IOWA CONSERVATIONIST

Volume 14 JANUARY, 1955 Number 1

THE 1954 IOWA DEER SEASON

MAKING CHAMPION DECOYS

For every duck decoy in America, there has been about a dozen articles written about making them. Each article has had a better product to sell than the ones before.

This one should be the ultimate. If decoys get any better than Jack Musgrove's they should be banned by law, for Musgrove's blocks have everything but the quack.

These decoys may frighten some home craftsmen, but they aren't as difficult as they look. Taken a step at a time, an amateur woodworker can build one in a few days. They *do* take time, but fewer of these decoys are needed in a set, and only five of the mallards will give good results.

The Wood

Sugar pine, western red cedar, white cedar, white pine or redwood may be used. Sugar pine and western red cedar are preferred. If possible, obtain wood in blocks 8 inches wide and 2½ or 3 inches thick. Blocks can be built up by gluing and clamping ¾ inch boards.

On a block 13 inches long, 8 inches wide and 3 inches thick, trace the pattern shown for bluebills, mallards or canvasbacks. Saw out with bandsaw or cut with drawknife. The above woods work very easily, giving crisp, sharp-edged cuts.

Roughing It

With a drawknife, chop out the area under the tail. Round off the upper sides of the body and the front of the body. Take off plenty of wood . . . the most common failing in homemade "dekes" is too much bulk. This is all very rough cutting; the fine details will come later.

With a very sharp ½ inch wood chisel, cut a v-shaped channel down the center of the back. This is the groove formed by the inner edges of the folded wings, and is an important feature. About 2½

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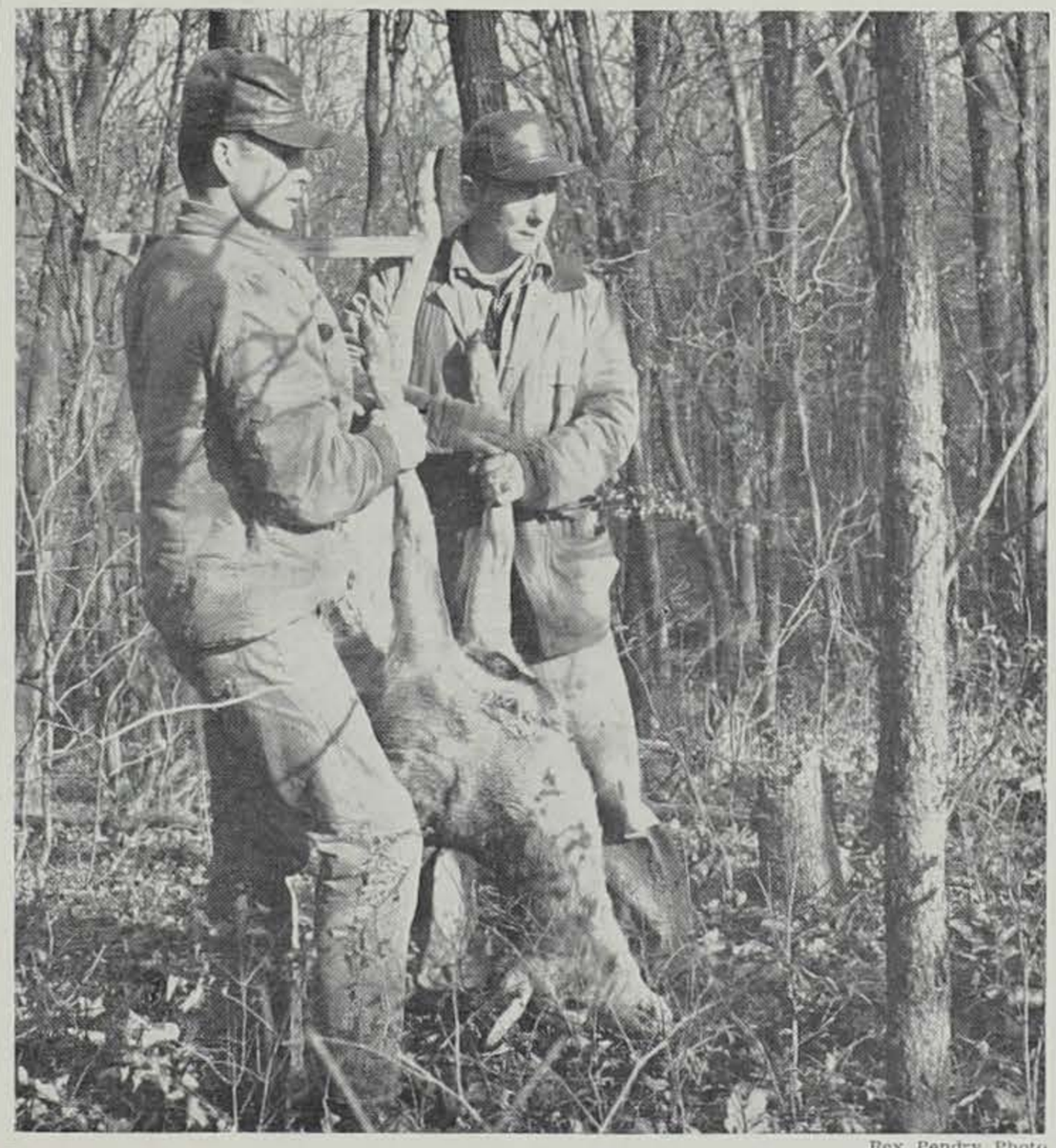

Rex Pendry Photo

Toting out the deer is the hard part of the hunt. These hunters found it worthwhile . . . the venison tasted like fine young beef.

