IOWA CONSERVATIONIST

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IOWANS "WATCHED THAT MUZZLE"

Gizzard Shad Suppresses Black Hawk Lake Fish Populations

By K. M. Madden
Supt. of Fisheries

Over 6,500,000 obnoxious gizzard shad became hog food or field fertilizer during October and November of 1951 at the hands of state rough fish control crews. These were removed from Black Hawk Lake in an effort to reduce competition for food, space and habitat of game fishes and to improve angling in this valuable water. Black Hawk Lake, one of the southern most glacial lakes, is old, geologically speaking. It has also had much experience at and from the hand of man in managing its tremendous fish population for the benefit of man. The lake and its extremely large heavily tilled watershed lying in Sac County, one of the rich agricultural counties, has been in times past an outstanding producer of fish life and at the same time a veritable death trap for the fish which have so prolifically reproduced in these waters through the ages.

In 1934, because of the low water stage and high silt deposits in the bed of old Black Hawk Lake, a complete winter freeze-out occurred. Very few fish, except bullheads, could survive during the low water drought years of '36 and '37. In 1939 Black Hawk Lake received a "shot in the arm" in the form of about one hundred of its 900 acres being dredged by the State Conservation Commission. Immediately following the dredging program the lake was completely restocked with all species of fish. Bullheads were predominant in the stocking list. This lake, shallow except for the 100 dredged acres, was fertile, and offered space and food so that the stocked fish grew rapidly and reproduced rapidly. Black Hawk Lake, after it was opened to public fishing in 1941, began to produce the good fishing that is typical of new or

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1951 GUN SAFETY CAMPAIGN PAID OFF

Jim Sherman Photo.

When all hunters become muzzle conscious, shooting will become a truly safe sport.

By George W. Worley
Supt. of Public Relations

For the second straight year the hunters and shooters of Iowa have gone through the Annual Gun Safety Campaign without a fatal accident. Apparently the emphasis placed on safe gun handling is making Iowans "muzzle-conscious" to the point where shooting is truly a safe sport. The successful gun safety campaigns of 1950 and 1951 are prime examples of what can be done when public agencies, civic groups, and individuals pull together for common welfare.

With the Iowa Safety Congress serving as coordinator, a force of more than a dozen agencies and groups and nearly a thousand individuals swung into action on November 4. The State Conservation Commission and its State Conservation Officers provided local leadership, publications, films and other facilities. The Izaak Walton League and other sportsmen's organizations gave freely of individual talent and time to bring gun safety programs to schools and other local groups.

Service men's organizations such as the American Legion, Amvets, and V.F.W gave space to gun safety in their bulletins and magazines and provided personnel. Boy Scouts and their leaders all over Iowa placed 40,000 gun safety folders under windshield wipers on November 10 and stressed gun safety in their troop projects and meetings. Skeetshooters and trapshooters distributed posters, bulletins, and set up gun safety exhibits in public places. Iowa peace officers conducted gun safety demonstrations and clinics. The Iowa Farm Bureau and other public and lay groups helped whenever and wherever they could.

Probably one of the most important factors in the success of the 1951 Gun Safety Campaign was the wonderful support given to the program by the press. Almost every daily and weekly newspaper

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Foot Komfort Kues For Kampers

By Curly Sharp

Sore, blistered, aching, or cold feet can ruin your fishing, hunting or camping trip. Let me give you old timers' secrets for foot comfort.

First and Foremost—Wool socks, as heavy as practicable, that fit. All real woods experts wear 'em, because they absorb shock, abrasion and perspiration.

Second but also foremost—Shoes that fit, and as heavy as practicable. They will avoid tired, bruised feet, and ease shocks and fatigue.

Third and equally important—Clean socks and clean feet for foot comfort. Keep your feet in tip-top hygienic trim and avoid several discomforts.

Fourth and not one jot behind—Instant attention to blisters, chaffed spots, corns and callouses, otherwise you'll suffer.

Let's take 'em all up in the order above.

The "Key to Foot Komfort" on your fishing, hunting or camping trips is those soft, pure, all-wool heavy socks that all experienced outdoorsmen wear. They cushion the feet, top and bottom, fore and aft. They absorb shoe friction, take up stone shock and bruises, absorb perspiration, and even when your boots and socks are wet they retain warmth. Always take enough pairs along with you so you can change into clean dry socks. Socks should neither be too long or too short. Too long they wrinkle and crease, too short they crowd the toes and cause aches. Sock width will take care of itself. So choose socks a comfortable fit, but not of surplus length. Choose them heavy, "hand-knit" if possible, and soft wool, not too tightly knit. White, grey and natural are best. Buy a good name brand.

The average tenderfoot thinks

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PERMITS NEEDED FOR WINTER FISHING SHELTERS

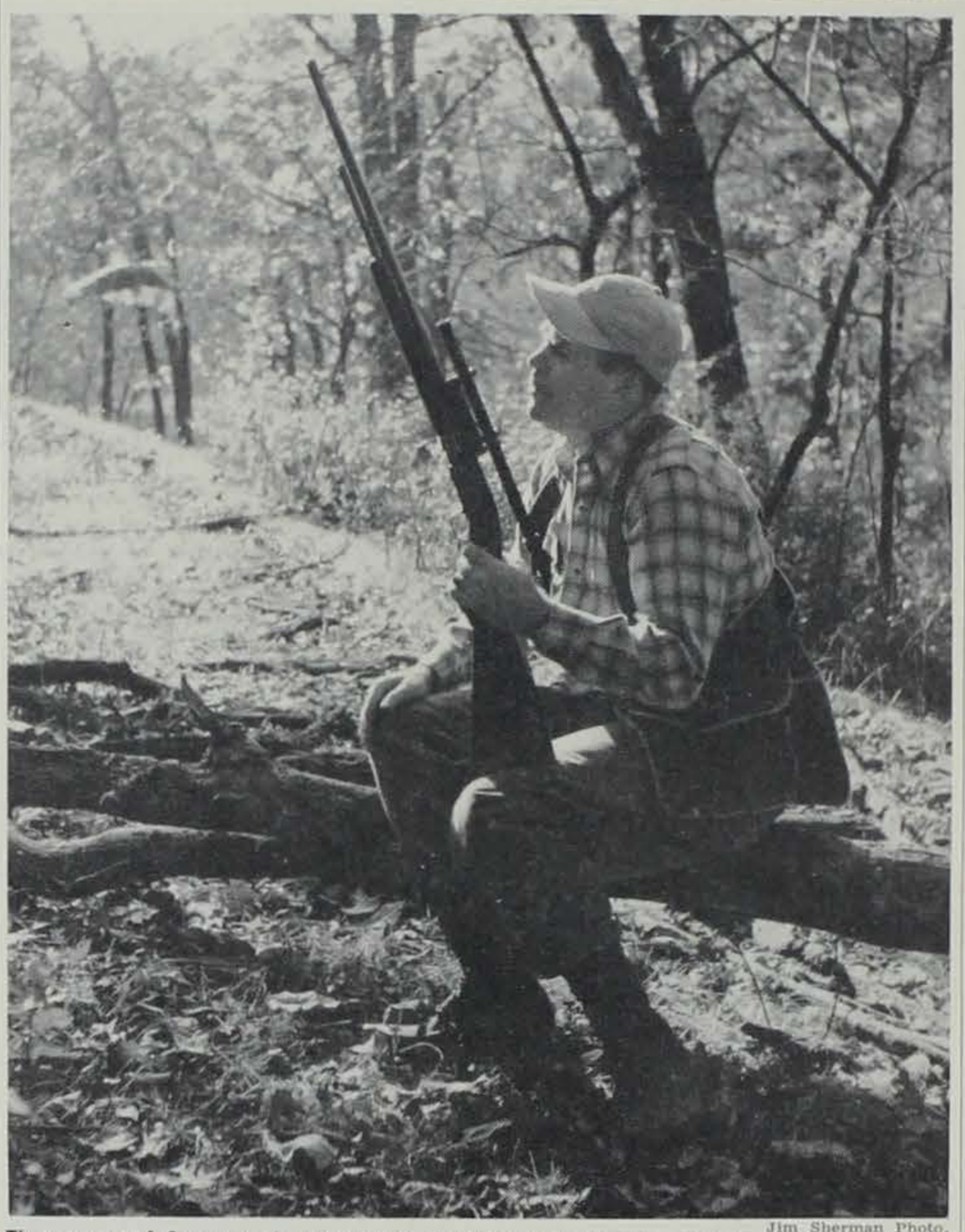
In order to insure removal of fish houses from state-owned lakes before the ice breaks up in the spring, the State Conservation Commission has inaugurated a permit system for all winter fishing houses. The system provides that for all houses privately owned and not used commercially, a permit must be secured from the Commission. A deposit of $5.00 is required for each house. The fee is returned in the spring after the fish house is removed from state-owned property and property disposed of by its owner. The fee is forfeited if the house is not removed by February 20.

