into the spot experience has taught them to

**Modern surf
angling
reels are
placed
22 to 24
inches
from the
butt of
the rod.**



find and distance is no bar to their choice.

They cast to their fish.

The evolution of a surf angler began from the tackle.

Equipment is of the utmost importance and the following could be considered the most practical and modern used today:

The Rod: A split cane rod (one piece preferred) of approximately 11 feet long and capable of casting a weight 2½ to 3½ ounces.

The fittings, such as reel seat and line guides are on top of the rod.

Modern surf reels are mounted on top of the rod, about 26 inches from the butt grip. This simplifies casting and the control of the reel during playing and landing a fish.

The Reel: The reel used today has all the features that modern engineering has devised and the level-winding type, with a free spool has been proved beyond argument to the surf angler's and spinning addict's greatest asset.

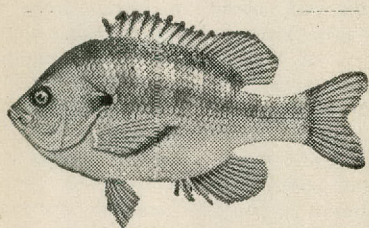
Mounted upright on the rod, the level-winding reel brings all the desired control. The cast is made with thumb control and the retrieve of the line is laid evenly and neatly on the spool.

The old-fashioned centre-pin, "base drum" (with handles) has gone from modern angling. A few of the skull-draggers still use them. They tow the fish ashore regardless of skill or sportsmanship. The heavy lines and sinkers

• Continued on Page 22



HINTS FOR THE ANGLER



BLUEGILL
Lepomis macrochirus

Among anglers who pursue the sport of panfishing, the unanimous choice, for both scrap and downright good eating, is the bluegill. Just as the largemouth black bass is appropriately called the king of American gamefishes, the bluegill certainly rates as the prince of panfishes.

Nearly every angler fondly recalls barefoot boyhood days when a jaunt to the "ol' fishin' hole" seldom failed to produce a dandy string of bluegills. Co-operation seems to be the characteristic of this piscatorial bantamweight.

Be it a bent pin with a piece of sandwich meat, dangling from wrapping string tied to the finger of a youngster, or the accurately placed dry fly—the bluegill shows no preference in personalities. When on the feed, and this is most of the time, the bluegill will take a bite of anything remotely resembling food.

For a session of utmost fishing enjoyment, with delicious eating the reward for a heavy creel, no panfish sport surpasses that which can be had

with a light fly rod, once the bluegills are located. They seem to school readily, strike vigorously and feed often—a most inviting combination for angling sport.

However, despite the greediness of the smaller bluegills, which makes them easy victims for the frying pan, the larger brethren are much more cautious and selective in their eating habits. Catching the limit of bluegill heavyweights requires study, skill and "know-how"—but, the satisfaction is worth the effort.

The bluegill is the most widely-known member of the sunfish family and therefore subject to a sizable variety of nicknames. The most common are: blackear bream, blue bream, copperhead bream, bream, brim, blue sunfish, coppernose sunfish, sunfish, sun perch, bluemouth sunfish, polladee, blue and punkinseed.

The coloration of this fish will vary greatly according to water conditions, but usually the back is dark, olive-green with a purplish luster. Chain-like greenish bars run girthwise. The belly often is a brilliant red-copper color while the cheeks are an iridescent greenish-blue. The fins are a deep green and the gill covers a velvety black.

Generally speaking, the bluegill clan abounds in the Great Lakes region, the Mississippi Valley and the South Atlantic states. However, it has been found in nearly every part of the United States and Canada.

Its favorite hangouts are brush piles, lily-pad fields, stumps, bridges, docks, boat landings, weed beds or just any deep hole or pocket wherever there might be aquatic food.

Although monster bluegills are constantly being reported, the average size will approximate ½ pound. By the fisherman's thumb rule, a bluegill from 6 to 8 inches is a "nice one," from 8 to 10 inches is a "dandy" and anything exceeding 10 inches is a lunker.

Although no official records have been recognized, a number of authentic catches between two and three pounds have been recorded in various local fishing contests. These are as exceptional as a 60-pound muskellunge, a 15-pound largemouth bass or a 4-pound crappie.

Regardless of the water it inhabits, the bluegill can be given the blue ribbon for excellence in flavor. The meat is sweet and firm, and it is practically no trouble to prepare for the skillet.

It has been said with conviction that the blue gill will eat anything digestible and is the nannygoat of the fish family. Its favorite foods are small minnows, worms, grasshoppers, crickets, countless insects, small crustaceans, as well as any candy, popcorn or picnic leftovers tossed its way.

At times, any lure that a bluegill can get into its mouth will take the limit.

Again, it will take a skillfully manipulated fly to produce the larger specimens. Ordinarily, the most effective lure is a

sponge-body, rubber legged spider, but many fly fishermen find effective any of their pet trout flies in size 10 or 12.

Although by far the greatest total of bluegills is taken by still-fishermen using garden worms for bait, more and more fly fishermen are finding these little scrappers great sport on light tackle. Spat-fishing with a bait rod and spinning with small lures also produce nice catches.

For just plain "bobber fishin'" the outfit is widely known and easily obtainable. An 8 or 10-foot cane pole with a length of line as long as the pole, a light, gaudy bobber, a split-shot sinker, a size 3, 4, 5 or 6 Carlisle hook, a can of worms—and, a fisherman is all set to enjoy some downright fun when he locates a school of bluegills.

For those with sportier tastes, a fly rod will furnish plenty of thrills. In selecting a fly rod it is well to keep in mind that while lightness is to be desired, the rod should still possess enough backbone to handle bass which will strike readily at small lures.

Especially suitable for this type of fishing is a trout weight rod made of split, tempered bamboo in the 8 to 8½-foot length, built on a No. 1½ or 1¾ ferrule. These rods will weigh from 4½ to 5 ounces and balance properly with an E or F level fly line.

Leaders 4 to 7 feet in length, testing 4 to 6 pounds are recommended. In extremely clear water, an extra tippet, size 1X or 2X, will produce when the blues are wary.

For enjoyable fishing and for best results, the line should be dressed before every trip in order to keep it floating throughout the day's fishing. The reel can be either single action or automatic.

Among the favored artificial lures are: rubber spiders or nymphs, cork-bodied bugs, spinner-and-fly combinations, small bucktails with tiny pork strip streamers, wet and dry flies, small spoons, popper spoons, small bass bug spoons and small wilder dilg minnows.

The fact that the bluegill can be taken in so many ways makes it a favorite of the common fisherman. While some game fish require expensive tackle and arduous preparations, the prolific bluegill will delight the clumsiest angler

CATCHIN' ANY FISH

OR

JUST FEEDIN' 'EM?

Get a SHARPE Bait Casting Float—Throw your Bait where you want it And don't Lose It! See it at your sport shop. If he doesn't have it, one will be mailed anywhere on receipt of 65c.

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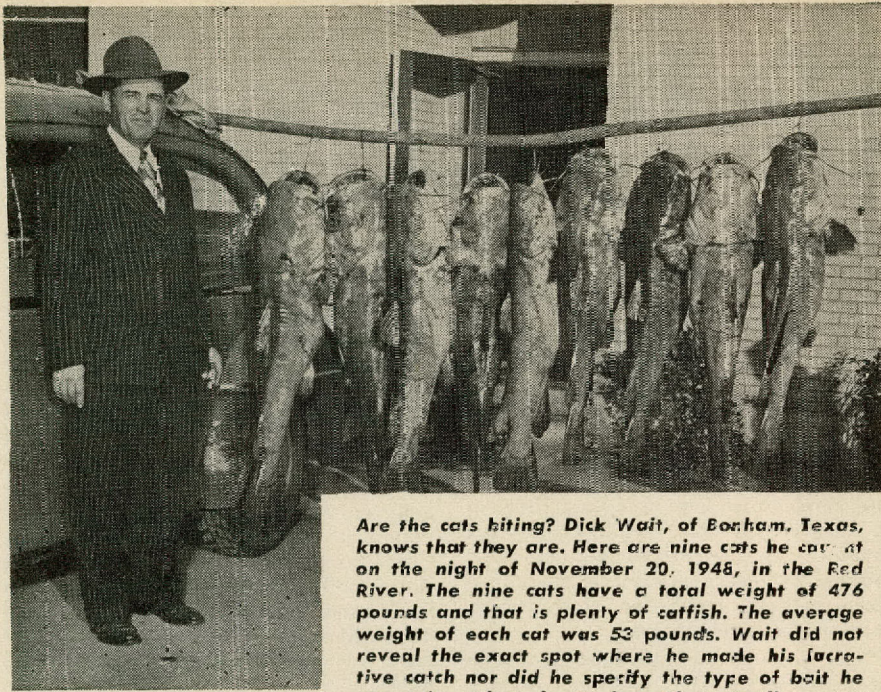
"DOC" JENKINS' AUTOMATIC FISH HOOKS Every Bite or Strike a Fish

Never Misses—Never Lets Go

Can be set for casting, still fishing, trolling, trotlines, etc. Just bait hook and close. A gentle nibble or a hard strike sets hook off. Hooks fish automatically. The harder the fish pulls the tighter hook holds.

2 HOOKS, \$1.00...NO LESS SOLD
1 DOZEN HOOKS\$5.00

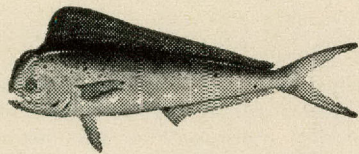
R. A. "DOC" JENKINS, Licensed Guide
P. O. Box 42 St. Louis 3, Mo.



Are the cats hitting? Dick Wait, of Bonham, Texas, knows that they are. Here are nine cats he caught on the night of November 20, 1948, in the Red River. The nine cats have a total weight of 476 pounds and that is plenty of catfish. The average weight of each cat was 53 pounds. Wait did not reveal the exact spot where he made his lucrative catch nor did he specify the type of bait he was using. Photo by Bonham Photo Studios.

by making a bobber go crazy.

Ounce for ounce, the battling bluegill is the most concentrated package of fun in the entire fish family—if you care to take the word of that majority of fishermen who consistently bring home bluegills instead of alibis.



DOLPHIN
Coryphaena hippurus Linnaeus

If you can imagine a fish that is beautiful beyond description, speedy beyond comparison and spectacular to the superlative degree—you have a composite mental picture of the dolphin.

Many writers have gone into reams of descriptive phrases, using all known synonyms for beauty but each of them falls miserably short of exactitude for the dolphin must be seen to be appreciated.

The dolphin's is not a typed beauty but one which changes with its moods and as the colors change, one can envision the blue depths of clear skies, the green vagueness of the ocean and the elusive, wistful streaks of pastel hues that make up a rainbow.

And when life has ebbed, so too, have these glorious colors, leaving only a drab, silvery fish and some anglers with a sense of regret for having destroyed a thing of beauty. However, sentiment usually gives way to admiration for the splendid fight waged by this remarkable

fish—and, the battle is on all over again.

At times, dolphin travel in schools and there is a "trick of the trade" which must be employed if the angler is to enjoy the utmost sport. When one dolphin is hooked, it should not be removed from the water until another is hooked and played where it can be seen by the school.

In this manner, the school can be held a considerable time and will readily take plugs all the while. However, should the last dolphin hooked be taken from the water, it is very likely that the school will sound and be lost to the angler.

The general coloration of the dolphin is golden, fading into a bright yellow near the tail which is deeply forked; the back is blue-black. Purple spots adorn the sides, and dorsal of male is bluish-gold while that of the female is green-gold. The male is readily distinguished from the female by his blunt, high forehead while the female's curves more gracefully down to the snout.

The dolphin is strictly a pelagic, or offshore fish, and is found in the warm, temperate seas of the world. It ranges as far north as the Virginia coast and is generally found in the Gulf Stream.

The world's record, taken with rod and reel, is 67½ pounds and was caught by Fred McNamara at Waiarae, Oahu, Hawaiian Islands, August 19, 1940.

The flavor of the dolphin is very good.

The dolphin is particularly fond of flying fish and it is an amazing exhibition to watch the dolphin pursuing one across the water. It is a most convincing demonstration of the dolphin's speed to watch it follow underwater while the flying fish flits through the air only to be

grabbed by the dolphin the second it strikes the water. This takes real speed and timing.

The dolphin also feeds on mullet, balao and other small fish.

When the dolphin is located and the aforementioned procedure for holding the school is used, then baits such as squids, spoons, strip bait, feathered jigs and underwater plugs such as the Vamp, Sea Runt and Saltwater Torpedo are effective.

Dolphin are Taken by Trolling

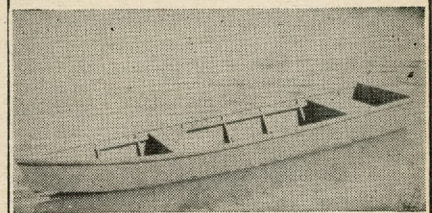
For real sport, when a school is located, the use of a saltwater bait casting rod like the "Riptide" is recommended. This rod is made of tempered, split bamboo in 5 and 5½-foot lengths with sufficient flexibility to impart most of the dolphin's fight to the angler.