THE ECHO VALLEY STATE PARK

Prof. Charles S. Gwynne

Department of Geology
Iowa State College

The Echo Valley State Park region, according to the county soil survey map of 1922, used to be called the Devil's Backbone. One can understand why, when one sees the line of rocky cliffs that fringe the streams in the park. According to one writer there was a triple echo of even minor sounds in the vicinity of the cliffs, so they came to be called Echo Bluffs. Now it is Echo Valley.

The park is an area of 100 acres or so a few miles southeast of West Union in north-central Fayette County. It lies along Glover and Otter Creeks. Glover Creek flows into the Turkey River about eight miles east of the park.

The cliffs of the park are part of the same series of dolomite or dolomitic limestone beds, the Niagaran, that are so prominent along the valleys throughout much of Fayette and neighboring countries to the south and southeast. The material of the Niagaran beds was deposited as a limey sediment in an ancient sea. It was later somewhat altered by the sea water and has since hardened to a rock. It contains much chert, a variety of quartz. This weathers white, and is very noticeable in the beds in the park. These beds are the very upper part of tse Niagaran series, and the park is near the

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Plenty of deer were seen by Iowa hunters during the 1954 deer season, and early reports indicate that the hunting was good. By late December a total of 5,938 hunters' report cards had been received reporting a kill of 2,367 deer. Of these, 1,796 deer had been killed by licensed hunters, and 571 by farmers hunting on their own property.

The eight checking stations set up by the Conservation Commission throughout the state received 306 deer during the three-day season, or an average of about 100 deer per day. This was about the same as in 1953, when 521 deer were examined at eight checking stations during last year's five-day season.

The biggest buck brought into a checking station and officially checked by Conservation Commission biologists was one at Pilot Knob, which weighed 215 pounds dressed or about 268 pounds live weight. The second biggest buck on this year's records was checked at Decorah, and weighed 205 pounds dressed or a live weight of about 256 pounds.

Total license sales for the 1954 deer season were 3,880, as compared to the 1953 figure of 3,782. A total of 3,374 farmers' deer hunting certificates were issued this year but no comparison could be made to the number of farmers hunting last year because such certificates were not then required.

The 1954 deer season was marred with one shooting accident. A Hinton man and his son were hunting in Plymouth County on the last day of the deer season when a deer jumped between them. The father was in heavy cover about 150 yards away, unseen by the younger man, and three shots were fired at the deer. One of the 12-gauge rifled slugs struck the father below the ribs and at last reports he was in critical condition in a Sioux City hospital. There were no shooting accidents reported to the Conservation Commission during the 1953 deer season.

The greatest concentration of

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Iowa Conservationist
Published Monthly by the
IOWA CONSERVATION COMMISSION
East 7th and Court—Des Moines, Iowa
(No Rights Reserved)
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CIRCULATION THIS ISSUE.....52,000
Subscription rate .....40c a year
Three years $1.00
Entered as second class matter at the post office in Des Moines, Iowa, September 22, 1947, under the Act of March 24, 1912.
Subscriptions received at Conservation Commission, East Seventh Street and Court Avenue, Des Moines 9, Iowa. Send cash, check or money order.

MISSISSIPPI TREASURE TROVE

Old Man River is a long way from Suva and the Spice Islands of the western Pacific. There's a lot of difference between a Polynesian skin diver and a Mississippi fisherman, but the places and men have something in common—fine pearls.

One night in 1907, a Harper's Ferry, Iowa, bartender sent an urgent message across the Mississippi.

A commercial fisherman was in his saloon, sopping up refreshments and showing his friends a fine pearl that he had found that day while clam fishing. The price of his pearl was dropping with the contents of his bottle, until he was offering the gem for less than $500. The bartender's message was to John Peacock, a pearl buyer in Prairie du Chien, begging Peacock to appraise the pearl before the fisherman gyped himself out of a young fortune.

Making his first appraisal by lantern light, Peacock later offered the fisherman $1,000 for the pearl. "I sold that pearl to a Chicago dealer for $5,000," Peacock recalls, "but he sold it to a New York retailer for $10,000!"

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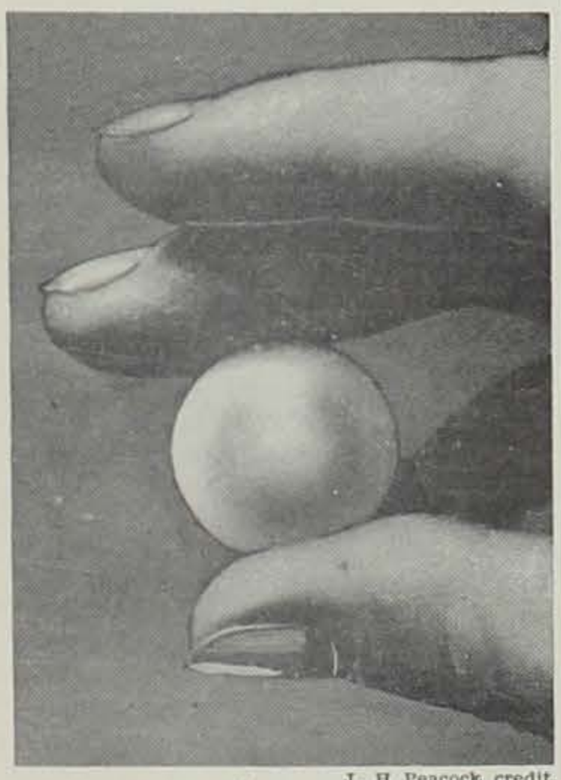