On fish houses used for commercial purposes, that is, rented by their owners to other fishermen, a fee of from $10 to $25 on each house is charged, depending on the size of the structure. These fees are not returned.

Permits may be secured from the fish and game conservation officer in the territory, or from the state park conservation officer stationed in the park on the various lakes, or from the State Conservation Commission office, East 7th and Court Avenue, Des Moines.

Winter fishing has become extremely popular on several of the Iowa lakes since the fishing season was extended through February 15 each year. As many as 300 structures have been in use at the same time on West Okoboji Lake where the heaviest winter fishing pressure has occurred.

Jim Sherman Photo.
A permit must be secured from the Conservation Commission for all fish houses used on state-owned lakes during the 1951-52 winter fishing season.



Jim Sherman Photo.
The owners of fine guns do not regard cleaning their firearms as a task, but as a ritual in the conscientious care of a precision instrument.

CLEANING AND CARE OF FIREARMS

Regardless of all that has been written on the cleaning and care of firearms, it still remains one of constant inquiry. It is but natural that the owner of a fine gun should wish to preserve its original factory condition or that a rifleman should endeavor to prolong the life of an accurate barrel. These men do not regard the cleaning of a gun as a penance, but as a ritual in the conscientious care of a precision instrument.

The introduction of non-corrosive priming mixtures some years ago added greatly to the enjoyment of the shooting sport by eliminating the necessity of cleaning the gun after each practice. Where the gun is in more or less constant use with modern smokeless non-corrosive ammunition, it does no harm to defer cleaning until the end of the season or when the gun is to be laid up for any extended period, providing the atmosphere is not excessively humid, in which case a thorough cleaning and the application of a protective grease is recommended without delay.

Many sketchy notions prevail on the cleaning and care of firearms, some of them rather inadequate in method. Briefly and simply, the main requirements are, thorough cleansing of the bore and outer surfaces of the gun, application of a grease film against corrosion and a mere touch of oil on stiff bearing surfaces. More detailed procedure for the various types of firearms follow.

22 Rim Fire Rifles

Always clean barrel from the breech if possible. Remove bolt, breech block or barrel, according to the design of the gun. Pass a number of clean patches soaked with powder solvent through the bore until the last ones come out free of stain. Then several dry patches. If the dry patches show no stain, the bore may be assumed to be clean. Otherwise, repeat with wet and dry patches until no stain appears. Then fill another patch with gun grease and work this back and forth in the bore with short strokes until entire surface of the bore is coated. Clean face of bolt or breech block, or any other parts of the action that have become smudged with gas, smoke or other residue from firing with some solvent on a rag. Wipe these surfaces dry. Re-wipe with oily rag, followed by dry rag. Re-assemble the gun, wipe outside of barrel and other metal surfaces with oily rag, followed by dry rag. The remaining oil film is ample protection against corrosion for a long time. Before using the gun again, push two dry patches through barrel to remove grease and the gun is ready to shoot.

High Power Rifles

First, push a dry brass brush of the same caliber through the barrel from breech to muzzle and completely out, before pulling the brush back from muzzle to breech and completely out. Two strokes each way will generally loosen the residue, so that it can be wiped out with a couple of dry patches. Then proceed to clean the bore and other parts as indicated in previous paragraph.

Revolvers

Solid frame revolvers must be cleaned from the muzzle. Swing out the cylinder and remove any caking of residue or lead that adheres to the breech end of the barrel where it projects through the frame, or to the front face of the cylinder, with an old brass brush flattened for the purpose. Clean each chamber of the cylinder, the barrel, the recoil plate and all smudged surfaces with powder solvent. Then wipe off the solvent and oil the above surfaces, again wiping them practically dry. Over-oiling a revolver makes it a slippery thing to handle. As an emergency weapon it should be ready for instant use. The chambers in the cylinder should be perfectly dry, so that they grip the fired, expanded shell and prevent its being jammed against the recoil plate and interfering with the smooth rotation of the cylinder.

Shotguns

Push a couple of close-fitting dry rags through the barrel. If lead

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Jim Sherman Photo.
From Dakota Point overlook in Stone Park, the broad level valleys of the Missouri and Big Sioux Rivers lie in scenic panorama.

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THE HILLS AND VALLEYS OF STONE PARK

By Charles S. Gwynne
Associate Professor
Department of Geology
Iowa State College

Stone State Park is a forest and grass covered area in the hills of Woodbury County, north of Sioux City. Big Sioux River flows along its western boundary, and from the hilltop above may be seen the wide expanse of bottomland of Missouri and Big Sioux Rivers. The park itself seems to be a jumble of hills and deep valleys. It is visited by thousands of Iowans each year. Indians frequented the area as they traveled up and down the Big Sioux before the white men came. Then as now the region was a favorite haunt of the animals of forest and grassland. The contrast between the rugged area of the park and the flat land to the west is striking. What is the story back of this remarkable region?

Just outside of the park, on the "river road" along the Big Sioux, is the first part of the record which tells the story. It is a high bluff of sandstone and shale, and perhaps even some limestone. This constitutes the bedrock of the area. It is the hardened sediment of the last of the great prehistoric seas that covered western Iowa. In it lived the fish and the shelled life of those times. The fossilized remains of some of these have been found in the excavations that were made along the road. The fish were not very large and they were not of the kind that live in the seas today. But there were reptiles more ferocious than any of the modern reptiles. Some of these shaly and sandy beds are also found in places along the roads in the park.