For trolling, light saltwater tackle such as the "4/6" outfit is preferred. This means a rod with a tip 5 feet in length weighing 4 ounces. With this is used a 2/0 or 3/0 reel holding 375 to 450 yards of 6-thread linen line.

In keeping with its character, the strike of the dolphin can be a thrilling sight when the angler is alert and watching. Racing toward the bait with the speed of a scared teal, the dolphin will leap into the air in a graceful arc above and behind the lure then come smashing down on the bait for the kill.

Truly a memorable fish, the dolphin will etch an impression on your memory that you might find difficult to describe but impossible to forget.

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Fishermen! Here's the boat you have been waiting for. A real man's boat right down to the last rivet. 11' 7" long, 43" beam, a 36" transom and 12" gunwales. Weighs 106 pounds. Made of aluminum and riveted for longer wear. Air tanks under each 1 x 12 pine seat. Gunwale and deck strips are of no-leak construction. Price \$99.50, FOB Palestine. Sold only by Manufacturer. Circular on request.—Write

Palestine Sheet Metal Works
Palestine, Texas

Drops of Death

Reports of heavy mortality of birds, fish, frogs, crabs and other marine and fresh water life, allegedly as a result of insecticide dusts and sprays, has led the National Audubon Society to investigate the situation," says John H. Baker, president. His complete statement follows:

"Far too little attention has been paid to repeated warnings by the U. S. Fish & Wildlife Service and the Department of Agriculture on the danger of employing certain new insecticides in heavy concentrations in outdoor areas. With the expanding use of such poisons, increasingly serious damage can be expected unless great care is taken in dusting and spraying. These new insecticides include DDT, DDD, TEPP and chlorinated camphene.

"These toxic agents in heavy applications not only kill birds and fish, but lead to heavy destruction of bees and other insects valued by farmers and fruit-growers. Land fertility may also be affected. With the spring season at hand, the problem is urgent. It concerns human welfare as well as wildlife.

"Surveys and experiments conducted by the U. S. Fish & Wildlife Service have demonstrated how and in what concentrations DDT may safely be used. Other organics have not yet been fully tested. Some of them are more deadly than DDT to warm-blooded animals. Wildlife mortality has been cited by scores of observers after checking the results of local insecticide spraying and dusting. Such evidence confirms the hazards of drenching outdoor areas with the new insecticides.

"Among specific examples of destruction of wildlife was a reduction of 50% or more in the bird population in six days in a test plot in Texas, dusted with 4.36 pounds of DDT to the acre. A reduction of 65% took place in six days among common bird species in a Maryland woodland tract, following aerial treatment with a similar amount. Quail fed on diets containing low percentages of various new insecticides did not begin to succumb until the eighth day. Deaths continued among them up to the 34th day of the experiment.

"Heavy kills of fish and crabs occurred after aerial applications where as little as 1/2 pound of DDT to the acre of water was employed, the poison being fatal to aquatic life in much lower concentrations than to land animals.

"Where lighter woodland applications of DDT than 2 pounds per acre have been used, little or no animal mortality

has apparently resulted. Even in such cases, however, the destruction of all types of insects by this toxic agent has occasionally been followed by aphid or mite outbreaks resulting from the loss of natural control by other insects.

"A great deal more research is clearly needed to establish the value and limitations of organic insecticides, and their safe employment out of doors. There is no question but that certain crops have benefited by the proper use of these poisons, but every precaution should be taken in their application at this early stage of their development.

"The peril of the new insecticides to birds lies in the fact that these organic poisons act slowly. Some of them have residual, cumulative effects. Birds usually devour only living insects, but poison and poison-laden insects which have

when and where they are needed, and in the minimum quantities necessary to control the specific insect target.

"With regard to DDT, the U. S. Fish & Wildlife Service recommends the use of less than 1/5 pound per acre over water or marsh, in oil solution, not in dust, to avoid kills of fish, crabs and crayfish. Less than 2 pounds of DDT per acre should be used even in forest areas, to prevent death or injury to birds, frogs and mammals. On turf and lawns heavily infested by Japanese beetles, effective larva control can only be carried out by concentrations as high as 20 or 25 pounds of actual DDT per acre. This can be expected to take a moderate to severe toll of bird life.

"DDT should be applied in early spring for early insects and not again until late July or August, after the bird-nesting period, to control late-appearing insects. The extreme sensitivity of fish and crabs to this poison makes its direct application inadvisable on streams, lakes and coastal bays where injury would be inflicted on commercial or sport fishing, and on ducks, shorebirds and other species which feed on aquatic animals.

"The National Audubon Society would welcome specific reports on insecticide experience from entomologists and other

Caution Is Urged in Outdoor Use Of Insecticides to Prevent Widespread Mortality Among Birds and Mammals In Forest, Field, Stream and Ocean

not yet succumbed can provide a fatal diet for adult birds and their young. A nest brought to the Audubon Society's office contained four dead nestling robins, surrounded by dead carrion beetles which had in turn been poisoned.

"Adult birds may fly many miles from a sprayed area before they are seized by the convulsions which precede death from DDT. It should also be borne in mind that insectivorous birds avoid or abandon any territory in which insect life has been practically exterminated. This explains the disappearance of birds from many areas subjected to repeated heavy spraying. Practically all our land birds are insectivorous in the nesting season.

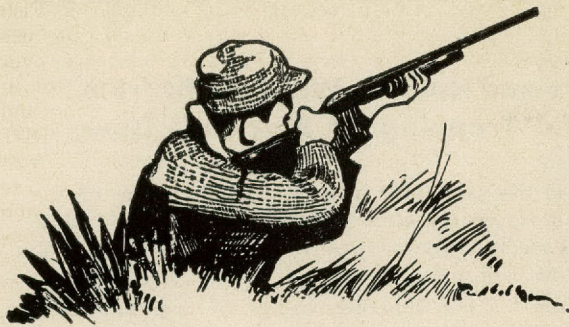
"The opinions of many qualified officials who have generously cooperated in our survey emphasize that rigorous measures should be taken by farmers, municipal authorities, golf-course officials and other private property owners to avoid damage from using excessive amounts of these poisons. The experience of the U. S. Fish & Wildlife Service in treating many types of land should serve as a dependable guide to safe, effective concentrations for various purposes. Most important of its findings is the conclusion that such poisons should be used only

qualified individuals or organizations. Such observers should carefully determine the concentrations and amounts employed, as well as the specific mortality or reduction in bird or other animal population that may result in given area."

N. C. Abandons Game Farms

North Carolina has joined a growing list of states which are abandoning game farms and artificial propagation of birds for restocking in favor of habitat restoration.

The final break with past policy came recently when the state Wildlife Resources Commission voted to sell or lease the state game farm property between Fayetteville and Raeford. This farm has been out of operation for three years and operated on a limited scale for several previous years. In announcing the decision of the Commission, Executive Director Clyde P. Patton stated that the Commission believes that the investment of fish and game funds for wildlife restoration will accomplish more if invested in habitat development instead of in artificial propagation.



ARMS AND AMMUNITION

By ADAM WILSON III
Gun Editor

Hand-Loaded Cartridges

The hand-loading of any cartridge in a modern ammunition plant sounds like something for Ernie Hix's "Strange As It Seems."

And it is as strange as it seems, but it is a story that only a handful of shooters know much about it.

We take it for granted that the many different standard rifle cartridges used by American sportsmen today are manufactured by machinery. In our machine age we have learned to expect that modern machines are now educated to perform consistently better and to produce more than the men who design or who operate them. Actually, cartridge making machines produce a product to as close tolerances as those used in the making of fine watches. We take that for granted, but machine-made ammunition produces accuracy and generally better performance undreamed of a quarter of a century ago. Basically all ammunition may not have been redesigned in the past 25 years, but it's better made. That accounts for the better quality. Yet no one is surprised at this.

Even with his better ammunition—and better rifles in which to use it—the average shooter doesn't have the ability to get the full benefits of his improved equipment. This is so primarily because he doesn't take the time or have the opportunity to acquire the necessary skill.

The average fellow would like to get off a perfect shot every time, but he is content, knowing his limitations, if he lands *one* shot in a vital spot of a deer or other game he takes with a rifle. This fellow doesn't use the extra margin of performance that's there in his ammunition and rifle waiting for him to use.

But there is another fellow, and there are not as many of him, as there are hunters, who wants a *group* of 10 shots in a one-inch circle at 100 yards with a .22 caliber rifle, or a group of 10 shots in a 20-inch circle at 1000

yards with a .30 caliber rifle—at least every time. You can call this fellow a gun "crank" or an *accuracy aristocrat* if you want to give him a flossy name.

This shooter represents the top cream of America's super marksmen. He belongs to that handful of fellows who set the accuracy pace for all other shooters. He may be a civilian or a member of one of the armed services. Some times he does his stuff in private on his own range which may be merely a properly protected field, or it can be a well equipped range. More likely he is a competitive shooter, who, until

They Can; They Do; And One Does

Can poisonous snakes poison themselves? It there a bird that can fly backwards? Do horned toads squirt out of their eyes?

Those are questions students at a Missouri school wanted to know. They asked their teacher, Mrs. Roy Arnold, who relayed their requests to the Missouri Conservation Commission.

The last two questions were easy. Yes, there's a bird that can fly backward—the humming bird. Horned toads can squirt blood from the eyelid near the edge of the eye, but not from the eye itself. It is associated with great fright and is not common.

But the first question was a real stumper. No one seemed to know for sure if a poisonous snake could commit suicide by biting itself. The request was referred to the New York Zoological Society. The curator of reptiles, Brayton Eddy, replied that he personally witnessed one rattler kill itself by its own bite, even though the fangs did not penetrate a vital organ. He would assume that poisonous snakes can poison themselves as well as other reptiles.

the war terminated the big bore (.30 caliber) matches, exhibited his skill annually at Camp Perry and more likely he will use two hand-loaded factory-made cartridges.

These are the .30-06 Springfield and the .300 Holland & Holland Super Match cartridge, the *accuracy aristocrat* of modern ammunition which have won a large per cent of all big bore matches at Camp Perry since they were introduced. The .30-06 was first used at Perry in 1922 and the International Matches at Milan, Italy, the same year, and the .300 H. & H. in 1935. Ever since they have been our most consistently accurate big bore cartridges.

While accuracy looks like the very simple end result of a shooter's ability and the performance of a rifle and cartridge, it is one of the most complex of goals which man, machines, and science can achieve.

If men could be expected to hold a rifle *perfectly*, and if ammunition were *perfect* and if rifles were *perfect*, it could be expected that every shot fired at the same mark would go through the same hole. Not one of these three elements or any combination of them, is ever present in its perfect form. Even when ammunition factories test fire ammunition under the most carefully controlled conditions in which even the effect of wind has been eliminated, only rarely does one bullet in a succession of 5 or 10 ever penetrate the hole of a preceding shot.

Why is this? The more technically you are equipped to discuss the subject, the more different reasons you can suggest.

Omitting the human element of the man who fires the rifle either from a rest or from his shoulder, you have the following among many other factors which alone, and in company with all other factors, influence accuracy.

Consider only the cartridge and its

• Continued on Page 24

A Two Way Break

Ranchers and Hunters Will Benefit from Successful Trapping of Blacktail Deer

Etheridge used the same type of trap which is in use on the Aransas refuge down on the coast in catching the smaller white tails. The trap is made of plywood and is 4½ by 4½ by nine feet, with trap doors at both ends.

After setting up the trap Etheridge baited the trap with sotol, a native Big Bend area feed. The trap was then left alone for several days, except for replenishing the "bait," to give the deer time to learn that they would find generous amounts of feed there at all times.

In no time at all, the mule deer located the trap and the "bait." They feasted on the sotol. Then Etheridge mixed cake with the sotol, the cake serving the

removed the sotol and left nothing but the cottonseed cake. The deer, as Etheridge puts it, "took to the cake like a fresh-born calf takes to its mammy's milk.

Then the trapping began. Some oldsters were trapped along with many youngsters. All were tagged and some of the bucks were dehorned before being placed in trucks for the trip to the Black Gap Country.

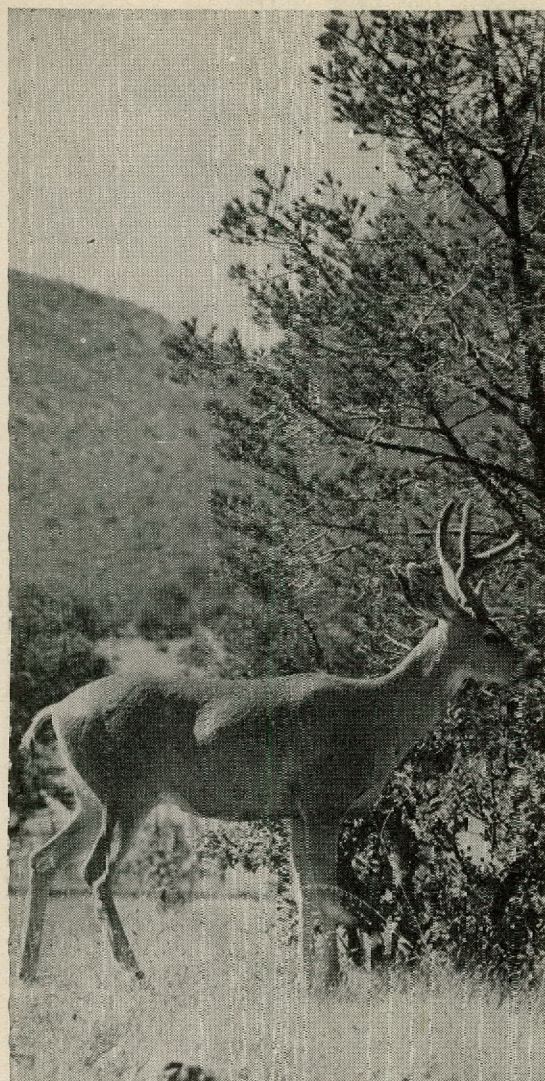
None of the mule deer were injured during the trapping and loading process. Before taking a deer out of the trap, Etheridge and his men placed a rope around each animal. The rope was so arranged around the trap that, when the animal emerged, immediately-applied pressure forced its head against the outside wall. The hind legs were stretched out full length, thus completely immobilizing the deer and making the work of tagging and de-horning simple.