J. H. Peacock credit.
The Genoa Pearl. Nearly an inch in diameter, it was too big for a lady's hand.

An old time clammer and his crowfoot bar. The little hooks catch in opened clams, may bring up a fabulous pearl.

* * * * * * * * * * *

Poor pearls and slugs (misshapen pearls) are often found in fresh water mussels or "clams," but a perfect gem is rare. The men who usually find them are the commercial fishermen of the Mississippi River, fishing with "crowfoot bars" for the clamshell used in Muscatine's button industry. These crowfoot bars, beams with small grappling hooks suspended from them, are dragged along the river bottom. The points of the hooks catch in the opened shells of feeding clams, the clam snaps shut and literally catches himself.

The mollusks are steamed at the end of the day to remove the meat, which is discarded, sold for fish bait, or used as livestock or poultry feed. The shell itself is sold by the ton to dealers in Muscatine and other button centers. The shell is a clammer's bread and butter—a pearl is a special bonus.

Peacock tells of a fisherman in northeastern Iowa who once bought some clam meats for catfish bait. He returned to his house one afternoon, cleaned his catch, and threw the catfish offal to the chickens. As he sat on the back porch he notice a rooster having some trouble with a catfish innard, and when the fisherman investigated he found a sizable but battered and discolored pearl. He called Peacock, who bought it for $150.

Peacock peeled off the outer "skin" of the pearl and found one of the rarest gems of his career: a pearl of a deep, pigeon-blood red.

The color of fresh water pearls usually depends on the color of the mother shell. "Washboard" clams usually have pink pearls, as do the "wavey-backs." The "three-ridged" shells usually have colored pearls in shades of blue, green and lavender. "Nigger-heads" have iridescent pearls; white gems with shifting tones of blue and pink. From the "muckets" come fine pink pearls, and sandshell mussels often have pearls of salmon and salmon-pink. From the little ladyfinger, whose mother-of-pearl is often slaty or blueblack, come the prized black pearls with flames of blue and violet iridescence.

Pearls are formed by the same glands that form the mother-of-pearl inside a bivalve's shells. When a small, irritating particle happens into a clam shell and cannot be ejected, the clam secretes liquid pearl around the substance, evidently to reduce the irritation. This substance is built up in layers, and so a pearl can be peeled like an onion. Most of these mother-of-pearl concretions are misshapen slugs, or baroques, which may be valuable for costume jewelry but not as gems. "Chickenfeed" is tiny pearls that are sold by the ounce, the present price running around $5.

John Peacock, now president of the Prairie du Chien Bank, has been dealing in Mississippi River pearls since 1899, and stoutly maintains that a fine Iowa pearl is the equal of any produced by the Orient. According to Peacock, oriental pearls were preferred in the old days only because of the exotic pedigree, and Mississippi pearls were of equally high quality.

The fabulous sales of such "wild" pearls, both foreign and American, were doomed by the Japanese cultured pearl industry. By culturing pearls in beds under controlled conditions, the Japanese were able to flood the pearl market and undercut the price of wild pearls. "A pearl necklace of 40-grain pearls can be bought today for $400 that would have cost $5,000 40 years ago," Peacock told us. "But even so, these Japanese cultured pearls are fine gems, of the same quality as those found in nature."

The largest fresh-water pearl that Peacock has ever handled was the Genoa pearl, a nut-sized gem found in 1904 that weighed 210 grains. It measured 15/16ths of an inch in diameter, but only sold for $1,500. "It was too big for any gem use," Peacock says. "It was good only as a collector's item, and as far as I know it is now in an English collection."

Before the day of the cultured pearl—back in the early 1900's—"wild" pearls commanded high prices. At one time there were 27 pearl buyers registered in Prairie du Chien, buyers from India, France, England and the United States. Up until World War I, tent cities of clam fishermen sprang up each summer on the Mississippi's bank around Lansing, McGregor, Prairie du Chien and Harper's Ferry. Whole families spent the summer gathering shell and grocery boats plied the river selling packaged supplies. That was the heyday of the wild pearl.

According to Peacock, a number of Prairie du Chien homes were built in those days from the proceeds of single pearls. Some fishermen received as high as $1,000 for a pearl. Peacock tells of one fisherman with a large family who had a chance to buy a small dairy farm for $1,500 (back in 1915). He was flat broke, however, and his growing family kept him that way. Then one day he found a pearl in a Mississippi slough and brought it to Peacock. Peacock's bids ended at $1,000 but the young fisherman, his dairy farm finally in sight, held out for $1,500. He got his price, his farm, retired from the river and prospered.