These same rock formations extend under Sioux City and much of western Iowa. The shale is used in the manufacture of brick and tile at Sioux City and at Sergeant Bluff. Farther north along the Big Sioux deposits of chalk are found with the shale and sandstone. The chalk is of the same sort as that of the "white cliffs of Dover." It was laid down in a sea that existed in the same geologic period.

For millions of years following the withdrawal of the sea, the land was eroded by wind and water, just is it is being eroded today. Then, beginning about a million and a half years ago, came the ice age. The land was covered with a thick sheet of glacial ice extending beyond the Missouri River into Kansas and Nebraska.

The arctic climate did not last so very long as time is reckoned, and the glacier gradually grew smaller and finally melted away. But there were two other later periods when the glaciers came to this part of Iowa. They left a deposit of glacial drift, but in Stone Park, as elsewhere in western Iowa, this is covered by a thick deposit of silt called loess, brought there by the wind. In places it is 100 feet thick.

The glaciers blotted out for a while the drainage systems which they found, but gradually the Missouri and the Big Sioux established their present courses. Now, between them, they have carved out a wide valley. From Dakota Point in the park one can make out the bluffs on the Nebraska side of the river, as much as 17 miles away.

These rivers flow on what is called a flood plain. Because the slope of the plain is so slight, the streams have a sluggish current. They are thus easily diverted from a straight course, and come to have channels that are constantly twisting and turning. The loops are called meanders and the streams are said to meander. The meanders shift, because the river cuts away the bank in the outside of the curve and deposits sediment on the inside. Sometimes the neck across the narrow part of the loop is cut away and the stream straightens its course. Thus, such rivers wander over their flood plains. The valleys are widened whenever the streams get against the valley sides. The flood plains have been kept level by the frequent flooding of the two streams.

Now that we have accounted for the level area of the flood plain, what about the hilly area of Stone Park? Here again, erosion by running water is the answer. The streams flowing from the upland have steep grades. They are easily able to cut into the soft loess and carry it away. Thus, the deep valleys and the ridges between were formed. Loess is noted for its ability to stand in a vertical face. Because of this the valley sides in loess are very steep. The loess of this part of Iowa was blown by the winds from the flood plains of the two rivers. It is a soft, powdery material, and forms a fertile soil.

Thus, we see there is an amazing story back of Stone Park that goes far back of Indian times. In brief, it is a story of spreading seas, and the work of running water, of glaciers and of wind.

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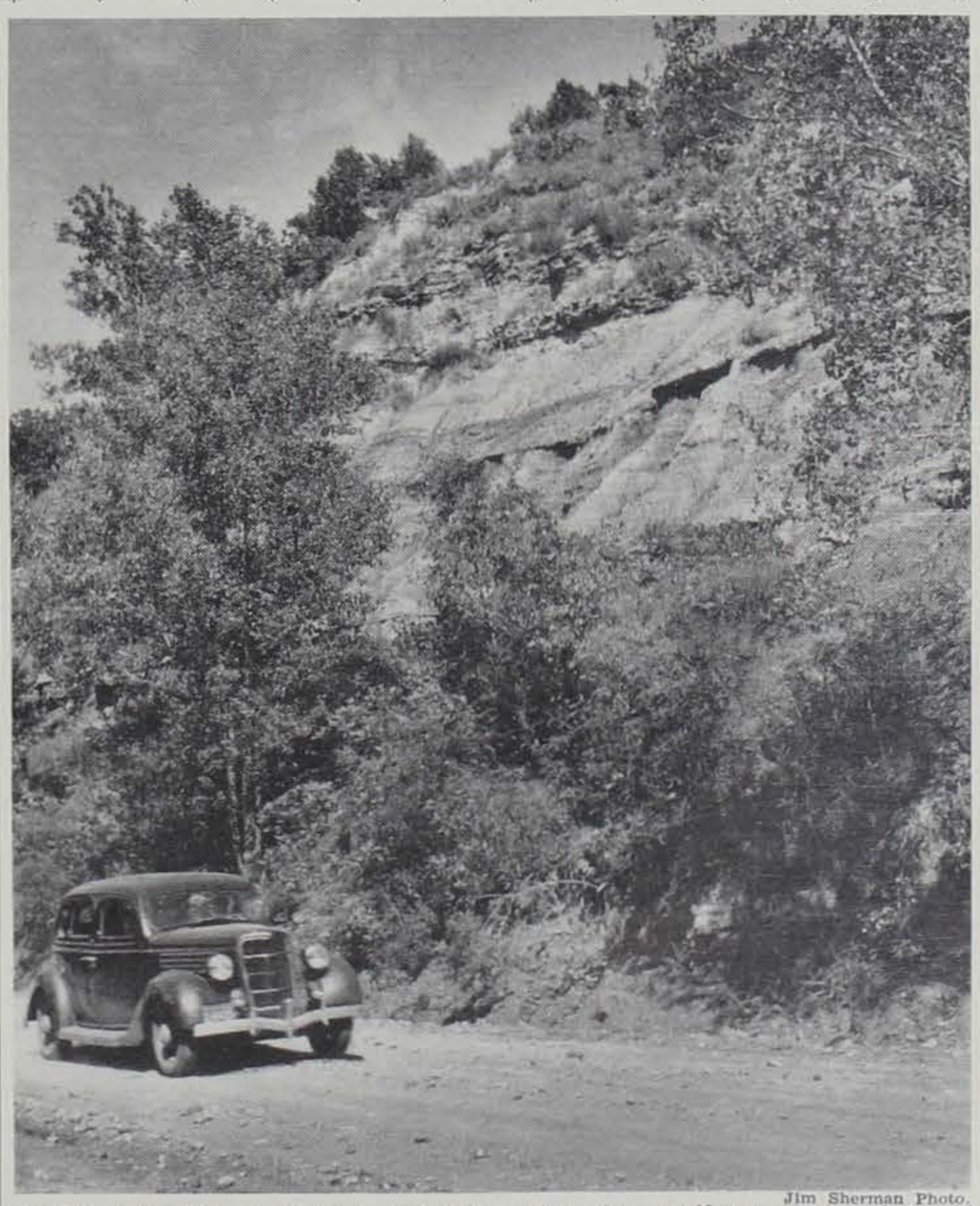

Jim Sherman Photo.
The Big Sioux bluffs of sandstone and shale add to the magnificent scenery of one of the most beautiful parks in Iowa.

"BILLY BASS"

Dr. R. W. Eschmeyer, executive vice-president of the Sport Fishing Institute, has demonstrated his versatility by penning one of the best-written children's books on conservation to come to the attention of the Wildlife Management Institute.