When ready to load the deer into the truck, the front legs were drawn up under the animal's chin by one man, while a second man continued to hold the hind legs stretched out behind the body.

Etheridge believes that this experiment on the Pyle Cattle Company ranch demonstrates that the blacktail population of the areas west of the Pecos can be controlled without undue cost.

The experiment can serve two purposes: first, ranchmen will be enabled to reduce the deer population on ranges threatened with overstocking; and second, the deer can be shifted from over-populated to under-populated areas without injury and at a nominal cost to the state.

Moreover, the areas in which hunters can go after blacktails will be extended, thus permitting more hunters to seek the thrill of lining up a big mule deer in the sights of his rifle.



The range of the mule, or blacktail, deer will be considerably increased as a result of the successful trapping experiment on the Pyle Cattle Company Ranch near Marathon.

Mule, or blacktail, deer can be trapped and transplanted successfully as the smaller white tail deer.

This was proven by an experiment conducted by Frank Etheridge, of the Game Department's game restoration division, on the Pyle Cattle Company ranch near Marathon.

During the course of the experiment, Etheridge trapped 36 of the big deer which are native to the region west of the Pecos. They were released in the Black Gap country 80 miles below Marathon to replenish the deer population of that area which has been threatened with extinction.

Black Gap Country Gets First of Big Deer

same purpose as pie. More and more mule deer came to visit Etheridge's trap and partake of his generous supply of sotol and cake. Finally, Etheridge

Outboard Guide

A handy 60-page booklet entitled "How To Get the Most out of an Outboard" has been released by the Scott-Atwater Man-

ufacturing Company, 2901 East Hennepin Avenue, Minneapolis 13, Minnesota. It sells for 10 cents and contains much valuable information for the owner of an

outboard motor. There is much information on state regulations, river and lake navigation, and boat and motor maintenance.



The Mottled Duck

• Continued from Page 7

fully feathered, except for the wings. An adult mottled duck will average about two and one-half pounds.

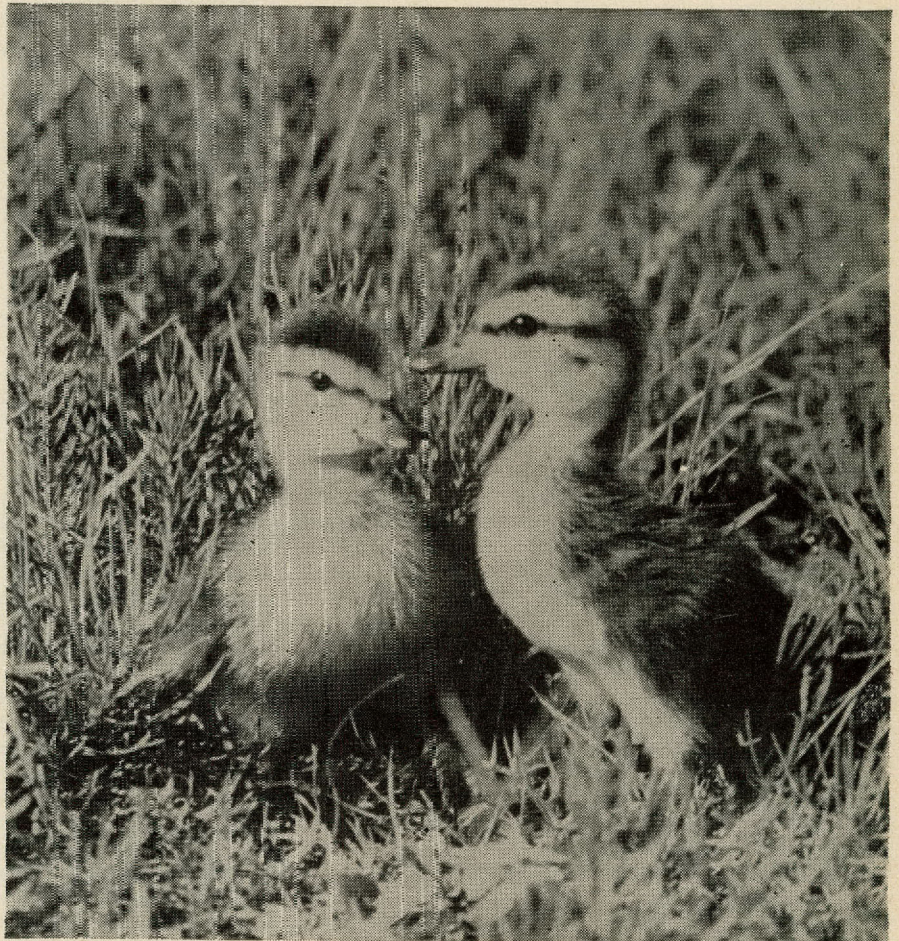
The mottled drake does not assist in the incubation of eggs and care of the young, as do males of some other waterfowl species. Small groups of drakes begin forming in late April, and by mid-May groups of from six to twenty are quite common. These drakes apparently go into their molt ahead of the hens, but to this date no one knows where they go to molt.

Larger concentrations of mottleds may be found at various points in August and early September. These larger concentrations soon disappear and it is anyone's guess where they go. It is hoped that banding of mottleds, both young and old, will some day answer the question, "Does the mottled duck migrate, and if so, where does he go?"

As yet, all band returns seem to indicate that mottled ducks move only short distances from the banding locality but we cannot make definite statements on the scanty evidence at hand. A concerted effort is planned for July, August, and September to band as many birds as possible and hope that enough returns will result to answer the question.

These young Mottled ducks were so engrossed in exchanging confidences that they didn't know the camera was trained on them until the shutter clicked.

The Mottled duck prefers the salt marshes, wide coastal prairies, native bluestem meadows and fallow rice fields.



Pen Term for Selling Ducks

Judge Dal M. Lemmon of the Sacramento, California, Federal Court meted out the heaviest punishment on record for a violation of the Migratory Bird Treaty Act when he sentenced Donald E. Smith of Del Paso Heights, California, to 2½ years in prison and fined him \$2,500. Smith had made the serious mistake of trying to sell 829 wild ducks to U. S. game management agents posing as wholesale buyers.

The arrest of Smith climaxed three months of intensive investigations of a huge "ducklegging" ring by the federal men. Albert L. Ford of Yuba City, California, arrested with Smith, was fined \$1,800 and was placed on probation for five years. E. L. Ziegler of Sacramento pleaded not guilty and is awaiting a jury trial. Charles O. Beauchamp, a Sacramento restaurateur, was fined \$385 for buying 50 wild ducks from the outlaws while Paul Young of Los Angeles was fined \$350 for offering to buy 210 ducks. Trials of three others on similar charges are pending.

The U. S. Fish and Wildlife Service, its game management agents who broke the case, and Judge Lemmon, in particular, deserve a vote of thanks from the conservationists of America.

A New License for Deer and Turkey

• Continued from Page 4

ing license holders will not have to use deer tags in their kills but they will have to observe all of the other laws and regulations governing the taking of deer and turkey. Deer tags are attached only to the big game hunting license which, under the provisions of the new law, may be issued only to citizens of the State.

The full text of the new law follows:

"Section 1. Big Game Hunting License. It shall be unlawful for any citizen of this State to hunt, take or kill any deer or turkey in this State without first having procured from the Game, Fish and Oyster Commission, or one of its authorized agents, a big game hunting license. Such license shall entitle the holder to all privileges now or otherwise allowed under a resident hunting license. The fee for a big game hunting license shall be Two Dollars and Fifteen Cents (\$2.15). Of this amount fifteen cents (15c) may be retained by the issuing officer as his collection fee.

"Section 2. Form of License. It shall be unlawful for any person to issue or accept any license required by the provisions of this Act, except on a form provided by the Game, Fish and Oyster Commission. Each license issued under the provisions of this Act shall have attached thereto the number of deer tags equal to the number of deer permitted to be killed during the deer season fixed by law for the year for which such big game license is issued. Each deer tag shall bear the serial number of the license to which it is attached. Each license and the deer tags thereto attached shall bear the name, address and residence of the person to whom issued, and the license shall give the approximate weight, height, age, color of hair and eyes of such person, in order that proper identification may be had in the field. Each license and deer tags thereto attached shall be dated on the date of issuance, and shall have printed across its face the year for which it is issued; and such license shall expire on the last day of August thereafter. Each license and the tags thereto attached shall be signed by the licensee at the time such license is received by him.

"Section 3. Duplicate License. It shall be unlawful for any person to procure or possess more than one big game license during a license year. Provided, however, in the event the holder of a license provided for in this Act shall have lost such license, or same shall have become destroyed, such license holder may file with the Game, Fish and Oyster Commission or its authorized agent an application in the form of an affidavit as to the facts of such loss or destruction, which affidavit shall contain a



This is what happens when a bass gets hungry or mad. One bass, about 13 inches long, decided another bass, also about 13 inches long, would make a tasty tidbit and so he struck. The hungry bass had swallowed his victim past the head when the end came. The bass were found dead at Slats Rogers lake near Bandera by State Game Warden August Timmerman who said he could not pull the bass apart and finally had to cut the side of the one that had swallowed the other's head to separate the fish. Holding the "locked" bass is Roy Rogers, son of Mr. and Mrs. Slats Rogers of Bandera, Texas.

statement as to the number of deer, if any, said applicant has killed under such lost or destroyed license; whereupon said Commission or its authorized agent may issue to such person a duplicate license, the fee for which shall be fifty cents (50c) without exception; provided, however, that such issuing officer shall remove a deer tag from such duplicate license for each deer killed by such applicant.

"Section 4. False Swearing. Any person who, in making an affidavit as provided for in this Act shall knowingly make a false affidavit of facts, shall be deemed guilty of false swearing and shall be punished in accordance with the provisions of Article 310, Penal Code, State of Texas.

"Section 5. Deer Tag. It shall be unlawful for any person to have in his possession at any time the carcass of any wild deer that does not have attached thereto a tag issued to such person under the provisions of this Act, bearing the date and place of kill of the deer to which it is attached. Such tag will be so constructed that once placed upon a deer could not be removed without mutilation. Such deer tag shall remain on said deer carcass while on storage and until finally processed or destroyed. It shall be unlawful for any person to use more deer tags during one license year than are attached to his big game license for that year. It shall be unlawful for any person to use the same deer tag on more than one deer. It shall be unlawful for any person to use a deer tag which was not issued to such person. Nothing in this Act

shall be construed to authorize any person to exceed any bag limit or to hunt deer during closed season provided for deer; and the fact that a deer tag was attached to the carcass or hide of any deer shall not be prima facie evidence that such deer was lawfully killed.

"Section 6. Disposition of Fees and Fines. The method of collecting, recording, reporting and remitting the fees derived from sale of licenses provided for herein shall be the same as that provided by law for other hunting licenses; and all moneys received by the Game, Fish and Oyster Commission from sale of big game hunting licenses as well as moneys collected from violations of this Act, shall be deposited in the State Treasury to the credit of the Special Game and Fish Fund and used for the purposes provided by law.

"Section 7. Exemption. No citizen of this State under seventeen (17) years of age shall be required to pay the fee prescribed for the license provided for in this Act; nor shall any citizen be required to pay said fee before taking, killing or hunting deer or turkey on land on which he is residing. Provided, however, that any person exempted by this Section shall first register with the Game, Fish

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NEW GAME WARDENS. This is the class which graduated from the game warden school at Texas A & M College on May 24. All of the graduates have been assigned to posts in the field. The new game wardens are, from left to right, in the front row: Travis Merle Gilbreath of San Saba, stationed at Johnson City; Robert B. Jesse of Paris, stationed at Carthage; Clarence E. Vann of Lampasas, stationed at Marfa; William R. Stewart of Brownsville, stationed at Edinburg; Lewis C. Hillum of Athens, stationed at Huntsville. Second row: Franklin C. Henze of Seguin, stationed at Raymondville; Maurice Sheppard Dry of

DeLeon, stationed at Sanderson; John D. Jones of Abilene, stationed at Abilene; Lynn Large of Leakey, stationed at Eagle Pass; D. W. Bowers of Menard, stationed at San Saba. Third row: Martin A. Peterson of Austin, stationed at Beaumont; Lester Gordon Foster of Three Rivers, stationed at Seminole; Harry B. Iverson of Fort Worth, stationed at Austin; Noel Joe Head of Brownwood, stationed at Fort Worth. Fourth row: Don Kenneth Keller at Dallas, stationed at Dallas; James Worthington of Houston, stationed at Kingsville.

and Oyster Commission or one of its authorized agents, on a form to be furnished by said Commission, and receive from said Commission a big game license which shall be in the form and signed by such exemption licensee as prescribed herein for licenses for which a fee is charged; but in addition thereto, such exemption license shall clearly show on its face that it is an exemption license.