Those were the days—when men were men and pearls were pearls. Peacock and other Mississippi oldtimers claim that the high channel dams changed all this and doomed clamming as a major river industry. They accuse the dams of silting over the old clam beds and slowing the current to such an extent as to make clam fishing difficult. In a few cases, the dams were built directly over the famous old clam beds.

Commercial clamming still exists, but it is only a shadow of the old pre-World War I industry. Pearls are still found every summer, too, although the prices are a fraction of those in the old days. A 20-grain gem found last summer brought $125; in past years it might have sold for $500.

Peacock pointed out, however, that Japanese cultured pearls run to whites, and pinks, and that a fine black or off-colored pearl found in the river today would still bring a good price.

It's something to think about. Maybe in some running slough, around an ancient sunken log where the crowfoot bars can't reach, there's a huge ladyfinger clam with a black pearl the size of a pingpong ball. If you find it, let us know.

MISTAKEN IDENTITY

An unfortunate incident with a serio-humorous twist came to light in Pennsylvania not long ago.

A man who said a deer was causing him crop damage went out one evening to eliminate the destroyer. The "deer" he shot turned out to be his own cow. Again proving any hunter should be sure of his target before shooting.

Yes, you found chicken and pheasant bones around that fox den. But where did the fox find the birds? There is a good chance that they were already dead, for foxes readily eat carrion.—*J. M.*

Hank Tietjens was the first lucky bowhunter of the season, killing his buck near Clinton with one arrow and almost no practice.

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IOWA BOWHUNTERS KILLED 3 DEER

Reports have reached the Conservation Commission that Iowa bow-hunters killed three deer during the 1954 deer season. The kills were made in widely separated areas, two in Clinton County and one in Cherokee County.

The first reported bow-and-arrow kill of the season was made on December 2 by Henry "Hank" Tietjens, a cattleman from Low Moor in Clinton County. Tietjens killed his four-point, 210-pound buck along the Wapsipinicon River near Wheatland.

Tietjens said that he shot the deer from a range of 45 feet, and that the animal ran about 50 yards before collapsing. "I guess it was just beginner's luck," he said. "I was standing beside a tree and the deer just wandered by." This was the first time he had ever hunted with a bow, and his archery experience had been a few shots in the yard of his farm home before the season.

The second bowhunter who scored was Neil Strupzenberg, a farmer from near Manson. He killed his deer, a 120-pound doe, on December 2 after an all-day hunt in the river bottoms north of Cherokee. Strupzenberg killed the animal just 15 minutes before the end of daily shooting time. He had hunted all day, following many tracks but having no shots. At 3:45 p.m. he saw the doe 40 yards away in a patch of weeds and killed her with the first arrow. Strupzenberg killed two deer last season with a shotgun—one a fine buck — but says that he got 10 times the thrill this year by killing his deer with an arrow.

The third bow-and-arrow deer kill was another in Clinton County, when John Mullins of Goose Lake shot a 155-pound, four-point buck. Mullins, a close friend of Tietjens (who killed the first deer of the season), was hunting with Tietjens when the third deer was killed. Mullins shot his buck on December 4 in the Wapsie River bottoms southwest of Folletts, two miles from where Tietjens had killed his buck.

None of the three successful bowhunters had any previous bowhunting experience, and all killed their deer with single arrows. Mullins and Tietjens attributed their success partly to luck, and partly to knowing the animals' habits and the lay of the land.

Although no other counties reported bowhunter kills, many archers had good shots and good chances. According to Ward Garrett, Conservation Officer for Pottawattamie County, a Council Bluffs newspaper reporter was sent out on opening day to do a deer hunting story.

While driving along a river road, the reporter saw an archer patiently sitting by a tree watching the trail before him. As the reporter looked on, two large bucks came sneaking along about 100 feet behind the hunter, crossed the road, and took off. The hopeful bowhunter never did see the two deer, or even know they were near him.

Iowa's "bowhunting only" season was in 6 counties from December 1 through 12: Clinton, Polk, Cherokee, Black Hawk, Wapello and that part of Pottawattamie County lying east of County Road "V". Fifty-one counties were open to both guns and bows and arrows from December 10 through 12.

A VISIT BY WAPACUTHU

A flight of arctic visitors—snowy owls from the far north—has come into Iowa this winter and the Conservation Commission is urging hunters to hold their fire.

These snow-white owls, their great wings spanning as much as 60 inches, migrate into Iowa on an average of every 4 years, arriving in the fall and staying on through March. They are driven on their southward migration by a scarcity of mice, lemmings and hares in their native range—the big barrens of northern Canada. Lemmings and mice are subject to regular ups and downs in their populations, and when lemming numbers are at a low ebb, snowy owls usually find tough going and head for happier hunting grounds.

Some bird authorities believe that not many of the snowy owls survive to return north, for they are easily seen and are tempting targets for gunners. Unlike most owls, the arctic owls hunt in the daytime in open country around fields, lake shores and sloughs where they are easily seen and killed, contrary to state law.

Because they normally live in the great barrens of the north the snowy owls prefer to hunt in the open. Because some of these barrens are more water than land, the snowy owls may also add ducks to their menus. There are accounts by sportsmen of having snowy owls attack duck decoys.