"Billy Bass," the first in a proposed series of juvenile books, already has been released and traces the life history of a largemouth bass from the time it hatches from the egg to its final demise as the biggest bass in the lake. Using language that can be read easily by any bright nine-year-old, Dr. Eschmeyer tells the story simply but interestingly, injecting into the narrative numerous biological facts and conservation ideas that will be found in no other work in the same reader-age bracket.

The books are being published by the Fisherman's Press of Oxford, Ohio. The price is $1.25 a copy with generous discounts for quantity orders from schools or sportsmen's clubs who wish to place a sound basic material in the hands of tomorrow's conservationists.

(Note: Your editor's own nine-year-old, who sometimes shows an alarming lack of affinity for the written word, had to be pried loose from his copy of "Billy Bass" before he would leave it to eat. Moreover, he absorbed completely every one of the conservation messages.)
—*Wildlife Management Institute.*

Over one-fourth of all the money spent for sporting goods in the United States is spent for fishing tackle.

Fish, like mammals, are important in keeping a natural balance between soil, water, plants, and animals. Fish use insect and plant food produced in fertile water.

Jim Sherman Photo.

Conservation officer examining three-year-old multiflora rose fence. More than 5,000 individuals have been provided free multiflora rose seed during 1951 by the Conservation Commission.

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MULTIFLORA ROSE SEED

The Conservation Commission first began the distribution of free multiflora rose seed in the fall of 1950. Ten thousand applications for 11,500 packets, each containing 1,000 seeds, were received and the seeds mailed out to individuals.

From the 10,000 applications we received approximately 600 letters relating experiences in planting this new living fence rose.

About 50 per cent of the 600 writing to us were successful in raising rose seedlings. Of this successful 50 per cent, the average germination was approximately 60 per cent of the seeds planted, that is, from each 1,000 seeds, 600 plants were grown.

Main causes of failure reported were: that the seed was lost, the seed was received too late to plant, planted but did not grow, planted but low germination.

This year the Commission received requests from 5,164 individuals including some who had poor luck in 1951.

To germinate successfully multiflora rose seed must lay over in the soil during the winter before it will germinate in the spring. Anyone who forgets to plant during the fall can still use the seed in the spring if the seed is stratified 45 days before planting.

To stratify seed at home, it should be mixed with damp sand, one part seed to four parts sand, mixed thoroughly and placed in a cardboard container and set in the refrigerator at 36 to 38 degrees temperature 45 days before planting.

Individuals wishing to hold seed over until spring should put it in the ice box March 1 and plant the seeds about April 15. They may be left in the refrigerator longer, but should be planted as soon as they are removed.

HUNTERS ARE A FUNNY LOT

Bob Myers took young Bill Pierson duck hunting with him Saturday morning and reports that Bill got his share of the ducks. We wonder if Bill's mother ever before found it is easy to get Bill up that early.

Comment by several wives leads us to the conclusion that hunters are a funny lot—for they say that the husband who is so-o-o-o-o hard to get up in the morning under everyday conditions will bound out of bed and hustle into his hunting togs long before daylight when he is going hunting.

Have you ever stopped to figure out the cost of each duck shot? We never have because we didn't want to know—we have had a hunch that it would be terrific . . . but it's fun to hunt so we skip the cost and concentrate on the fun.

If we had to work as hard putting up storm windows as we do wading a slough that is one foot of water and two feet deep with mud, we would consider it downright persecution . . . but that clump of slough grass out there ahead looks like such a good duck blind that we do the struggling willingly.

Maybe the average wife considers the hunting fever in the same class as the seasonal madness that affects so many of the denizens of the wild. She must think her husband hasn't progressed much from the days of the cave man.

And then there is the fellow who drives a hundred miles or more to get the same kind of hunting he can find within a few miles of his home. We heard one chap telling of the shooting he had on opening day and when we asked him the size of his bag he said, "Three ducks." And that fellow had driven almost out of the state to find a hunting spot he liked, while lots of the hunters who stayed close to their homes came in with the limit. Distance does lend enchantment (and adds to the cost).—*Humboldt Republican.*

When beavers dive, valves in their ears and nose close to keep out water.

LIKE MILLIONS OF OTHERS

Like millions of other people in this great nation of ours, I like to fish and hunt. I am never happier than when I can "wet a line" in some river, pool or lake, and can find real contentment to the very depths of my soul, sitting beside some duck pond with my boots in slushy slime, and the seat of my pants wet from squatting in some hideout or blind in an oftime futile hope that some mallard may decide to set his wings in my vicinity.

To those who do not enjoy fishing and hunting, it perhaps seems sentimental and maybe silly to go hundreds of miles each year after a few fish at a price which some economist has figured out at some twenty dollars per pound national average (no one has yet figured out the per pound cost of ducks on the same basis), when fish of a like kind can be had at the meat market for a few cents. However, it is not the fish, but just going fishing that counts, and as for myself, whenever anyone speaks those magic words "let's go fishing" to me something stirs within me, and I start trying to figure out the ways and means to take off.

In this feeling I am not alone. As I said above there are millions of us. Fishing and hunting is big business. More than 16 million fishing licenses are being sold annually. Then there are some four million others who are ocean anglers who do not require licenses. There are said to be about three million others who hunt and fish on their own land where no license is needed in some states together with veterans in some states and women in others. Then there are probably eight to ten million children, plus those who fish unlawfully in more secluded places and do not buy licenses. It is safe to say that well over thirty million people in this nation spent at least some time at this great sport. There must be something worthwhile to interest so many people.

From the standpoint of money, fishing and hunting are really big business. There is more money spent on hunting and fishing each year in this country than the total receipts of all the oil stations, three times more than is spent on liquor in this nation, seven times more than is spent in all jewelry stores. Sportsmen spend for fishing and hunting more than was paid for all the cattle and hogs marketed annually in this nation.

The yearly expenditure, according to the best available figures, for these outdoor sports will be close to nine and a half billion for the year. This compared to two and a half billion spent for liquor, and less than four billion dollars paid to farmers for hogs.

By comparison to baseball, golf or horse races, the fishing and hunting get little or no comment from the press or radio, but purely from the standpoint of the numbers who participate, and the amount of money expended, the outdoor sportsman is clear out in a class by himself.

Perhaps if we all understood these figures better we would be less critical of the meager amounts spent on conservation and preservation of wildlife in this nation. It is something worth thinking about.