"Section 8. Penalty. Any person who shall violate any provision of this Act shall be deemed guilty of a misdemeanor and upon conviction therefor shall be fined in a sum not less than Twenty-five Dollars (\$25) nor more than Two Hundred Dollars (\$200)."

Only One Fishing License Now Needed

• Continued from Page 5

without the consent of the owner or agent. It shall be unlawful for any person to issue or accept any license required by the provisions of this Act, except on a form provided by the Game, Fish and Oyster Commission.

"Section 7. License Deputies. Any person designated by the Executive Secretary of the Game, Fish and Oyster Commission, its bona fide employees, and the county clerk of each county in this State are hereby authorized to issue any li-

cence provided for by this Act, or that may hereafter be provided for, and all persons so issuing licenses shall fill out correctly and preserve for the use of said Commission the stubs attached thereto; and shall keep a complete and correct record of all licenses issued, showing the name and place of residence of each licensee and the serial number and date of the license issued. The county clerk and all other persons issuing licenses shall, within ten (10) days after the close of each calendar month, prepare a detailed report showing the serial number and date of each license issued during the month covered by the report, and the name and address of the person to whom

issued, and shall forward such report, with remittance of fees due the State, to the Game, Fish and Oyster Commission at Austin, and said Commission shall credit such county clerk, or other person, with the amount so remitted. As soon as possible after the licenses in a license book have all been issued, and only the stubs remain therein, such county clerk or other person shall forward such used license book to the Game, Fish and Oyster Commission, at Austin, in order that said Commission may furnish necessary information regarding holders of licenses to any officers of the State. All unissued licenses shall be returned to the Game, Fish and Oyster Commission, at Austin, when request therefor is made by said Commission.

"Section 8. Disposition of Fees and Fines. All moneys received from the sale of licenses provided for herein, after the payment of the fees allowed under this Act have been deducted, and all moneys received from penalties assessed for violation of this Act and for violations of fresh water fishing laws not otherwise disposed of by law, after deduction of fees allowed by law, shall be remitted to the Game, Fish and Oyster Commission, at Austin, and be deposited by said Commission in the State Treasury, to the credit of the Special Game and Fish Fund, which fund shall be used for the purpose of building and maintaining fish hatcheries, fairly distributed over the State of Texas, and for the propagation and distribution and protection of fish in the State of Texas, and for the dissemination of information pertaining to the conservation of fish in this State. All expenditures shall be verified by affidavit to the Game, Fish and Oyster Commission; and on the approval of such expenditures by the Executive Secretary of said Commission, it shall be the duty of the Comptroller of the State to draw his warrant on the Treasurer of the State for the amount of such expenditures, in favor of the person claiming the same, such warrant to be paid out of the Special Game and Fish Fund. All moneys and all balances now in such fund from moneys already paid into the State Treasury, or that may hereafter be paid into said fund, are made available as soon as paid into the State Treasury, and are hereby specifically appropriated to the use of the Game, Fish and Oyster Commission, for the several purposes herein specified.

"Section 9. False Swearing. Any person who, in making an affidavit as provided for in this Act, shall knowingly make a false affidavit of fact, shall be deemed guilty of false swearing and shall be punished in accordance with the provisions of Article 310, Penal Code of Texas, 1925.

"Section 10. Fishing Under License of Another. It shall be unlawful for any person to fish under the license issued to any other person, or to permit any

other person to fish under a license issued to him.

"Section 11. Effective date of Act. This Act shall become effective on the First day of September, 1949.

"Section 12. Penalty. Any person who shall fish in any of the fresh waters of this State, without the license required of him by this Act, or any person who shall fish under the license of another, or who permits another to fish under his license, or who fails or refuses, on demand by any officer, to show such officer his fishing license required of him by this Act, or who shall violate any of the provisions of this Act, shall be deemed guilty of a misdemeanor, and upon conviction, shall be fined in any sum not less than Ten Dollars (\$10) nor more than One Hundred Dollars (\$100).

"Section 13. Forfeiture. Any person who has been convicted of violating any of the provisions of this Act shall thereby automatically forfeit his fishing license for the remainder of the license period, and shall not be entitled to receive from said Commission, or its agent, a license to fish for one (1) year immediately following the date of his conviction; and it shall be unlawful for any person so convicted to purchase or possess a fishing license or to fish in this State, for a period of one (1) year immediately following date of such conviction. Any person violating any of the provisions of this Section shall be deemed guilty of a misdemeanor and upon conviction shall be fined in any sum not less than Twenty-Five Dollars (\$25) nor more than Two Hundred Dollars (\$200)."

Surf Casting

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make casting or accuracy a matter of luck.

Level-winding reels equalizes skill and success. Light sinkers and finer lines place the baits to distant spots. With ancient reels and huge sinkers dismissed, the all-important point of rigging confronts the beach angler.

The ever-green boy with the string line and pin lives on, yet tackle boxes rarely contain this most valuable asset to fishing.

In 25 years of fishing I have seen strange and fantastic equipment.

Many anglers will agree there are times when the elusive fish will take the bait off a strand of barbed-wire. These times usually occur about once in 50 years. For all that, the frequency of this, will tackle the problem from the point of view of commonsense.

As little as possible obstruction should be in the way of the hungry fish taking the bait you intended as an enticement. At the same time, give due consideration to the method you intend applying to his capture.

This is not involved by using modern

casting gear. It becomes commonsense.

You need weight to cast but you don't expect any self-respecting fish to pick up a sinker like a loaf of bread, and then expect you can be artist enough to hook him before he feels the startling evidence of resistance by the sinker buried in the sand!

Any fish taking any bait under any conditions expects only the natural resistance of its appearance. Anything more than this will be quickly avoided. Nature demands this.

The surf rig is important if the angler desires to cast his bait with full regard to distance and success at the end of the day.

The sinker is allowed to be free running on the line by a small ring attached to the lead by means of a thin cord. This allows the fish to take the bait without feeling the weight of the sinker. It is the balance of the sinkers and the bait that determine the cast. And now for the actual surf cast.

The surf cast is a ground cast. The use of various baits affects only the drop from the rod tip.

Lighter baits are not so difficult to handle, and the breaking strain of the line helps, too.

Using heavy bait, a 4-ft. drop from rod tip to sinker, and up to 6-ft. for lighter baits, would be sufficient to obtain accuracy and distance.

The cast is made with not too much vigor because the flexible rod must be loaded slower and the pull of the line, steady, to lift the bait and sinker off the sand.

The caster must be careful to start the double load off the sand with equal force. There must be an equal pull on the sinker and the bait. This loads the rod tip evenly and will allow the sinker to take the bait away with little off-balance wobble. Steady pressure on the loaded rod will do the rest. No force is required at any time.

I am confident that any man given the correct gear can learn to cast a bait into the surf to an average distance within two hours.

It requires no feat of strength, only timing and attention to rigging.

With the bait and sinker in the air, the delivery and releasing of the spool must coincide.

As the rod tip passes the shoulder the recoil is taking place and the spool will be found dragging under the thumb. That is the time to ease the thumb on the reel.

With the relative slow speed of the surf cast, timing is quickly achieved.

Spinning is only for the caster. If you can cast a bait 80 yards, you can cast a spinner 100 yards.

Surf casting cannot be learned from a book without practice. Get your tackle and get your fish by the most skillful and pleasant way, surf casting and beach spinning. And don't forget, the success of the day is in the effort.



Dr. William B. Davis, head of the Department of Wildlife Management, instructs a class in wildlife management techniques at Texas A & M College.

Wildlife Training

• Continued from Page 5

ably higher values which have been placed on Texas wildlife resources (2, 4).

The accuracy of the results obtained by the Federal and state university authorities who made the Ohio survey was probably as good as could be attained by anyone, but regardless of whether their figures can be applied directly to evaluate the sporting aspects of wildlife in Texas, it is evident that wildlife is the basis of a large-scale sports hunting and fishing industry here as elsewhere in the United States. Game birds, mammals and fish support numerous small business people and provide a large portion of the income of some sporting goods and ranching enterprises.

If we can accept an annual estimate of Texas hunting expenses of about \$35,000,000 (approximately the Ohio figure) then our game animal crop alone causes about as much money to change hands every year as does the sale of wool in this state (3). Using this same figure, the game crop also may be said to be as valuable as either the peanut, hog, oat, rice or citrus crop in Texas (3). Combining hunting and fishing values at about the \$70,000,000 level, Texas sportsmen then annually spend an amount equal to the total state income from two-dollar wheat during an average year (3).

A crop as valuable as this deserves the study and administration that is required to preserve it and increase it as a continuing and growing asset of all the people. It has been long apparent that the earlier highly-regarded expedients of restocking and predator control are not the sole solutions to the problems of increasing game populations everywhere.

Game species are affected by changes, often even minor alterations, in farming and ranching practices. They are a portion of a complicated balance affected by soil fertility, plant kinds and distribution, weather conditions, hunting practices, and the abundance of predators and their prey and the food of that prey.

The modern wildlife biologist must devise ways of measuring the stock of game on hand of each species and of controlling the hunting kill so as to harvest only the proper portion of the annual increase. This will always be a tremendous job in which the game warden plays a most important part. The biologist must also conduct studies to determine the nature of factors which tend to prevent desirable bird and mammal populations from increasing and he must make recommendations for correcting them where it is wise to do so. In this, the researcher is fighting against the laws with which nature has restricted such wild animal populations since life began. Furthermore, the investigator necessarily is bound by other interests of mankind on the land which usually take precedence. He is also called upon to control the numbers of undesirable animals and must recommend ways of doing this. He must always be searching for new ideas; buying and reading the biological findings of other investigators all over the world. The wildlife technician must be a combination zoologist, botanist, land use planner, agriculturalist, forester, marsh ecologist, economist, bacteriologist, museum specialist, mathematician, writer, librarian, bird and animal husbandryman, sportsman, outdoorsman, and often a surveyor, photographer, lecturer and airplane pilot. All of these skills are seldom acquired by any one technician, but every wildlife

biologist in order to perform his job must be well-trained in a majority of them.

Such training is accomplished in the classroom and laboratory and also in the field at Texas A. and M. College. The wildlife management curriculum is under the direction of Dr. William B. Davis, internationally recognized wildlife specialist and head of the college's Department of Wildlife Management.

As an undergraduate, the budding wildlife biologist becomes involved in courses in botany, chemistry, English, agronomy, animal husbandry, mathematics, zoology, surveying, economics, geology, history, forestry, writing, ichthyology, entomology, herpetology, ornithology, mamalogy, genetics, rural sociology, ecology, speaking, journalism, statistics and wildlife management. He may specialize in either game or fisheries management and he takes professional courses in these fields. He also spends at least one summer in a traveling field course.

This curriculum leads to a Bachelor of Science degree which qualifies the graduate for a position as game technician in the lower grades, provided that his general background and personality beyond mere schooling also are suitable. For many responsible positions in game technology, however, graduate work beyond the bachelor's degree is becoming increasingly necessary. Every year, more and more positions in game research are being occupied by students who have completed advanced degrees as Master of Science or Doctors of Philosophy. The reason for such lengthy training is the basic complexity of the biological problems to be solved—a complexity that often is overlooked by persons not intimately acquainted with the facts.

Because of the need for graduate training, Federal, state and private agencies concerned with the wildlife resources have joined together in several states to assist in producing men who can handle the job. Texas was one of the first states to take advantage of this cooperative arrangement. In December 1935, the Texas Cooperative Wildlife Unit was organized to promote graduate training and research in wildlife management. Sponsored jointly by the Texas Game, Fish and Oyster Commission, U. S. Fish and Wildlife Service, Texas A. and M. College and the Wildlife Management Institute, the Unit is administered by a committee consisting of Mr. Howard D. Dodgen, Executive Secretary, Texas Game, Fish and Oyster Commission, Dr. W. B. Davis and the Unit Leader. The Unit's first Master's Degree candidate was graduated in 1938. Since that time, Unit-sponsored fellowships to outstanding outdoorsmen-students have resulted in the graduation of nearly two dozen wildlife scientists with the Master of Science degree. Since each graduate student must undertake substantial original field researches in addition to his class-

A Brake for Wildlife

Summer is the period of accelerated highway travel when thousands upon thousands of vacationists are on their way to enjoy the recreational facilities of distant places. These are also the months when another crop of wildlife is being produced and nursed along to maturity. And these are periods of great danger to young wildlife.

The motorist is in the best position to literally "give wildlife a brake" this year.