Earl Rose, fisheries biologist at Spirit Lake, had a similar experience last fall. He writes: "My boy and I were hunting at Barringer's Slough on Thanksgiving. The slough was nearly frozen over and we were watching some small flocks of mallards over the area. One duck pulled out of the flock and down over some hunter's blocks and received a couple of blasts. It kept flying for about half a mile and finally set its wings and made a "deadstick" landing on the ice about 300 yards from us.

"It had no sooner landed than a large snowy owl glided down from a plum thicket and hit the mallard full tilt. The owl sat on the duck for about 10 minutes, making no effort to kill it. Art Weiland was watching the deal too and Art sent his Labrador out after them.

"As soon as the owl saw the dog he attempted to fly away with the duck and after some difficulty managed to get off the ice. That was some sight—the drake mallard, still very much alive with his neck stretched out and quacking, was held close against the owl as they proceeded up the slough, finally making a belly landing (the duck's belly) on the ice next to some rushes. The owl perched on top of the duck for about 20 minutes and then proceeded to pull great bunches of feathers from the neck and breast. Then it killed the bird and proceeded to eat it.

"I thought it was unusual to watch the capture of a fully grown mallard that, while crippled, was still very much alive. I have seen three snowy owls this winter: one in Clay, one in Dickinson, and one in Lyon County."

Snowy owls may take a game bird when it comes easy, and may even pick up a rabbit now and then. But they more than make up for this by the great numbers of mice and rats that they eat. There's no point in killing such a rare and beautiful bird just to prove hunting skill. There's nothing to hunting them, and they're pitifully easy to hit. Besides being against state law, the shooting of an arctic owl is a sheer waste of both beauty and utility.

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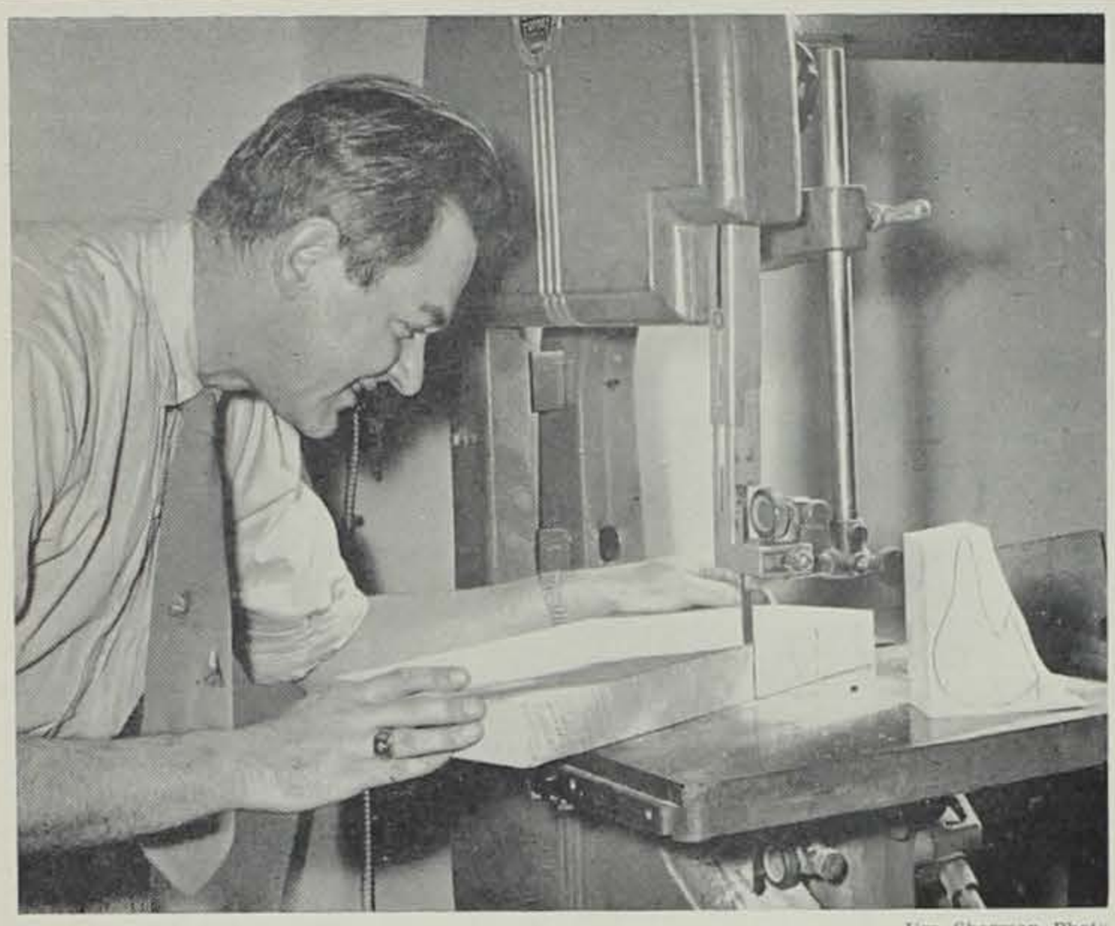
Wapacuthu: wounded by a hunter but still defiant. Probably a female, this arctic owl is heavily marked with brown bars.



Jim Sherman Photo.

The beginning of a Musgrove decoy: bandsawing the blanks of body and head.

Decoys . . .