Personally, I think we should do everything possible to keep our rivers and lakes as pure as possible, and should give every protection to wild game.—*The Observer, Perry Chief.*

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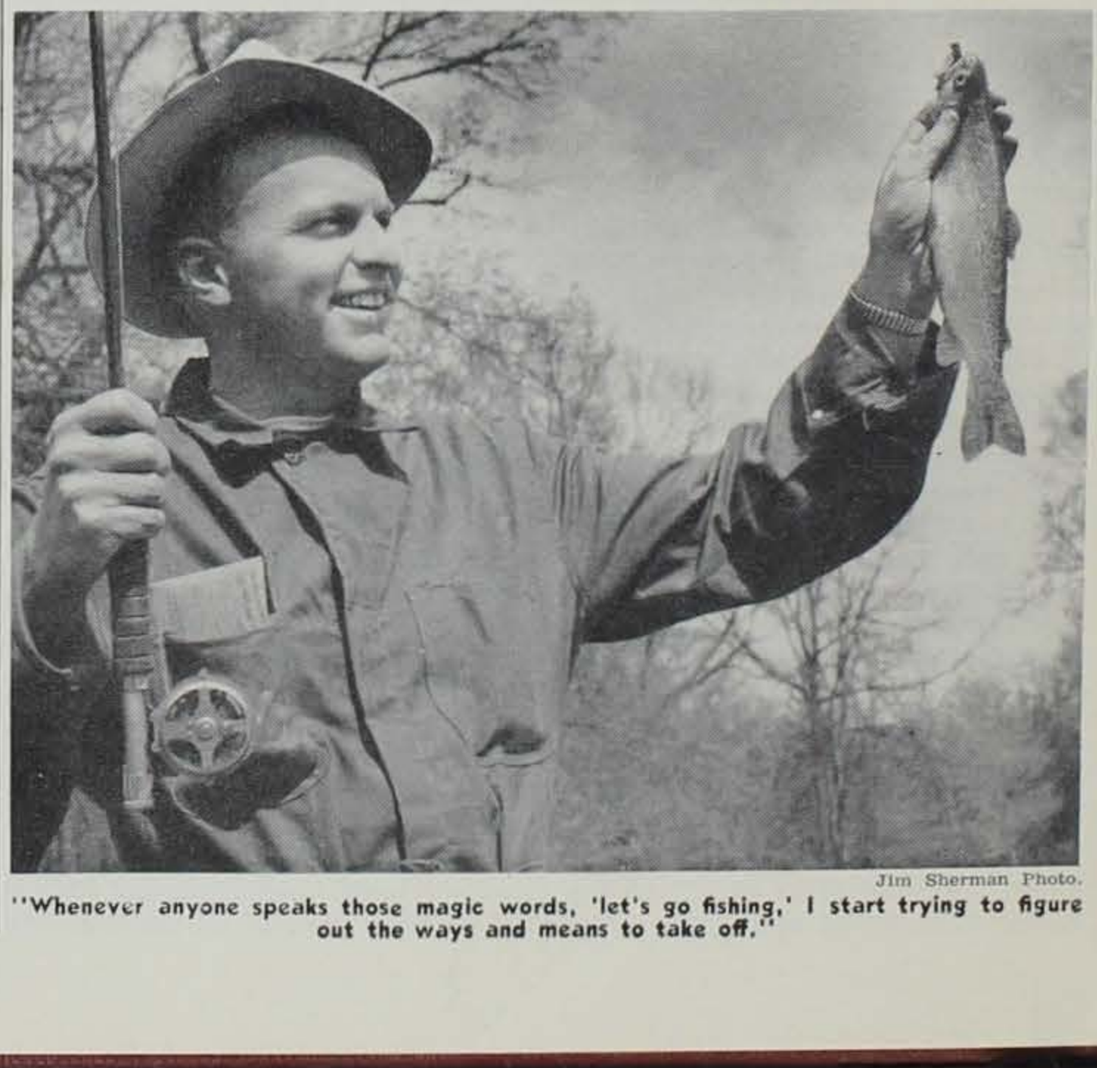

Jim Sherman Photo.

"Whenever anyone speaks those magic words, 'let's go fishing,' I start trying to figure out the ways and means to take off."

Jim Sherman Photo.
Deer have become abundant in many localities and are a hazard on the highways in every county in the state.

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DEER WRECKS CAR

Tom Mewhirter of Red Oak is out quite a few "bucks," while residents of homes for the aged in Atlantic will pass the buck as the result of a deer leaping into the Red Oak man's car on primary 48 near the Nishnabotna River bridge north of Griswold recently. Mewhirter's 1951 Studebaker was badly damaged as the deer, a 95-pound buck, leaped into the front of the machine and then fell under its wheels.

Mr. Mewhirter called the Iowa Highway Patrol, which turned the deer over to Frank Tucker, State Conservation Officer here. The deer was dressed at the Atlantic locker plant, and the meat will be given to homes for the aged. One side of the carcass was damaged when the wheels went over the deer. — *Atlantic News Telegraph.*

HIGHER FINES FOR ILLEGAL FISHING?

Fines of $100 each were paid recently by two Ottumwa men in Justice of the Peace Court after 450 catfish were found in their possession! We're inclined to agree with a man at Wayland, Iowa, who thought the fines did not make "good sense." As he put it, "The 450 catfish should more than average one pound each when dressed, selling at 75 cents a pound or a total of $337.50."

He added, "These 450 fish were taken out of the river (Skunk) and will make poor fishing for the legal fisherman. I would estimate there has been $5,000 damage done to parties who use pole and line," AND, "At the rate these men were fined they could be picked up twice a week and still make easy money." This makes the fines seem illogical, but we do not agree with the gentleman that we should "pose" a law in Iowa which would cost a person with more fish than his legal limit $100 for every illegal fish in his possession. Whether a fisherman has one or 100 fish more than the legal limit, he has violated the law; however, the extent of violation should determine the fine. In the above case, the ratio of fish to fine was slightly unbalanced.—*Spirit Lake Beacon.*

In primitive times gray squirrels seem to have been great fall travelers, migrating by the thousands, generally in an easterly or southerly direction.

The broad tail of the beaver is not used as a trowel, nor is it used to carry materials.

Jumping mice can easily leap 5 or 6 feet.

Muskrats fight savagely when surprised out of water.

The flesh of the muskrat has always been eaten by Indians.

The gliding flight of a flying squirrel seldom exceeds 100 feet.

"HUNTING LUCK"— WHAT'S THAT?

By Henry P. Davis

Hunting luck is a minus quantity and the fellow who has the most *success* in hunting is the fellow who works the hardest at it.

Hunting is pretty much like anything else. We get just about what we put into it. If we're out to enjoy an outing and get the fullest benefit of the many, many facets of the outdoors in its varied moods, we can let the game bag become incidental and take our chances with "hunter's luck." This is probably the only way we can really get the full measure of pleasure from a trip afield, for there is a lot more to be found in hunting and fishing than just getting game or catching fish.

But if we're out after "meat in the pot," trusting to "hunter's luck" will seldom grease the skillet. To bag game or catch fish we must not only have a certain amount of know-how but we must also put out a considerable amount of effort in making that know-how work. I used to hunt quail with an older friend who seemed to be just in the right shooting position every time a Bob White flushed. If game was walked up, he was invariably the one who flushed it. I called him "lucky" until observation taught me that he was **working** at the job of hunting every minute in the field. He was a keen student of wildlife habits, knew what kind of cover to hunt at what time of day, watched the shifting of the wind, etc. His remarkable "luck" was merely an energetic application of knowledge gained through hunting experience.

Of course, hard work afield will not alone fill the game bag. A supply of game has to be there first. But the interested and energetic hunter will generally do something about seeing that proper habitat conditions prevail on the hunting grounds he uses regularly.