The vacationist is, of course, not entirely to blame. Young wildlife hasn't learned traffic dangers or regulations and too often very foolishly tries to cross a heavily traveled highway at the wrong time. No one recommends that a motorist endanger human life by slapping on his brakes in order to avoid a dodging rabbit, but many game animals and birds could be saved each year if the motorist would only keep a sharp lookout for wildlife, especially in good game country, and use his brakes in time enough to avoid disastrous contact.

Millions upon millions of pounds of valuable wildlife meat are wasted annually on American highways through carelessness of the motoring public. One has only to take a drive or two through the countryside of his own section to see the serious toll taken from the ranks of wildlife which inhabit nearby forest and fields. The use of a little imagination will give you a complete picture, for this wastage is not confined to any particular area or areas. Of course, the toll is heavier in some sections than in others, but wherever good roads exist and motorists can travel at comparatively high rates of speed, the damage done to wildlife by automobile is enormous.

In the state of Pennsylvania alone last year at least 99,000 wild animals were victims of motor traffic. This is the actual number counted, not estimated, by Pennsylvania Department of Highway employees. This represents a toll of almost 300 creatures of the wild daily! Although motor traffic in Pennsylvania is heavy the year round, this is not an isolated case. Every state in the Union has a similar problem. If it were possible to make an accurate national survey of the situation, the total loss would run into staggering figures.

Editorial campaigns, billboard campaigns and highway caution signs would be of great help in reducing this annual loss. The responsibility rests with the individual motorist. Many of these highway wildlife casualties are, of course, unavoidable but there is no doubt that much of this enormous annual waste could be eliminated by the exercise of more careful driving.

Spring and summer are dangerous seasons on the highways for the birds and animals of field and forest. This year, take it a bit easy, Mr. Motorist, especially when traveling through game country. Be on the lookout for crossing birds, deer, rabbits and other small animals. This summer give wildlife a "brake"! Drive carefully and save wildlife . . . and maybe your own life.

room work, their investigative findings even while in school have provided basic information which has been promptly put to use by state, Federal and private wildlife agencies. Nearly 100 scientific papers and popular articles on Texas wildlife have been written and published to date by Unit and College staff members.

Dr. Walter P. Taylor, first Leader of the Unit was instrumental in having the Department of Wildlife Management (formerly the Department of Fish and Game) installed in 1937 as a part of the School of Agriculture at Texas A. and M. College. Since the formation of the Unit and the Department, 73 Bachelor's and 20 Master's Degree candidates have been graduated. These men are now working in state, Federal and private wildlife

management jobs. In the Texas Game, Fish and Oyster Commission, 75% of the technical staff are A. and M. graduates in wildlife management.

The foresight of the original planners of the Texas Cooperative Wildlife Unit and the continued cooperation between the Texas A. and M. Department of Wildlife Management, the Texas Game, Fish and Oyster Commission, the U. S. Fish and Wildlife Service and the Wildlife Management Institute are placing Texas in the vanguard of the status which are managing the valuable wildlife resource for the public good.

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Hand Loaded Cartridges

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following components which influence accuracy:

1. POWDER—its kind, type, quality and quantity;
2. CARTRIDGE CASE—the type and method of production of its brass, its size, shape and varying degrees of hardness;
3. BULLET—its composition, shape, weight and construction;
4. PRIMER—the construction of its cup and anvil, the composition of its chemical elements, their combined sensitivity and performance.

We'll skip the various ways in which cartridge components inter-relate, and move on to the rifle on which these elements have an influence on accuracy.

1. The shape and fit of its stocks;
2. The setting and pulling of its trigger;
3. The general distribution of weight and feel of the entire rifle;
4. The accuracy of its barrel;
5. The proper chamber design which permits the bullet to seat into the lands of the bore when the cartridge is loaded and this eliminates the "jump" from the cartridge to the bore when the cartridge is fired;
6. The efficiency and action of the entire receiver, bolt and breech mechanism;
7. The precision with which barrel and action are inletted into the stock;
8. The sights;
9. Recoil, barrel vibration and barrel "whip."

All of these and many other rifle factors must perform properly in conjunction with each other and with the cartridge factors if top accuracy is to be expected.

Where the average shooter or hunter ignores this multitude of factors or takes for granted that his rifle and ammunition are suitable for his use because they are of the same caliber, the accuracy aristocrat tries to satisfy himself that every element he can control is set to operate at peak efficiency.

Many top shooters work over their own rifles, although most give the tuning up job to a qualified gunsmith. The goal is a gun which will shoot the much prized "minute of angle" groups. Minute of angle in the parlance of the shooter means that the total dispersion

of a group of 10 shots will be no more than 1 inch at 100 yards, 2 inches at 200 yards, 3 inches at 300 yards, etc. The factories themselves when producing such guns as the Model 52 and the Model 70 target rifles endeavor to approach this accuracy figure with each gun.

Because factory ammunition, even the best of it, is sometimes subject to variations which are so slight as to be inconsequential to the average hunter, the "cranks" who want to minimize every factor that might produce less than perfect results, usually want even better ammunition. For the past 13 years they have had it in the two hand-loaded super match cartridges.

Both of these cartridges are .30 caliber. The .30-06 is most commonly used in the Springfield '06 and Winchester Model 70 rifles. The Model 70 rifles are also chambered for the .300 Holland & Holland Magnum as are some specially made target rifles. The bullets are identical for both cartridges. They are 180-grain metal case with a Spitzer point, and have a boattail of 9 degrees. (Part II Next Month.)

I have seen a few of the FANCY GRADE Model 721 and 722 high power bolt-action rifles, which Remington brought out early this year. Very nice, too, coming equipped with high comb stocks designed especially for use with telescope and receiver sights.

High comb stocks are furnished in the "A," or standard, grade and the special "B" grade at an extra cost of three dollars. No extra charge is made for high comb wood on the Peerless, or "D," grade and the Premier, or "F," grade models. The comb is as high as withdrawal of the bolt will permit, and drop at the heel is in correct proportion.

The "B" grade stocks are made of American walnut with comb cuts, fine grip and fore-arm checkering and are equipped with standard sling swivel loops for one-inch strap. Price is \$99.95 for Model 721; \$95.95 for Model 722.

The Peerless, or Grade "D," model includes a stock of selected fancy American walnut, with comb cuts, grip and fore-arm finely checkered in a special pattern, black hard rubber grip cap, black plastic fore-end cap and standard sling strap swivel loops. The stock is specially fitted to the action and barrel, and the trigger is corrugated. Unless otherwise specified, a Lyman Gold Bead front sight No. 0037 and a Marble rear sight is furnished. The bolt, with browned handled, is chromium plated for smoothness of operation and better appearance. Firing pin head and magazine follower are buffed and polished. The engraving on the receiver, barrel and trigger guard is of a simple scroll type, beautifully dignified in design. Screw heads are also polished and engraved. \$430.00 buys the Peerless model.

In the Premier, or "F," Grade the ar-

Grass Roots Conservation

It can never be said too often that the land itself is our primary living resource; the other living resources are products of the land. Too often we forget, and much of our conservation is anywhere from 4½ to 6 feet above the ground, depending on the individual. How else could we destroy cover with one hand and plant game and fish with the other? How else could we complacently watch fields and woodlots become impoverished and then blame the major disappearance of game and fish on poachers, predators or anything else, overlooking the basic importance and necessity of suitable habitat?

Fish and wildlife can thrive only where healthy or suitable land and water conditions prevail, just like people. In fact, it is becoming clear that they are more finely adjusted than man, his crops and his animals and they are the first to respond to deterioration of the land. When land will no longer hold wildlife, it is time to watch out for the future. So far as fish and wildlife are concerned, restoration of the habitat ought to be the first consideration, not the last.

Much of the land on which our sportsmen have had to do their shooting in the past has been classified as waste land. No term could be more misleading because wildlife is a valuable crop. We have before us now some amazing contrasts. Some of our most popular duck-shooting grounds are rapidly being converted into crop lands by ditching and draining, thereby becoming productive in the conventional sense and taking their place on municipal tax rolls. At the same time we have valuable crop land artificially converted to duck-shooting land by flooding.

All farm land is capable of producing a wildlife crop in addition to agricultural crops, but no farmer could possibly be expected to make any effort to increase wildlife if by so doing he merely invites the destruction of his property by troops of careless shooters, without gaining any advantage himself. Before any real improvement in the game crop can be expected, it must be realized that it can only start at grass root level, and farmers may be expected to help only if a satisfactory basis of co-operation between farmer and sportsman has been established.—Sylva.

tistic finish of perfect craftsmanship is combined in the practical simplicity of the Models 721-722 design. The Premier is more or less a dolled up Peerless, with a stock topped with a high grade oil finish, and a gold name plate set in on the underside of the wood. The engraving is relief scroll with a bear head on the trigger guard of the Model 721, and a deer head on the guard of the Model 722. The Premier is all yours for \$670.00—A. W. III.

750 Million Pot

Sportsmen who hunted and fished in 1948 spent \$10,000,000 more than the combined total of expenditures for bowl golf, skiing and motor boating. Recent statistics reveal that anglers spent \$1,350,000,000 in enjoying the sport of fishing, while hunters dug down in their pocketbooks to the tune of \$750,000,000.

New Trolling Line

For the angler who wants to know how much trolling line he has out behind his boat, the Weber Lifelike Fly Company is now marketing a line which will give him the information at a glance. This is a DuPont nylon monofilament line which is marked alternately every hundred feet with blue, yellow and green dye. The line, called "So-Deep," is made in a continuous length of 600 feet. It is translucent and almost invisible in the water. It creates less water friction and this feature allows trolling at effective depths with the weight of the sinker reduced by fifty per cent.

During the hatching season wild turkeys make a hissing sound in imitation of a snake as a protection against disturbers seeking their eggs.

Twilight for Wildlife?

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areas without which wildlife cannot survive in numbers on the adjoining less fertile land.

Americans have reduced the productivity of soils at a greater rate than many other nations. These abused lands that can no longer produce agricultural crops produce poor crops of wildlife. America has vast areas which are, by natural processes, slowly going back into productive condition. But today they are almost sterile as far as producing healthy, vigorous and abundant life is concerned.

It is the growing conviction of wildlife students that it is almost impossible to overemphasize the importance of good soil and water management from a wildlife standpoint. And while this nation has been careless in managing its soils, it has been even more so in the management of water.

Most water utilization projects are still developed as isolated units with little consideration for anything except the particular objective of the promoter, be it hydroelectric power, irrigation, flood control, or navigation. Big impoundments have been and are now being developed without much effort even to keep them useful as long as possible. No effort comparable with the original expenditure for impoundment has ever gone into preventing excessive erosion from silting up the reservoir.

This nation also still goes on the theory that streams should be open sewers into which any community or industry has an inherent right to dump waste material. Waters are only partially productive because of this practice. While a number of states have pollution laws, many are inadequate and others cannot be enforced because of the political strength of the polluters. The recently enacted federal pollution law has neither teeth nor the promise of development of teeth in its present form. Its best feature is that it indicates a growing public concern over this wasteful use of water.

Growing emphasis has been placed on the necessity for increased food production in recent years. Yet, the production of fish and their valuable natural products of many streams has been destroyed or greatly reduced by silt from excessive erosion, domestic sewage and industrial waste. Any one of these factors can destroy a stream; all three are almost certain to do so.

The propensity of man to look for easy and painless ways out of immediate predicaments also has profound effects upon other creatures. In agricultural lands, this search for a cure-all has taken the form of one fetish after another. Once a fetish was made of clean

farming. It was made to appear almost immoral for a landowner to allow shrubs, bushes, trees, hedges to remain on the land. Reliance has been placed upon miracle crops, miracle fertilizers, and miracle chemicals to solve the problems caused by poor land use. The latest fetish is the assurance or belief of some chemists that a chemical cure can be developed that will in some magic way prevent all insect or disease damage.

Many new toxic materials such as DDT have direct and indirect effects upon wildlife. It is known that DDT used in heavy concentrations will kill birds. Used in weaker concentrations, it does not appear to be directly fatal to birds. However, it could easily have serious effects by destroying food supplies at critical periods such as the nesting season. There is some evidence that this does occur but the frequency of such occurrences is still a question.

Questions have been raised as to the necessity of the extensive use of insecticides and plant sprays if proper attention is paid to the maintenance of soil fertility. It seems obvious that fertile productive land will grow more vigorous crops better able to withstand diseases and attacks of insects than those growing on land of low fertility.

It is obvious that any human activity which changes the type of vegetation on land will affect wildlife. Any human activity which puts land to intensive and exclusive use will also affect wildlife. In the latter case, the effect is always adverse; in the former, it may be adverse to some species and favorable to others, depending upon the new type of vegetation and the type of land management installed.

All these adverse effects could easily add up to make a very black picture. It would be black indeed, in fact rather late in the evening to be called "twilight" if there were no other factors to be considered. Fortunately for this country, there are.

The first and probably the most important is the growing public appreciation of the necessity of intelligent management of natural renewable resources. There is also a growing appre-



ciation among leaders and the rank and file of conservation groups that the conservation and wise management of soils and waters and their plant and animal products are all part of one picture. It is not possible to promote one unit without some effect upon others.

Wildlife of forested lands has relatively brighter prospects than these forms found in purely agricultural lands. Wildlife management can be easily fitted into forest management, partly at least because man had not altered forests types so radically as to destroy essential habitat for most forest wildlife.