(Continued from page 97)

inches from the tip of the tail this groove opens up into an arrowhead-shaped cavity, the "arrowhead" being the space between the wingtips. The outer edges of the wingtips run roughly parallel to the outer edges of the tail, as shown in the pattern. You can stop here if you like, for these are the main feather and wing features.

The rounded "pontoons" on the sides of the decoy are the fluffy side covert feathers of the duck. They are simple to carve and add much to the finished product. Once the decoy has achieved its low, rounded outline, it is only a matter of a couple of hours to carve in the feather details of the tail, wingtips, wings and back. Use a single-edge razor blade or an extremely sharp pocketknife.

The forward ¼ of the decoy must be levelled off and cut flat about an inch below the highest part of the back. This is the area on which the head will rest. The base of the neck of a living duck is much lower than the crest of its folded wings.

After the major whittling on the decoy's body is done, the block may be hollowed if desired. This is not essential, but will result in a lighter, more buoyant block. Place the body in a vise and hollow with a chisel, gouge or router until the sides and top of the decoy are about an inch thick. Leave a small section at the front unhollowed, as shown in the photograph. A dowel hole for the head will be drilled through this section.

A baseboard will be needed for the bottom of a hollow block. Use ¾ inch stock, cut roughly to the shape of the bottom of the decoy. Glue with a thick mixture of Weldwood glue and clamp tightly. When dry, trim to shape and anchor with four brass screws. *Never* use steel screws in a decoy.

A Good Head

When the block is carved and sanded, drill a ½ inch hole up through it about 2½ inches from the front of the block. Drill a corresponding hole in the head blank as soon as it is sawed out. If the finished head is drilled, it may split.

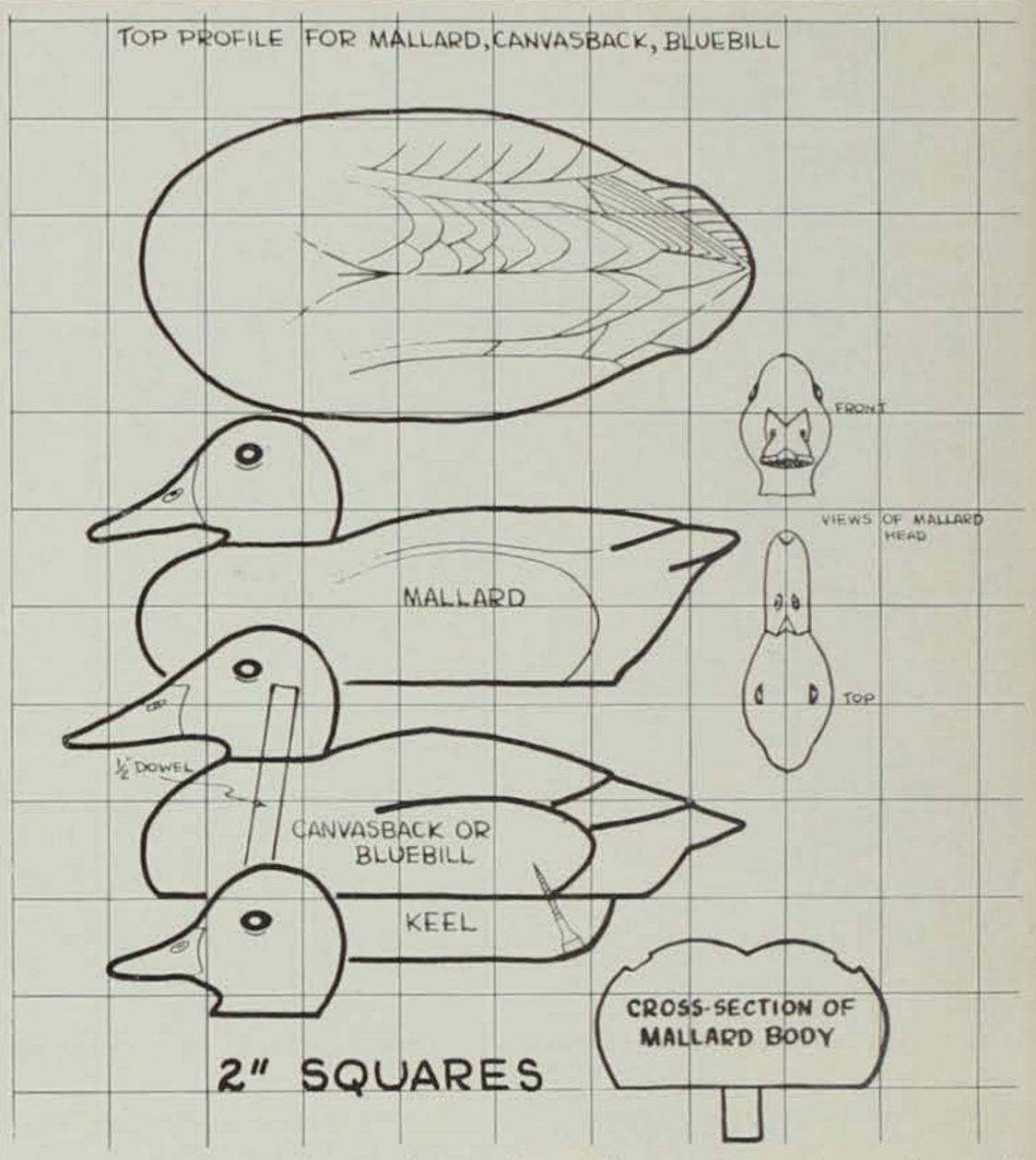
An important feature of the head is the round cheeks below the eyes. A duck's head is not flat. The top and back of the head are narrow, as shown in the pattern. The heads in the pattern look large in proportion to the body, but they aren't after they are rounded and carved. Most duck decoy heads are too small for the bodies. A duck's head is bigger than it looks.