A recent creel census on the fresh waters of the state of Maryland, conducted cooperatively by the Department of Game and Inland Fish and the Department of Research and Education, shows that in that state 10 per cent of the fishermen catch 46 per cent of the fish. And 53 per cent of the fishermen catch the remaining 54 per cent of the fish. What happens to the other 37 per cent of the fishermen, you might ask. Well, according to the census, they simply catch NO fish. And that is what is generally known as "fisherman's luck!"

I don't know how closely these figures come to covering the game harvesting situation, but I do not think they would be far off the beam if so applied.

In explaining the figures of the census, Harold J. Elser, biologist, Department of Research and Education, said: "In the world of economics, a few people have large incomes, a lot of people have moderate incomes and many more are in the low income bracket. In the world of fishing, a few of the anglers catch a lot of fish, a much larger percentage catches a moderate amount of fish and another large group catches nothing. Although the fisheries manager would like to spread the catch more evenly, there is little he can do about it. The people in the 'catch nothing' group are either not interested in anything but the hard-to-catch fish or are those people who do not have a sufficient amount of know-how, luck or patience."—Remington News Letter.

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Jim Sherman Photo.
"Luck" in hunting comes to those individuals who have know-how and who put considerable effort into making that know-how work.

Jim Sherman Photo.
More hunting trips have been spoiled by foot troubles than any other single cause. The wise woodsman's first concern is comfortable foot gear.

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Komfort . . .

(Continued from page 185)

wool socks are too heavy, but in them his feet will be so much more comfortable, (even on the hottest day) and he can hike so much farther, easier and efficiently, that he'll be converted for life after one trip, contrasted with the blisters, cold, chaffed, sweaty feet and other ills induced by his thin cotton socks.

When you try on a pair of hunting shoes at your dealers be sure to take along a pair of heavy wool socks, put them on over your ordinary socks, and then size up your footgear accordingly. If everything feels comfortable, not too snug, not too loose, with your civilian socks under your wool socks, your shoes are about just right. Judge your foot comfort by standing and taking a few steps, not when just sitting. The thin socks inside the outer pair will just be enough to make allowance for the slight swelling which all sustained tramping will bring to your feet.

Choose medium high top hunting or hiking boots. "Long tops" can become terrifically uncomfortable, especially when you are seated in a boat for hours, as they bind the upper calf. Up to nine inch tops are high enough for all walking purposes and anything beyond that is a mistake, unless you have to wear higher boots in a snake-infested country.

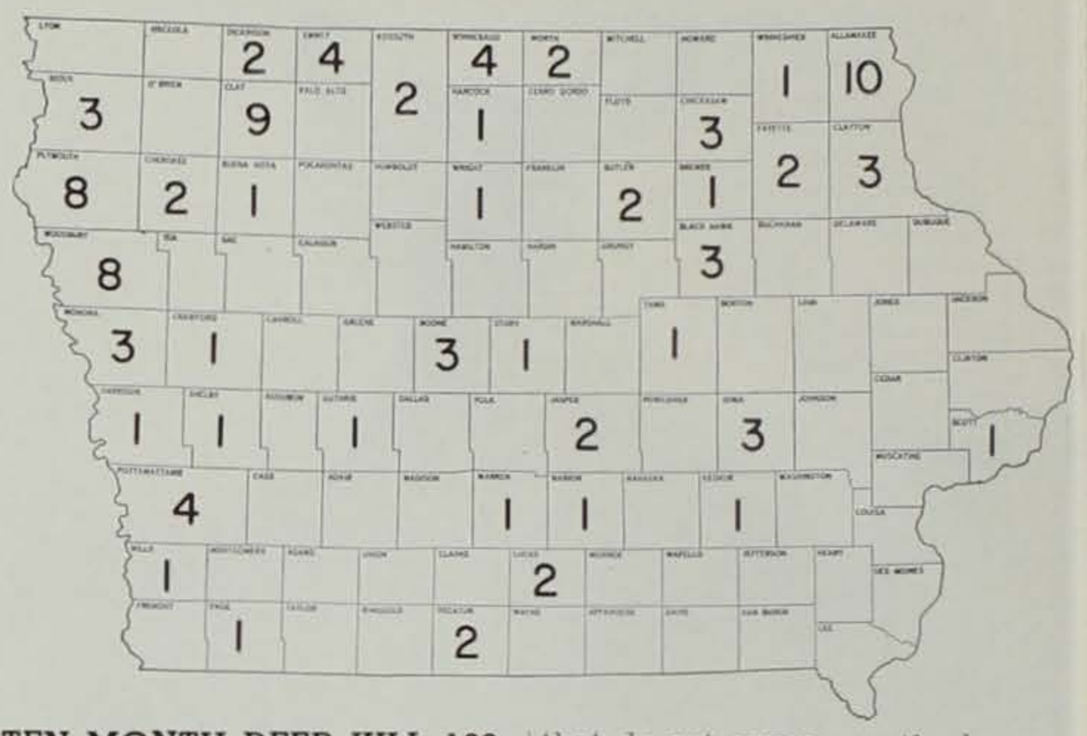
The soles should be heavy enough to protect your city-soft feet thoroughly from rocks, roots, etc. Too large shoes cause blisters by friction, but too large shoes are better than too small, because you can remedy looseness by wearing a thin pair of wool socks under your heavy ones, but cramping shoes you never can make comfortable. An innersole inserted (you can make one out of an old felt hat) in shoes will often remedy sloppy fit. Shoes should be full forward but absolutely snug at the heel. Otherwise you must lace them too tight across the instep.

Clean feet and clean socks make such a tremendous difference in foot comfort on short trips of just a few hours. The removal of the by-products of perspiration by daily washing both feet and socks prevents a lot of foot discomfort, and lessen chances of infection in cuts or sudden blisters that break. If you have to choose, where time is limited, on a hurry-up hunting or fishing outing between clean feet and clean socks, take the clean socks! Soft clean socks are a constant joy for comfort and morale.

Blisters and callouses and corns can nullify all the time and money you've spent for good hunting and fishing equipment, transportation, licenses, etc., and tired aching feet will smash your whole trip as flat as the proverbial Dutchman's instep. You would be wise, before going on your trip, if your corns and callouses (if you have 'em) are in bad shape, to take a few treatments from a good chiropodist (foot doctor). This will cost little compared to your increased and sure enjoyment.

Blisters can be forestalled and prevented if you put a strip of adhesive tape on the irritated spot the minute you notice it. Blisters already developed should be opened at one edge with a needle, pin, or sharp point of knife sterilized in a match flame. After the water is pressed out a thin layer of surgical gauze held in place by adhesive tape should be placed directly on the blister. Avoid soaking feet in hot water as this makes them tender. Be sure any foot powder you use is toughening instead of softening. If you like rubber-bottoms, but rubber doesn't like your feet you can avoid all its discomforts by using a leather innersole. This also takes up many a shock and bruise. Frequently when there's roughness at some spot, on a seam, or at the toe, or sole or heel, you can pound and smooth it down with a rounded stone, placed on it while you tap the outside of the shoe over the spot.