Much publicity has been given to "eruptions" of deer and other browsing and grazing animals. These eruptions have been caused by a complex of factors, one of which has been the "cut-out-and-get-out" logging policy.

Under such a system, vast areas were cut rapidly. Reforestation may have started immediately in such areas or they have been held in a non-productive state for many years by recurring fires.

A forest recovering from a fire or logging grows up to a mixed stand of shrubs and trees. During that period it produces a maximum amount of food and covers that favors the rapid increase of browsing species. As the forest grows and the overhead canopy closes, food and cover suitable for such animals decrease. Add to that natural cycle the concentrated effect of overbrowsing or overgrazing by too many animals for the condition then existing and a "deer eruption" followed by starvation appears.

Sustained-yield harvesting of forests placed into actual operation will eventually help stabilize populations of such animals. Combined with an intelligent game management program, it is possible to foresee a long-range picture in which numbers will not grow to such peaks nor decline so violently. Not only browsing animals but many other forest inhabiting species will be benefitted by sustained-yield harvesting. This segment of wildlife has prospects of better rather than poorer living environment.

The outlook for grassland wildlife is not so rosy. The antelope has made a comeback in many of the western states. To a less extent, it has recovered in the prairie states where once it was abundant, but its numbers are not and probably never will be large. The rea-



son is obvious. Regardless of the fact that there is comparatively little direct competition between antelope and cattle for feed, intensive cattle grazing normally results in a decrease in the amount of other available food. Sheep grazing conflicts more directly with antelope grazing.

The complete grazing utilization of grasslands plus dry farming of many grassland areas adversely affects many other forms of wildlife. The prairie chicken and the sharp-tailed grouse, for example, have been extirpated from large areas by the destruction of necessary habitat as a result of changes in human utilization of land. Such forms can recover only in areas on which the original vegetation can be restored or some acceptable substitute provided. They do not have the necessary adaptability to persist in the fact of the present type of land utilization and their places have, to some extent, been taken by such exotic species as ringnecked pheasants and Hungarian partridges, both better able to adjust themselves to present land use practices.

The prospect, therefore, for greatly increasing the grassland species is not as favorable as it is for forest lands. These species can and have been aided by some new practices and perhaps can be aided more by methods to be developed in the future.

Since agriculture has affected so many millions of acres of land, agricultural development has caused many of the major problems in maintaining wildlife populations. Many resident species can persist only to the extent they can adapt themselves to present and future agricultural land uses. Changing from one farm crop to an alternate condition favors one form over another. In western irrigation districts, for example, a change from corn and alfalfa to sugar beets has been followed by a decrease in pheasant populations. Yet many resident creatures can persist under agricultural conditions, particularly when some attention is given to their needs.

Migratory forms of wildlife have perhaps been most adversely affected and face the darkest future. Something like 100 million acres of land, much of it either breeding, feeding, or wintering habitat for migratory waterfowl, have been drained in the past 100 years. Drainage for agricultural purposes is still being promoted extensively.

Until we more clearly recognize the values of marshes and lakes as water reservoirs and regulators of water tables, and the values of the products that can be taken from such habitat, and land management practices are developed to utilize such values, there is little hope for rebuilding migratory aquatic wildlife. Despite all other efforts, it is apt to continue on the decline as long as drainage of additional marsh-

es and lakes continues.

If all past recommendations by agriculturists were made completely effective on an individual farm, it is highly improbable that wildlife could or would persist on it. A combination of clean farming and intensive insect and weed control coupled with an effort to mine the last possible nickel out of every acre of available soil, would unquestionably destroy all food and cover for wildlife with the exception of such forms as the English sparrow, the starling, house rats and mice.

The saving factor is that there are interests and incentives other than securing the last ultimate nickel in profit that motivates much human activity. It is possible to practice profitable agriculture and sound soil management on land and still leave adequate food and cover for wildlife.

The use of permanent vegetation to prevent excessive erosion offers infinite possibilities for supplying adequate condi-

tions under which wildlife may live without interference with sound land management. New techniques and new methods are continually being developed.

The assumption on which some of our land use recommendations are based, particularly in the U. S. Department of Agriculture, seems to be that this nation has grown so desperately poor that it must mine to the maximum extent every square inch of soil available. In thickly populated sections of Europe, there is still room for shrubbery, trees, hedges, and for wild creatures. In relatively thinly populated America, we apparently must urge the landowner to attempt to destroy everything that interferes with the maximum dollars and cents production of each unit of land.

There is too little appreciation of the fact that land can be profitably used for other purposes than the production of agricultural crops. Little attention has been given to the use of water farming although it is an important part of management in other nations. There is little appreciation of the values of marsh land and yet there are such lands whose net profit from management of the aquatic resources is greater than that secured on adjoining intensively cultivated agricultural land.

The fate of wildlife in agricultural areas is inextricably bound up with land use. To the extent that intelligent, long-range land management based primarily upon maintaining productivity can be translated from their field of theory into actual practices upon the land, wildlife will benefit. Intensive agriculture, properly planned, can mean change rather than extirpation for wild creatures. Change in crops or in land use may affect some forms of life advantageously and others adversely. Nevertheless, agriculture does not necessarily mean twilight for wildlife. The reverse may easily happen to the extent that intelligent management can be substituted for the exploitive type of land use still far too prevalent.—American Forests.

Catfish Fat

Fishermen, here's a tip from Herb Fisher, of the University of Missouri wildlife research unit on the use of catfish fat.

Herb finds that some commercial fishermen use catfish fat to help in frying fish, in removing tar from hands, and as an agent in hardening and eliminating the stickiness of tars used on their nets.

Some fishermen use the fat in the treatment of chapped hands, a disorder common among men who frequently dabble in water. A small amount of the fresh fat rubbed on hands makes the skin soft and pliable, but is not expected to replace regular hand lotion since it retains an odor peculiar to the finny tribe.

Things You May Not Know

The so-called Silver Eel is just a common Green Eel with a date! When they are six or eight years old, eels stop feeding and change to a silvery color for their long trip out into the ocean to spawn and die.

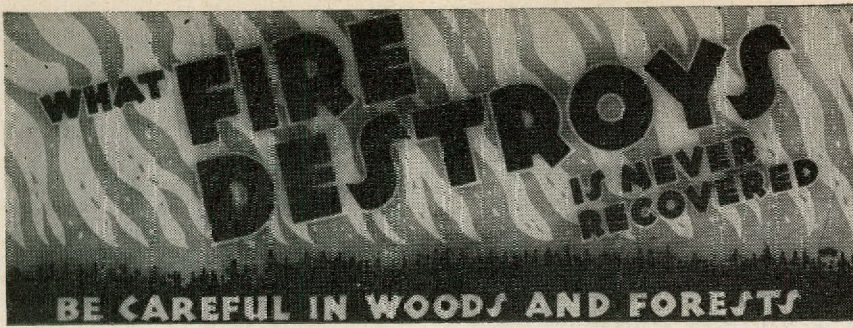
The elephant is the only mammal that kneels when reclining. His knee joint rests on the ground while his hind foot sticks out backward.

One of the coolest known forms of light is that given off by the firefly.

The surf bird nests on the mountain tops of central Alaska but winters in South America. For nearly 150 years after the bird was given its scientific name, ornithologists were unable to locate its breeding ground.

The Portuguese man-of-war is a jellyfish that is made up of a group of small animals attached to a single float. Some of these animals move the colony along by swimming. Others catch prey. And others produce the young and protect the colony from enemies.

The ant has two stomachs. One he uses for himself. In the other, he stores food which is to be shared with other ants in the nest.



Bigger and Better Lakes for Texas

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There is no quarrel with anyone for overlooking a river in a State where so many things are big. We read about the great floods of the Brazos and are little aware of the extent of its colossal watershed, so here are the facts; and reminder that the Brazos is being given that unified watershed treatment.

BRAZOS RIVER: It rises in New Mexico 40 miles west of the Texas boundary line and empties into the Gulf of Mexico near Freeport. The total length of the river is 1,215 miles most of which is included in the Brazos River Conservation and Reclamation District with offices at Mineral Wells. The Brazos River program is the first overall unified project, from its source to its mouth, to be undertaken in the United States, says John W. Pritchett, member of the State Board of Water Engineers.

The District is actively engaged in financing, constructing, and encouraging the construction of reservoirs for all beneficial purposes. Among the recommendations are the construction or modification of six multiple purpose reservoirs, and investigation for the construction of ten or more additional reservoirs are now under way.

The Possum Kingdom Lake stands as its major accomplishment with its potential of 724,700 acre feet of water. Where the lake got its name is explained by Mr. Pritchett. Just below the dam there is an area called Possum Kingdom Flat, so they did not have to look far for a name. How the flat got its name is a historical problem that must be referred to the old-time hunters and trappers.

The great reservoir has meant much to the cause of potable water, for domestic use, for irrigation and for fishing, by diluting the salts of the combined forks of the Brazos which customarily have stood at more than 3,000 parts per million of chlorides at the Bunger Bridge. Lake dilution has reduced the salt to around 600 parts per million in the tail race. On May 31 the acre feet had increased to 685,200 reducing the chlorides to below the 600 mark.

The Whitney Dam now being constructed above Waco, will have a storage capacity of over 2,000,000 acre feet. That is more than double the capacity of Possum Kingdom, and should reduce, by further dilution, the chloride to around 200 parts per million. The Brazos no longer has the reddish color which came down from the Salt Fork, and its clean sparkling waters are now the proper home of the finest of game fishes. But the Brazos is only one of the great watersheds now being developed.

COLORADO RIVER: Reservoirs of the river have a combined capacity of more than 3,000,000 acre feet, and other projects under construction or in the planning stage include a floodway and levee at Brady, enlargement of Lake Brownwood Dam and Spillway, the North Concho Reservoir near San Angelo and also a dam and reservoir near Marble Falls is being planned, besides two reservoirs at Colorado City.

TRINITY RIVER: At this writing four large dams are under construction on the tributaries above Dallas and Fort Worth by the U. S. Corps of Engineers. Completion of these dams will materially reduce the threat of major floods at and immediately below Dallas; bring barge navigation closer to realization and assure the large cities of an abundant supply of fresh water. These dams are: Benbrook on Clear Fork, (258,630 AF); Grapevine on Denton Creek, (434,200 AF); Garza-Little Elm on Elm Creek, (1,016,200 AF); and Lavon on the East Fork, (422,800 AF). Total 2,132,400 acre feet. Present existing storage capacity amounts to some 757,000 acre feet in Lake Dallas, Lake Bridgeport, Eagle Mountain Lake,

Mountain Creek and Lake Worth.

Improvement of the navigation channel from Galveston to Liberty to provide a channel of nine foot depth with a bottom width of 150 feet was authorized in 1945. Removing of shoaling began this year. The channel to Fort Worth has not yet been authorized.

SABINE RIVER: There is a considerable use for the water in rice production, municipal supply at Orange and for industrial purposes, particularly the nylon salt plant of the du Pont Company. A late Corps of Engineers report on this waterway is being reviewed by the Water Board at this time.

NECHES AND ANGELINA BASIN: The water problems of the lower Neches River Valley are due both to floods and low flows. To alleviate flood damage and the water shortages four dams have been authorized for construction by the U. S. Corps of Engineers. Rockland and McGee Bend sites are located on the Neches and Angelina Rivers, respectively; and the two dams referred to as dams A and B, to be located on the Neches River below the Rockland Dam, one above and one below the confluence of the Neches and Angelina Rivers. Work has begun on dam B. The combined capacity of Rockland and McGee Bend reservoirs will be 6,831,000 acre feet.

CYPRESS CREEK: With head waters in Wood County it flows southeasterly 91 miles, leaving the State through Caddo Lake. Tributaries are Little Cypress, James Bayou, and Black Cypress Creeks. Ferrell's Bridge reservoir eight miles west of Jefferson, Texas, was authorized for construction by Congress in 1946 and detailed surveys are under way at the present time by the U. S. Corps of Engineers. The storage capacity will be 414,000 acre feet. Flood Control and conservation storage are the chief considerations. Other plans of the Corps of Engineers include dredging and straightening the channel from Shreveport, La., to Jefferson, Texas, for 66 miles, and the construction of a dam at Mooringsport, La.

GUADALUPE RIVER: In addition to existing power dams, present plans of the Corps of Engineers call for the construction of Canyon Dam and re-

Sportsmen Like Pictures

Hunting pictures . . . fishing pictures . . . pictures of game bagged in field or forest . . . pictures of hunting and fishing trips . . . pictures of bird dogs and retrievers . . . in fact, all pictures that have a bearing on field and stream. Mail them to The Editor, TEXAS GAME and FISH, Walton Building, Austin, Texas. They will be returned to you just as soon as we can use them.

servoir at a site seven miles northwest of New Braunfels. Capacity is designed for 563,000 acre feet and will be used for flood control and possibly power production.

RIO GRANDE RIVER: The river heads on the eastern slope of the San Juan Mountains in Colorado and empties into the Gulf of Mexico near Port Isabel. The Boundary Commission was directed to construct three dams in the treaty of 1945. The lowermost known as Falcon Dam above Roma, Texas, will be the first one of the three to be constructed.