Brass upholsterers' nails may be driven into the head for eyes and painted dark. Glass taxidermists' eyes are best. Cut out an oversized eye socket and fill with plastic wood. While the plastic wood is wet, press in the glass eye, allowing excess filler to ooze out around it. Gently mold this into "eyelids" so that the eye takes on an elliptical shape.

The Last Touches

When head and body are finished and sanded, join them with the ½ inch dowel and Weldwood glue. Avoid casein glues; they aren't rugged enough. Don't worry about having a tight, even joint, for the joint is filled with a mixture of thick glue and sawdust and the neck is blended into the body. Allow to dry and sand to a smooth even joint.

The keel for the decoy is ¾ inch thick, 1½ inches deep, and about 8 inches long. Gouge a slot in the surface of the keel that joins the bottom of the decoy. This slot is 6 inches long, ¼ inch wide and ½ inch deep. Pour slot full of molten lead. Before attaching keel to decoy, strap it in place with rubber bands and place in water to determine the correct balance. When the proper position is found attach with heavy coating of thick Weld-



wood glue and fasten at each end with a 1½ inch brass screw.

Drill a hole 1½ inches back from the front of the keel for the anchor cord. Don't use an anchor cord that is too short for the water you'll be hunting in. In the end of the cord tie a four-inch loop and attach the anchor to the end of this loop. This loop may be placed over the decoy's head when not in use, keeping the anchor up out of the way where it will not tangle with other decoys.

Before painting, wet the decoy to raise the grain and give a final sanding. Prime the wood with a coat of boiled linseed oil and paint with artists' oil colors that have been thinned with turpentine. If thinned with oil the final result will be too shiny. Basic oil colors needed are burnt umber, red, yellow, blue, black and white. Yellow and blue may be mixed to produce green, and black, white and brown may be mixed to produce grays. Color tones and patterns may be obtained from any good color plates of ducks.

Too Pretty?

Such decoys have been criticized as being too fancy, but a duck decoy can't be *too* fancy. The more accurate and detailed they are, the better. They are no more fragile than any good wooden decoy, and the oil paints are very durable.

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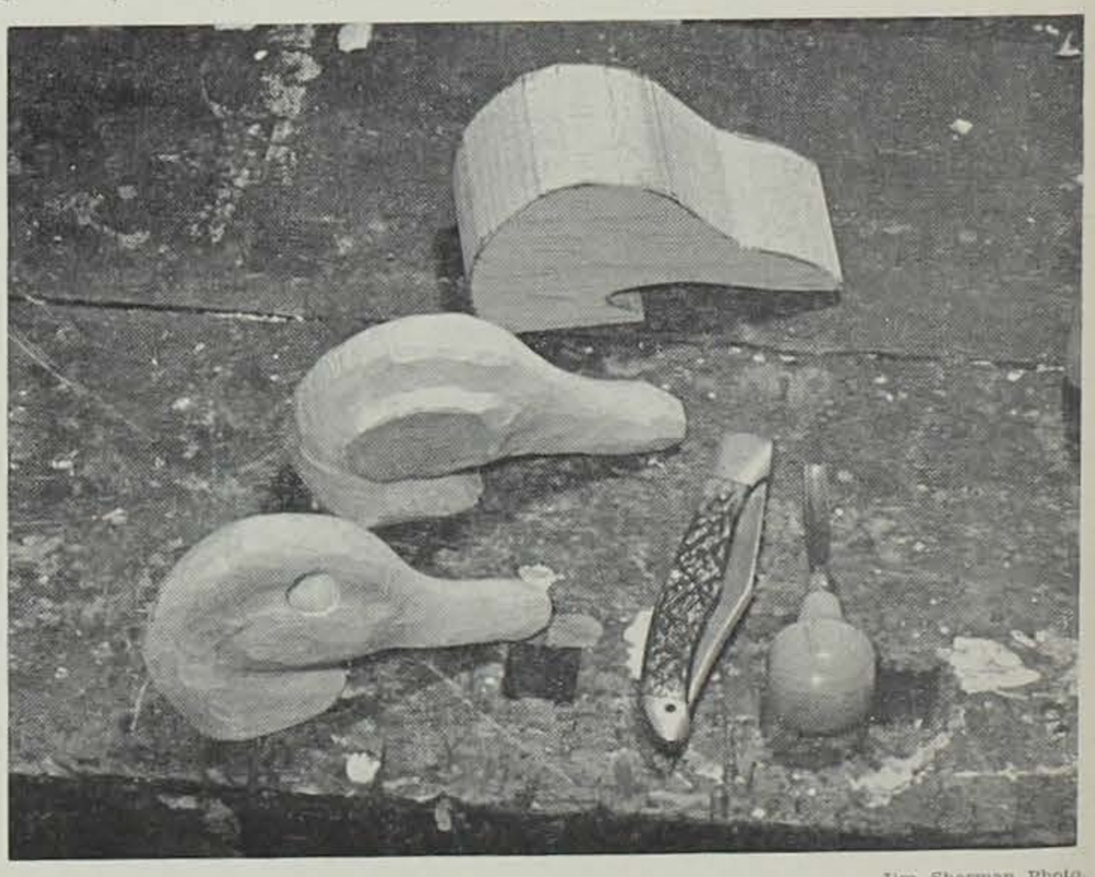

Jim Sherman Photo.