DEER KILL JANUARY-OCTOBER 1951



TEN MONTH DEER KILL 103

Conservation officers' reports show that 103 deer are known to have been killed during the first 10 months of 1951. Deer kills during this period have been reported from 40 of the 99 counties. Deer are present in every county in the state.

The highest deer kill, 10, has occurred in Allamakee County in northeast Iowa, with nine reported from Clay, and eight each from Plymouth and Woodbury counties in northwest Iowa.

Sixty-six deer have been killed by cars, 15 by miscellaneous accidents, and seven by dogs. Fifteen are known to have been killed by illegal hunting and it is the opinion of conservation officials that poaching has accounted for many more that do not appear on the known-to-be-killed list.

Usually car-deer accidents occur from dusk to midnight and drivers report the accidents come without warning. They expressively describe their experience with the words, "flash, crash."

Iowa's deer population during the past 10 years has had a mushroom growth. In addition to causing heavy automobile damage, in several section deer have caused a great deal of crop damage. Unquestionably the state of Iowa must soon face the problem of legal deer control.

The tips of a snake's tongue are not poison fangs. The tongue is a sense organ of touch, smell, and perhaps hearing.

We have four kinds of toads, four kinds of tree frogs, and five other frogs in Iowa.

Muzzle . . .

(Continued from page 185)

in Iowa gave generously of their space to reproduce posters and tell their readers about the importance of safe gun handling. Magazines and radio joined with news presses to make the gun safety campaign one of the most publicized events of the year in recreation and safety.

Although the week of November 11-18 was officially declared "Gun Safety Week" by Harry Linn, chairman of the Gun Safety Week Committee, the campaign actually began on November 4. During the two-week period a force of 600 volunteer speakers led by local State Conservation Officers gave about 340 demonstrations of safe gun handling to schools, clubs, Boy Scouts, and other groups. Attendance at these demonstrations totaled nearly 50,000. In addition, speakers gave talks on gun safety to 135 groups, with a total attendance of about 55,000. Gun safety movies were shown at over 85 meetings, with an attendance of about 10,000. State Conservation Officers and local speakers participated in 45 radio programs stressing gun safety. Seven thousand large colored gun safety posters were tacked up by groups and individuals. Over 100,000 bulletins, folders and other pieces of gun safety literature were distributed at meetings and to schools.

Incomplete reports indicate that there were about nine or ten non-fatal gun accidents during the period of November 4-18. In view of the fact that the opening of the 1951 pheasant season coincided with Gun Safety Week, and that hunting on most other game species was also at its height, some accidents could be expected. The fact remains that fatal accidents were reduced to zero during this period which ordinarily claims the lives of four or five Iowa hunters.

There has been a remarkable decrease in the number of deaths from gunshot wounds in Iowa during the two years when gun safety campaigns have been conducted. From 1940 through 1950 an average of 40 persons died each year in Iowa from this cause. In 1950 the total for the year dropped to 21. During the first nine months of 1951 only 13 persons died of gunshot wounds.

Jim Sherman Photo.
Over 6,500,000 gizzard shad were removed from Black Hawk Lake in a two-month period. They were utilized for hog feed and field fertilizer.

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Gizzard Shad . . .

(Continued from page 185)

virgin waters. Good fishing continued for five or six years until nature upset the balance.

The fertility of Black Hawk Lake was apparent to fisheries technicians and laymen alike. The lake always produced a heavy bloom of green algae, which occurs in rich lakes. This same fertility which was ideal for algae also proved to be ideal habitat for gizzard shad.

Test netting in 1945 revealed the first recorded shad as being in the lake following the complete freeze-out of 1934. Phenomenal bullhead, bluegill, crappie, yellow bass, and largemouth bass catches were made during the period between 1941 and 1947. After the mysterious introduction of shad in 1945, the shad population remained low and did not immediately upset the balance of the lake.

In 1947 a tremendous flood from the Boyer River actually poured through Black Hawk Lake and out the outlet into the Raccoon River. Black Hawk Lake lies on the crest of the Missouri River watershed and the Mississippi River watershed. Most fisheries technicians believe that as a result of this high water a tremendous gizzard shad population found a happy home in Black Hawk Lake. Following the 1947 flood, the obnoxious gizzard shad population in Black Hawk Lake began to be a recognized nuisance by fish managers, as well as anglers themselves.

Gizzard shad are not desirable as game fish, provide no recreation for the angler, occupy space and consume foods needed by desirable fish for normal growth and reproduction. In addition to this competition, these same shad, in the fry, fingerling and sub-adult stages, provide excellent forage for predator type fish such as largemouth bass, walleyed pike and northern pike, and during certain stages are forage fish for crappies. Thus, the presence of shad in water limits the mathematical chance of catching one of these predator type fish to almost zero. The shad population in Black Hawk Lake progressively developed and as this development occurred, a noticeable decline in bottom foods occurred in Black Hawk Lake. The shad consume all types of foods, from microscopic Plankton forms up to insects and bottom foods which are so essential to the development of all young fish. In spite of heavy juvenile bullhead stocking, the famous bullhead fishing in Black Hawk Lake continued to decline. Creel census reports also indicated that the angling success for crappies, largemouth bass and bluegills was likewise on the decline. Successful reproduction for Black Hawk fishes was limited to the prolific shad. They alone found conditions right, and by sheer weight of numbers they dominated the reproductive environment.

In the fall of 1950 an intensive shad removal program was inaugurated by the Fisheries Section of the State Conservation Commission. In the fall and winter of 1950-51, 10,000 adult shad were removed by seine. Young-of-the-year shad were too small to catch in the gear available. During 1950 and 1951, tremendous numbers of young-of-the year shad winter-killed. Spring seining in 1951 produced additional adult shad.

The stocking program for the lake during 1951 was designed basically to work on the residue of the young shad population of 1950 in order that the bottom foods and fauna might be built up to the point where it would support natural reproduction of desirable fish. Largemouth bass, walleyed pike, and northern pike were stocked to provide the predator action necessary to hold this shad population down. Only adult bullheads were stocked for immediate angling.

The fall of 1951 produced amazing proof of the tremendous reproductive capacity of fish and shad in particular. In spite of the removal of adult shad by net and the 1950 winter kills of young-of-the-year shad, tremendous poundages of shad were taken by net during the fall of 1951. As soon as the water cooled to the point where the warm water loving shad would be driven to the deeper water, small mesh net was employed for the first time to remove not only the adults but young-of-the-year shad as well. According to rough fish removal records during October and November, 1951, 189,303 pounds of shad were removed from Black Hawk Lake, only 3,000 pounds of which were adult shad. The quick early freeze-up occurring in November, 1951 drove the shad from the shallow waters to the deeper dredged waters where they were effectively, for the first time, seined with small mesh net. These fish averaged thirty-five fish per pound. The staggering total of approximately six and one-half million fish were removed from this 900-acre lake. Simple arithmetic gives the figure of 7,360 young shad per acre removed during the fall of 1951.