PECOS RIVER: Red Bluff Reservoir was completed in 1936 with a storage capacity of some 300,000 acre feet used for flood control, irrigation and power development. The river is salty above the reservoir, too much so for farming certain products. Now, approximately 28,000 acres are irrigated below the dam and about 50,000 acres are supplied by ground water sources.

DEVIL'S RIVER: In 1929 two dams were completed for power production. Storage capacity of Devil's Lake is 45,700 acre feet; that of Lake Walk, 3,500 acre feet. The river is a major factor in sustaining the flow of the Rio Grande. Though a short stream, Devil's River is a rival of the Pecos for the scenic grandeur of its canyons.

NUECES RIVER: The Bureau of Reclamation has made a survey of the entire watershed and has under consideration the construction of several reservoirs, notably the Cotulla, LaPryor, Fowlerton, Sabinal and Concan projects.

This data is taken from the Progress Report of the Board of Water Engineers for the biennium 1946-1948. Improvement of the Texas waterways is a monumental undertaking which the Board, in cooperation with the U. S. government, is carrying on in a most efficient way. More water and more fish is the dream of the fishermen and it looks like the dream is to become a reality.

Tom Sharpe Invents Bent Casting Float

"Sharpe's Bait Casting Float" is beginning to make its appearance on the shelves of dealers and fishing equipment.

The float was invented by Tom Sharpe, of San Antonio, an ardent fisherman and one of the State's outstanding conservationist.

The float is different from most in that it has a cavity into which the bait is drawn to prevent the minnow, worm, shrimp or other cut bait from being thrown loose when the cast is made.

The Sharpe float is made of either balsa or South American sponge wood. It is made in three sizes, large for salt water fishing, medium for fresh-water

casting, and small for fly rod fishing.

When cast out on the water, the slip float rights itself, dumps the bait into the water, and permits the line to sink as deep as the angler desires before the float reaches a stop knot on the line.

Although the float is made in three sizes, each float is four inches long. The difference sizes weigh $\frac{1}{4}$, $\frac{1}{3}$ and $\frac{3}{4}$

ounces.

Sharpe was secretary of the Texas Wildlife Federation when it was first organized in 1936. That same year Sharpe was fishing in the Colorado river near Austin with several friends when he hooked a 111 pound gar. A four hour battle ensued with a fly rod. Sharpe finally landed the gar.

CONSISTENCY?

An Average Citizen was walking to his office one morning. His way led past the hardware store and he stopped to see what was new in the sporting goods display. Happening to glance into the store, he saw a loungeer snatch a pocketknife from a rack and conceal it in his coat pocket.

The Average Citizen was outraged; bustling into the store he called the proprietor and told him about it, pointing out the culprit who lingered by the counter. Mr. Citizen and the owner accosted the thief and held him until a policeman could be called. In jig-time the scoundrel was on his way to jail and the Average Citizen was receiving the owner's thanks for his prompt, public-spirited action.

Later that morning, a friend called on the Average Citizen. Both were ardent quail hunters and the talk soon turned to the late quail season. The friend passed on some information about a certain locality where, he said, a mutual acquaintance had reported getting his limit easily one day. The Average Citizen laughed.

"You don't know how Jim got his limit so fast? He slipped in on the refuge. And it wasn't just a limit—it was quite a bit over."

"No!" exclaimed the friend. "That's hard to believe. Are you sure?"

"I ought to know," said the Average Citizen, "I watched him do it."

"But that's breaking every law in the book! Why didn't you tell the game warden?"

Mr. Citizen glared. "Think I'd tell on a man? Besides, it's the warden's job to catch him—it's none of my business."

They said goodbye, then, and the Average Citizen returned to work. When he got home that night, and sat down to dinner, he regaled his family with the events of the day, emphasizing—with conscious virtue—how he had twice demonstrated his code of ethics. Mrs. Citizen applauded dutifully, but 14-year-old Joe was silent.

"What's the matter, Joe?" his father asked, with heavy humor. "Don't you approve of my conduct?"

"I—I guess so," Joe said, squirming, "but—Dad, if you helped arrest the man in the store, why didn't you help the warden?" Wasn't Mr. Jim breaking the law, too?"

"You don't understand, son," was the indulgent reply. "The man was stealing. Jim was just outsmarting the warden."

Joe slipped from his chair. His face was red. "Mr. Jim was stealing, too!" he declared. "I want to go hunting when I grow up, and so does Jim Junior. If his father and other fathers break the laws and kill more'n they oughta, there won't be any thing for us kids to hunt. He *was* stealing—from us!" And then Joe ran from the room.

The Average Citizen, his mouth open, stared after him for a moment and then picked up his fork. "That boy!" he exclaimed. "I can't figure him out. Saying Jim was stealing those quail; arguing that I should have told on a fellow-sportsman!"

Mrs. Citizen didn't look dutiful now. "Well, he *was* breaking a law!" she snapped. "That *isn't* just his game, but Joe's too. What's the difference if it's quail or jack-knife?" And she walked out also.

The Average Citizen looked hurt. "Women!" he growled. "Kids! You can't reason with 'em. They're so *inconsistent*.—W.O.N. in Missouri Conservationist.

Valley Club Wins Objective

By Paul T. Vickers

When the Valley Sportsmen's Club started working to get a law passed restricting commercial fishing in Laguna Madre, it didn't make a water-haul. President Cedric Wood of the Valley Club reported with pride at the annual gathering of members that this one achievement of the Sportsmen's Club was worth all the effort it had taken to form the organization.

Wood told an audience of 400 at the annual membership meeting and barbecue at Port Isabel, that the new seining law already in effect was calculated to result in vastly improving sports fishing in the protected waters of Laguna. He pointed out the moral of organized and cooperative effort as against individual trials made many times in the past years to get seining in Laguna Madre restricted. None of these efforts had any effect and it was an admitted fact that tens of thousands of fish too small for market were left on the shores of the Laguna to die. On the other hand, within approximately a year after the Valley Sportsmen's Club was formed, through its united effort, the law was passed.

The Valley Sportsmen's Club now has 2015 members making it one of the largest in America, and, so far as is known, next to clubs that Fort Worth and Port Arthur have, the largest in Texas.

Evan Hurst, Harlingen banker, who was one of the organizers of the Valleywide club, which stemmed from the Sportsmen's Club of the McAllen Chamber of Commerce, sponsored chiefly by Colonel Lloyd M. Bentsen, Sr., of Mission, C. H. Britton of McAllen, and J. Forrest Palmer of McAllen and Port Isabel, was elected president at the annual meeting held at Port Isabel. Hurst was formerly chairman of the Valley Chamber of Commerce hunting and fishing committee, and took the lead in organizing the Valley Sportsmen's Club following a kickoff dinner given by Bentsen and Britton.

J. A. Hockday, former mayor of Port Isabel, and a long-time leader in resisting the wanton destruction of undersized fish, was elected first vice-president. Oliver Aldridge, Edinburg, widely known hunter, was elected second vice-president. W. W. Richards, San Benito, and B. E. Carroll, Raymondville, both prominent sportsmen were elected third and fourth vice-presidents.

Marvin Downs, Pharr, who had done a vast amount of work at his own expense



GOVERNOR SIGNS SEINING BILL. When Gov. Beauford Jester put his name on a measure restricting commercial fishing in Laguna Madre the Valley Sportsmen's Club chalked up one of its greatest achievements. Watching the Governor sign the measure are, from left to right, Senator Rogers Kelley; Cedric Wood, Donna, president, Valley Sportsmen's Club; John Van Conkrite, La Feria chairman of the Valley Club's legislative action committee; and Menton J. Murray, state representative. — Felder Photo.

and on his own time as secretary, was unanimsously re-elected.

The Sportsmen named Cedric Wood, Donna, retiring president, E. J. Montgomery, Rio Hondo, Britton and Bentsen honorary vice-presidents.

Directors elected in addition to the officers were: Guy Bevil, Brownsville; Duane Harris, La Feria; E. M. Aikin, Rio Hondo; Don Sheldon, Donna; Jake Strickler, Mercedes; S. N. McWhorter, Weslaco; Fitzhugh Taylor, Alamo; Wilford Thompson, San Juan; Gordon Kethley, McAllen; Roy Buckley Sr., Mission; M. C. Betsen, Edcouch; and H. C. Conn, Elsa.

The Valley Sportsmen's Club, now that it has realized its main ambition of protecting fishing in the Laguna Madre, plans to give much of its time to propagating fish and game in the Valley. New experiments are to be made in propagating game birds with major attention devoted to the protection of white wings and quails. The Club will also make studies of the propagation of fish in fresh water bodies in the Valley.

Hurst said that probably one of the main activities of the Club would be the planting of fish in Falcon Dam, to be built on the Rio Grande by the International Boundary Commission, and in the huge canals to be built by the U. S. Bureau of Reclamation to carry water from the dam to the 680,000 irrigated farm acres

in the Valley. The Club also expects to extend its activities to "fish farming" by giving information to land owners on how they may have their own fish ponds, and how to "farm their fish" scientifically.

The Valley Sportsmen's Club was patterned after the successful clubs at Fort Worth and Port Arthur. Hurst said that though it was pleasing to have a membership of more than 2,000, the new goal would be 4,000 members. People in the Valley became so enthusiastic over the Sportsmen's Club, that in some cases wives sent in dues for their absent minded husbands. In none of these cases was there any suspicion that they wanted them off on fishing trips.

Due to the smoothness of the terrain in the Valley, there being no cliffs nor deep chasms, and due to the protected fishing waters of the Valley segment of the Gulf Coast, and due to the lack of dangerous game, it is believed that the Valley has more women hunters and fishers than most other regions. Many women are ardent members of the Valley Sportsmen's Club.

Those guanine crystals that give a fish its iridescent hues are waste products of the blood—a hang-over from the days when Nature, designing the fish, had not yet devised a modern excretory system.

House Proposal Would Violate States' Rights

The House Agriculture Appropriations Committee has made recommendations in its appropriations bill for the fiscal year 1950 which ignore states' rights to regulate hunting on national forests, according to the Wildlife Management Institute.

The report states:

"In many instances, the foraging in the national forest of deer, elk, and other wild game amounts to depredation. While it is believed the Forest Service, through its employees, has full authority to kill wild game on the forest necessary to protect the forest from depredation, it has not been done. The more practical method would be to increase the number of hunting licenses issued, and increase the bag limit, particularly with respect to the shooting of doe. Such authority at present lies exclusively with the States within which the national forest lands are situated. It is possible that Federal legislation, if enacted, would permit the Forest Service to issue hunting licenses, fix bag limits, et cetera, within the boundaries of the national forests to the extent that would bring this situation under control. The committee has no knowledge that the Forest Service has ever proposed or recommended any measures of this sort."

Under policies established for the management of national forests, the regulation of hunting has been left to the states in which the individual forests are located. Sportsmen and game officials in the various states are certain to oppose this proposal vigorously as an infringement of states' rights. Little would be accomplished other than to destroy a working cooperative agreement of long standing; and cooperation between the individual states and the Federal Government in the management of the national forests is more vital now than at any time in their history.

A highly desirable proposal was offered in the same bill, however, when the Committee proposed that funds earmarked for wildlife management on the national forest be reinstated. Specific funds for this purpose were removed in 1948 from the Forest Service appropriation. The present committee believes that the "practices which the Forest Service has been compelled to follow because of the action taken two years ago are not sound budget practice." The Forest Service is charged with the care and maintenance of wildlife range on the

national forests and the committee indicated that a specific appropriations should be allocated for this purpose. The Committee instructed the Bureau of the Budget and the Forest Service to include such an item in the 1951 budget request. Conservation organizations have asked for the reinstatement of funds for wildlife management on national forests for the last two years.

A total of 282 national wildlife refuges, totaling 18,107,024 acres, were being administered by the U. S. Fish and Wildlife Service at the end of the fiscal year 1948.

New Regulations For Medina Lake

Medina Lake got a brand new set of fishing regulations when Gov. Beau'ord Jester signed House Bill 386 into law.

Under the new law there is a bag limit of 10 on black bass, white bass, catfish, crappie, or in the aggregate of these fish.

There is a limit of 20 on bream, goggle-eye, green perch, and any other type of sunfish.

Black Bass, white bass and catfish, to be keepers, must be 11 inches in length. Crappie must be at least seven inches.

The bag limit must not be exceeded on any one day, nor can a fisherman have more than the limit in his possession at any one time, regardless of when they were caught.

Hooks on trot lines and throw lines must not be closer than four feet apart.

Minnow seines are not permitted and it is against the provisions of the new law to capture minnows.

Under the new regulations a special Medina Lake license no longer is required. However, there still is a fee of \$1.10 for anglers using artificial bait, and after September 1 anglers must have the so-called universal fishing license costing \$1.65.

Waterfowl Seen To Be Holding Own

Here's the latest report on the migratory waterfowl situation in the far northern breeding grounds. The information comes from Ducks Unlimited.

Many thousands of square miles of southern Alberta and southwestern Saskatchewan which produced waterfowl abundantly in 1948, are out of commission due to lack of surface water. The decline in breeding waterfowl in this area is substantial. Conversely, a marked increase in breeding density is recorded in central and northern Alberta, in eastern and central Saskatchewan and in Manitoba.