There are six and one-half million fish taken from these 900 acres of water which will not be present next spring to compete for the insects and fauna which breed and live and die in, on, or near the bottom of the lake. This will give a seed stock of these same bottom food organisms an opportunity to take hold, reproduce and provide food necessary to the development of fry and fingerling bullheads, crappie, bluegill and largemouth bass, as well as walleyed pike and northern pike which may successfully reproduce in Black Hawk Lake. (NOTE: Carefully controlled research studies on farm ponds have produced 200 catchable fish per acre of water.) The removal of 7,360 obnoxious fish per acre of water will help to provide "lebensraum" (living room) for desirable fish and the foods which desirable fish need.

The shad population in Black

(Continued on page 192)

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Jim Sherman Photo.
In rough fish removal operations in Black Hawk Lake, 7,360 young shad per acre were removed.

Jim Sherman Photo.

How many fathers take a sincere interest in teaching their sons gun care, gun safety, and good sportsmanship?

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IS DAD TOO BUSY?

We think the greatest fault for lack of clean sportsman-like hunting can be summed up in a few words—namely, "How many men who are hunters today learned to hunt with their fathers? How many fathers take a sincere interest in teaching their sons gun care, gun safety, good sportsmanship?

To a boy there is only one man whose example is his ideal—that man is his dad. Have we dads, in the past couple generations, been so busy making a living that we have overlooked some of the many important features of being a dad? You will note we did not say father. There is a difference. Many men make wonderful fathers that can't qualify as a dad.

But for our money the father who can enjoy taking his son with him and showing him how and when to hunt and fish is a little more than a father. And definitely he is the happiest man in the world. His boy won't call him father, he'll say, "Hey, dad."—*Russell Tribune.*

Fish hatcheries a la the ancient Chinese were novel things. A hen's egg was emptied of its contents and filled with the spawn of fish and sealed. The egg was then incubated by a hen for several days. The embryos were then placed in pans of water, kept warmed and fed appropriate food until they reached a stocking size.

Iowa is the heart of a great north-south bird highway. During the fall and spring migration, as many as a billion birds may visit us or fly over our state.

DEER ON HIGHWAY

Two deer recently have been hit by cars in Winnebago County. Saturday night one was hit in Mount Valley Township, and Monday night another was hit in Linden Township. Drivers are warned to drive cautiously at night, as these animals constitute a danger on the highway. Meat from killed deer must be given to charitable or tax-supported institutions.—*Lake Mills Graphic.*

Gizzard Shad . . .

(Continued from page 191)

Hawk Lake will continue to remain a threat to the success of Black Hawk as a fishing lake and it will require regular control measures to keep shad from gaining ascendancy when favorable conditions occur. Predator type fish stocking will continue. Only adult bullheads will be stocked because of the food shortage until bottom foods recuperate to the point where they will support young-of-the-year fish of all species. Forage type fish such as bluegill, crappies and sunfish will be controlled so that predaters will have to eat shad young-of-the-year. With help, nature will hurry a "bloom" of desirable fish.

We look to the future with confidence and expect Black Hawk Lake to return to normal good fishing as the result of continuous intensive rough fish control, fish stocking, adult bullhead stocking, and nature's help.

MULTIFLORA ROSE—BIG BEAR BARRIER?

Kodiak, Alaska
November 19, 1951

State Conservation Commission
East 7th and Court
Des Moines, Iowa
Dear Sirs:

I am from Elgin, Iowa, and am now in the Navy and stationed on Kodiak Island, Alaska. I hunt and fish with a native that has a lease on an adjoining island and wants to plant a shrub fence that will keep the Kodiak bears from his stock. They are very large and I think that the multiflora rose would be the only living fence that would hold them back. We did some work with this plant in the sportsman's club I belonged to before I joined up and I would like to have some literature on it if you have it available, or a possible source of information if you have it. If there is a charge would you please send it C.O.D. or send the receipt. I will gladly send you the price by return mail.

The weather here is very mild, seldom reaching below zero so I thought the rose could thrive here. It would be appreciated if you would help us in this matter.

Sincerely yours,
R. L. Hanson, Sn.
Navy 127, Box 19, c/o F.P.M.
Seattle 99, Washington

* * *

November 27, 1951

Mr. Bob Hanson, Sn.
Navy 127, Box 19, c/o F.P.M.
Seattle 99, Washington
Dear Mr. Hanson:

I was pleased to receive your letter of November 19 in which you wonder about the use of multiflora rose seed in Kodiak Island for a fence to keep out bears. I am not familiar with the growing season in Alaska or on the islands near there. Here in Iowa multiflora rose grows better in the southern part of the state than it does in the northern part, because of the difference in the length of the growing season.

In Missouri I have seen multiflora rose plants 12 feet high. In northern and central Iowa 7 feet high is the limit. These fences are very thick and very thorny and will turn all kinds of livestock, once they become established. However, the great Kodiak bear, which I understand is the largest carnivorous animal on earth, is another matter.

Nevertheless, under separate cover I am sending you information on multiflora rose and two packets of seeds containing 1,000 in each packet, along with planting instructions.

I will be glad to hear from you on this subject from time to time for we are gathering as much information on multiflora rose as we possibly can, in order that we may answer the multitude of questions we receive. If you are transferred from this station I would appreciate hearing from the one who takes over your project.

Yours very truly,
Paul Leaverton
Superintendent of Game
State Conservation Comm.
Des Moines, Iowa

Firearms . . .

(Continued from page 186)

streaks show, remove them with a brass cleaner. Then follow the usual procedure in cleaning with solvent and applying oil or grease against corrosion. Before using the gun again wipe out the barrels. This will insure removal of any rags or cleaning tools that may have been inadvertently left in the barrel from previous cleaning, which is the cause of many bulged or burst barrels.

Guns in the Showroom

Periodic inspection, oiling and wiping off of firearms is the rule in all first-class salesrooms. Before handing a gun to a customer, it should be carefully wiped with a clean dry cloth to avoid staining his gloves or clothes. When returning same to gun cabinet, gun should be wiped with oily cloth to remove traces of perspiration and wiped dry with clean cloth.

Guns in Transportation

Guns for shipment should be liberally coated with grease to protect them against exposure to rainy conditions and leaky boxcars. Factory shipments are amply protected in this respect.

Powder Solvents

Many regard these as general purpose gun oils—for rust prevention as well as cleaning. Their specific purpose is to dissolve combustion residues in the bore, action or receiver, and clean those surfaces for the application of a good gun oil or grease for rust prevention. They are poor rust preventatives as they drain off and leave the steel unprotected. An excess of solvent in a loaded revolver will eventually break down the oil-proof compostion and deteriorate the ammunition.

Brass Brushes

Should be used dry for a competent scouring effect to remove rust, lead, metal fouling or caking. Use appropriate size for each caliber. To avoid breaking down the web, push the brush completely through and out of the barrel before drawing it back. Do not attempt to reverse the brush while in the barrel as this will ruin it.

Oiling

The tendency is to over-oil firearms. An excess of oil in the barrel will drain down into the action and magazine as it stands in the gun cabinet, coating the cartridges when loaded and causing wild shots when fired. Where friction surfaces on the bolt or action require oiling, a very light film of oil is sufficient. —*Remington Arms Company, Inc.*