It is evident that there has been a major shift of breeding stock from the drought-stricken parts of the prairies to safer waters north and east. Further investigation now in progress will reveal whether the increases in the north and east are sufficient to offset the decline in the prairies.

Ducks Unlimited sums up the present situation in these words: "It is too early to forecast the results of the present breeding season."

Other reports received by Ducks Unlimited indicate that:

The migratory flight was as great or greater than last year.

The peak flights were about two weeks earlier than last year.

That about 90 percent of the waters remaining in the drought area will last through to see the hatch safely on the wing. Cool weather and rains in the latter half of May retarded evaporation but further rains are needed to ward off drought loss in some areas.

The first broods were observed in southern Alberta on May 18, (Pintail) in southern Saskatchewan on May 18, (Pintail) and in southern Manitoba on May 16, (Pintail) and May 19 (Mallard). The broods were averaging between six and seven for Pintails; eight to nine for Mallards.

The fish called the flounder can imitate the pattern as well as the color of their backgrounds. Placed on a checkerboard, the flounder will attempt to reproduce the arrangement of the squares on its body.





BOOKS



FIELD BOOK OF NATURAL HISTORY by E. Laurence Palmer, 664 x pages. Illustrated with over 2,000 clear drawings. Published by McGraw-Hill Book Company, Incorporated, New York, New York; 1949. Price \$7.00.

Here, between two covers, is undoubtedly the most amazing work of its kind ever published, a complete one-volume library on natural history whose scope ranges from cosmic dust through to man. The individual sections on the various phyla are more complete than many entire books on plants, insects, and animals which this reviewer has seen. More than 2,000 subjects, mineral, plant, and animal, are covered separately and each individual species listed is shown in a clear drawing, which will facilitate identification of specimens. Practically every order and most of the families of the Plant and Animal Kingdoms are represented by one or more typical species. For each there is a brief, but complete description, a discussion of range, a paragraph on habitat, another on general characteristics, and an outline of economic importance. The sections on minerals and astronomy, both of which are essential to a complete work on natural history, are particularly unusual; for more often they are passed over lightly or omitted completely by most authors of books on this subject.

This book will prove a handy reference for writers, nature students, sportsmen, and teachers. Its value is best summed up by a recent remark of J. Hammond Brown, general president of the Outdoor Writers Association of America, who, in discussing this work with the reviewer, stated, "For years I have had on my desk five reference books on nature subjects which I have used constantly. When Dr. Palmer's book arrived I threw all the others away." This is a work which, to be appreciated fully, must be seen.

WILDLIFE FOR AMERICA by Edward H. Graham and William R. VanDersal, 110 pages. Illustrated with more than 50 excellent half-tones. Published by the Oxford University Press, 114 Firth Avenue, New York 11, New York; 1949. Price \$2.50.

Wildlife is a product of fertile soils and, in most cases today, a by-product of land-use by man; for, within the last

few centuries, man has become the strongest ecological force except climate. Whatever is done to a particular acre of agricultural land affects the wildlife population upon it. If it is abused, robbed of its fertility, the tract's productivity of game and song birds and mammals is reduced proportionately. If, on the other hand, methods of cultivation are used which maintain fertility, the population of wild creatures may be held at a high level—although changes in crops may alter the population's composition.

During more than three centuries of civilization in North America, soils have been stripped of their natural vegetation and mined of their fertility. Forests have been cut and burned as weeds. Wildlife was slaughtered. This trend has only recently been checked. With the historically recent rise of the soil conservation movement a start has been made toward repairing damages of past abuse. With the new movement has come renewed hope that large wildlife populations can be maintained in America.

This, in brief, is the outline of this excellent book by two of the nation's foremost ecologists. The story is beautifully told in pictures, each of which is amplified by a page of well-written text. The style is simple, clear, and direct and each page carries a separate thought forcefully expressed. Written especially for older children, the volume still has an appeal and carries a message for adults. Happily, there is none of the maudlin sentimentality that characterizes too many children's books. In all, it is one of the most concise presentations of the past, present and future of conservation problem that this reviewer has seen.

MAN ON THE LANDSCAPE by Vernon Gill Carter, 129 xv pages. Illustrated with 53 half-tones. Published by the National Wildlife Federation, 3308 Fourteenth Street, Washington 10, D. C.; 1949. Price \$1.50 (Reduced prices for quantity orders.)

All vertebrate life is dependent upon the top few inches of soil. Under natural conditions topsoil is a self-perpetuating resource, the product of a balanced cycle of soil minerals, air, and water on the one hand and living organisms on the other. When it is considered that man, in three centuries in the United States

alone has run 75 million acres of this precious material down the rivers to the sea the concern of conservationists is easily understood.

Civilized man, says the author, has managed the American landscape with all the skill of a Cro-Magnon man turned loose with a bulldozer in a watch factory. Much of the difficulty stems from the fact that western European agricultural practices, still used by most American farmers, are not adaptable to American topography. Because of these methods, which disregard natural forces, we are traveling the same road which carried to oblivion the Empire of the Caesars and the Babylonian Kingdom. Doctor Carter suggests a cure for this problem. Modern scientific farming and agricultural engineering, he says, hold the key and can cushion the impact of natural forces upon the soil and prevent the disaster toward which we are heading. This is an excellent book, well written, clearly illustrated, and it carries a definite message. The approach is level-headed and scientifically calm, but the impact is hard. This book would make an excellent teachers' aid or textbook and should be read by all conservationists and students of natural science.

STUDIES IN FRESHWATER FISHERY BIOLOGY by Karl F. Lagler, 231 v pages. Illustrated with 74 half-tones, charts, and drawings, and many tables. Published by J. W. Edwards Brothers, Incorporated, Ann Arbor, Michigan; 1949. Price, in paper cover, \$4.00.

Written and published in a limited edition as a technical manual for use in colleges presenting advanced courses in fishery biology, this undoubtedly is the most complete and best organized work of its kind. The author has spared no pains in stripping the pages of all extraneous matter, and the resulting work is pure fact based on the best available scientific knowledge. It is not a publication which can be read for entertainment except by the most scientific minded, although Dr. Lagler's thorough presentation of a wide and complex field of biology in a minimum of words will delight the true scientist.

The author, one of America's ranking fishery biologists, has tapped every possible source of information to keep his material as accurate and as up-to-date as possible. Each of the chapters contains only a few pages, but all of the basic material on each subject covered is presented. Complete references are listed for further and more detailed study. Numerous experiments and projects are suggested and outlined. This manual will be of particular interest and value to instructors of biology, fishery specialists, and advanced students in the field of natural science.

THE SHOTGUNNER by Bob Nichols, 373 pages. Frontpiece from an old English print. Published by G. P. Putnam's Sons, 2 West 45th Street, New York, N. Y.; 1949. Price \$5.00.

Bob Nichols, formerly, and for 13 years, shooting editor of "Field and Stream," regards shotgun shooting as a fine art, and he treats shooting with the same subjective fondness with which a master painter would write of portraiture or landscape painting. The result is an extremely well-written work filled with information that will prove invaluable to both the beginner and to the advanced shooter. Even the proverbial gentleman who can break 100 at skeet with his arm in a sling will find every page of this book of fascinating interest. Nichols has the rare ability to take two lines from a ballistics table and turn them into smooth and entertaining prose. Those who have followed his work over the years in the pages of "Field and Stream" need no introduction to his easy, informal style.

The author covers his subject with characteristic thoroughness. There are, for instance, separate chapters on "the gunner's eyes," and "the gunner's feet." Many authors on shooting spend a few pages on the necessity of lead—Nichols devotes nearly 40 pages to the subject and covers every conceivable target angle. As in all of his writing, the author rarely refers to the gun alone or to the shooter alone. The two are considered by him as an inseparable unit.

Nichols occasionally makes positive statements in points which other experts might regard as controversial. When he does, he defends his stand ably with the courage of conviction born of a lifetime of shooting experience.

BEGINNER'S GUIDE TO SEASHORE LIFE by Leon Hausman, 128 pages. Illustrated with 250 line drawings by the author. Published by G. P. Putnam's Sons, 2 West 45th Street, New York, N. Y.; 1949. Price \$2.00.

Here is a unique reference, which is recommended to surf fishermen, summer beachcombers, and seashore vacationists, from the skilled and prolific pen of Dr. Leon A. Hausman. The inexperienced saltwater fisherman will find a guide handy in identifying and locating preferred baits of local anglers. It will enhance vacationists' pleasure, on their trips to the shore, with the thrill that comes from being able to identify the odd plant and animal life found only on the margins of saltwater. To most vacationists a sand bar is a sand bar, and a mudflat a smelly stretch of muck. To the person who has real curiosity and interest in nature, they become fascinating communities of mollusks, sponges, corals, anemones, worms, and crustaceans. With a field guide such as this, even the rankest

beginner can identify almost all of the principal denizens of the surf, inlets, estuaries, and flats.

Dr. Hausman covers the most common forms of seashore life found on the coasts of the United States and Canada. Each of the 250 subjects is described in a short but lucid paragraph accompanied by a clear pen-and-ink drawing, which will fascinate identification of specimens. The book is of a handy size with durable binding. It will prove an interesting companion for the seashore vacationist.

AMERICAN SPORTING DOGS edited by Eugene V. Connett, 549 xiv pages. Illustrated with 105 photographs, paintings by the celebrated Edwin Megargee, and early engravings of sporting dogs. Published by D. Van Nostrand Company, Incorporated, 250 Fourth Avenue, New York 3, New York; 1948. Price \$7.50.

This is a complete volume on the major sporting dog breeds in America. Twenty-six nationally known authorities contributed to make it one of the most extensive works of its kind ever published. In the long list of authors are included such authorities as William F. Brown, Paul Bakewell III, and Lewis F. Gingery. Breeding and genetics, training, and the history of all major breeds are covered in detail and each section contains a list of the official standards for bench and field trial judging. For those interested in breeding a blooded sporting dog, the tables of early field trial winners will be of particular interest.

Each of the authors was asked by the editor to include all information that he would have found useful in his early days as a trainer, handler, and owner. The result is a complete and informative treatise on the history, development, and present status of the popular sporting breeds. Training methods, field trial handling, hunting, and training for the bench are included. Any dog owner will prize this handsome book and will find constant use for it in training and breeding his hunting dogs. To the prospective gun-dog buyer it is particularly recommended since it provides, between two covers, an excellent comparison among the various breeds and strains of sporting dogs.

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Fertilizers and Weed Killers

Farm pond owners who have problems with excessive pond vegetation and stunted conditions of fish may find the answers in the proper application of fertilizers and weed killers.

For controlling underwater vegetation the application of 4-12-4 commercial

fertilizer at the rate of 100 pounds per acre of water every two or three weeks throughout the growing season is recommended. The addition of farm lime in quantities about one-fifth that of the fertilizer is also desirable to keep the water from becoming too acid. Such applications tend to stain the water so that light rays necessary for growth of underwater vegetation cannot penetrate deeply.

Undersirable pond plants growing along the water's edge can be eradicated by completely spraying them with a fine mist of a mixture of one pound of 80% ammonium sulfamate plus two tablespoonfuls of a detergent type of laundry powder (not soap) plus one gallon of water. The ammonium sulfamate will kill most plants with one application and when properly used is not harmful to the fish.

Another chemical, 2-4D, mixed at the rate of one ounce per gallon of water plus the two tablespoonfuls of detergent wash powder is satisfactory for controlling most broad leaved plants. It is not suitable, however, for killing cattails, sedge and other narrow leaved plants.

Sprayers used for such work should be thoroughly cleaned with hot soapy water, particularly if they are to be used later for insecticide spraying.

Small Game on Upswing

Reports from over the nation indicate that small-game populations in most sections are on the upswing of their periodic cycles.

The U. S. Fish and Wildlife Service's annual winter inventory disclosed substantial increases of waterfowl in all four flyways. Nearly all waterfowl species except mergansers and shovellers increased in numbers. A mild winter throughout its wintering range favored the woodcock, which made a strong comeback last season over the previous two years. The still mysterious regular cycle of the ruffed grouse turned the bottom corner two years ago and populations now appear to be building up in the Northeast toward another "high." The mild open winter which the East enjoyed this year favored the bobwhite throughout most of its range.

The hardier pheasant survived the severe western blizzards better than most expected, according to reports from the Plains States. Provided the nesting season is favorable there is little reason to believe that the climb from the crash decline of two years ago will be more than momentarily and locally checked.

If Nature favors the North American continent with normal weather during the next few months, sportsmen should be able to look forward to a successful small-game hunting season next fall.

FROM 3 TO 6 KITS ARE
BORN IN APRIL OR MAY



NOCTURNAL IN HABITS --
'COONS ARE SELDOM SEEN
ABROAD IN DAYLIGHT

RACCOON



COONS EAT FISH, CRAYFISH,
FROGS, CRICKETS, ACORNS,
NUTS, GRAIN, AND BERRIES

RACCOONS ARE NOTED FOR
THEIR TIRELESS CURIOSITY



FOOD IS USUALLY WASHED
AND CAREFULLY INSPECTED
BEFORE IT IS EATEN



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