Evolution of a champion decoy head.

They are heavier than poorer blocks, but fewer are needed. These beautiful blocks are not practical for can or redhead sets on large lakes where many decoys are needed. However, five of these mallard blocks on a small lake cove or slough are deadly, especially when a fine pintail decoy is placed 50 feet away to attract attention.

Sculptured decoys take time and patience, but aren't out of reach of the average workman with sharp tools. As Musgrove says, the decoy is there all the time. All you have to do is to cut away the excess wood!—*J. M.*

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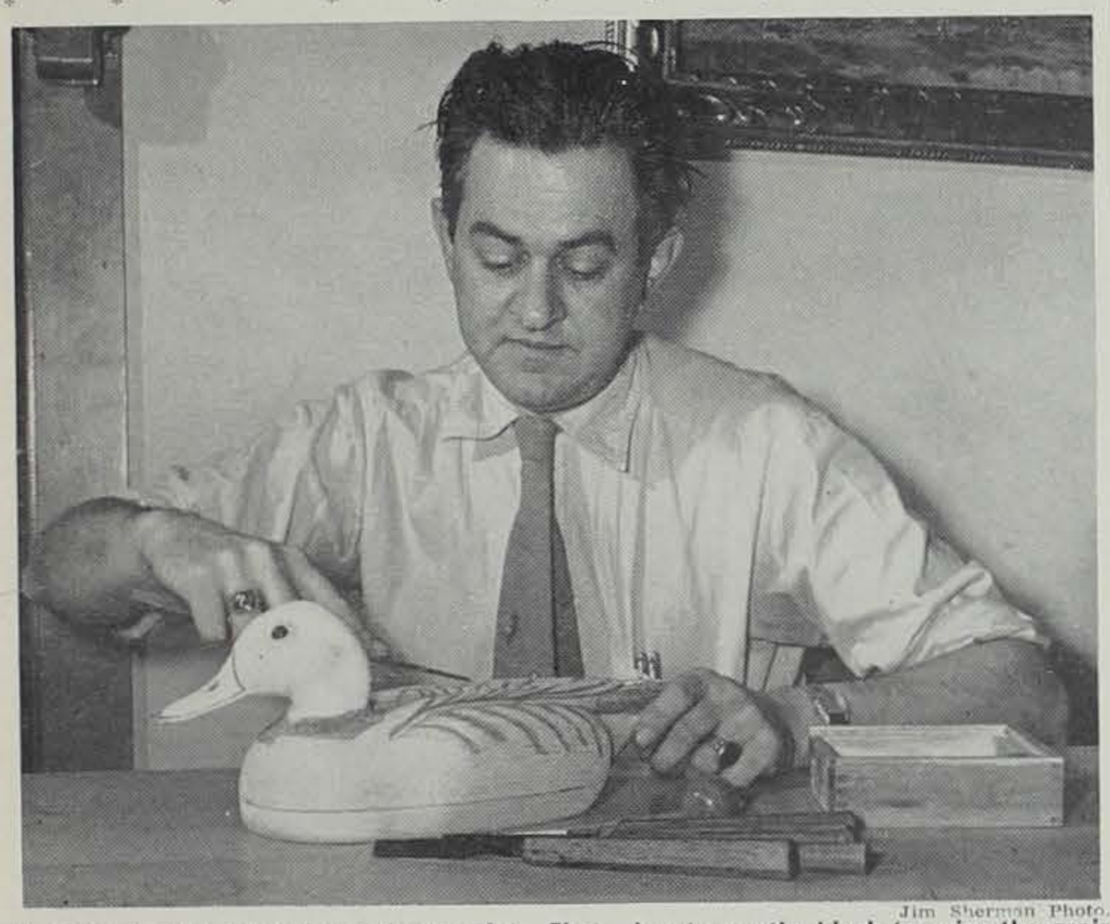

Jim Sherman Photo.

Musgrove's deke is nearly ready to paint. First, he steams the block to raise the grain and then sands smoothly.

BORN FOR THE JOB

In the manufacture of sporting ammunition, the well-known element, lead, has played a highly important part for many, many years. Hunters of big game, upland game, and waterfowl have frequently asked the Remington Arms Company, Inc., Bridgeport, Conn., why this metal is so peculiarly and ideally adaptable to the manufacture of hunting cartridges and shotgun shells. The answer to this question has a number of interesting facets which give it a technical flavor.

There are at least four important factors in the requirements for a satisfactory long-range bullet or projectile material: the raw materials must be plentiful, they must be relatively inexpensive, they must be easily fabricated, and the bullet must have as high a density as possible.

The first three requirements are more or less obvious. There are many materials which are plentiful and inexpensive; there are considerably fewer which, at the same time, are easily formed by such inexpensive methods as casting, swaging, or dropping from towers. It is, however, the addition of the fourth condition, high density, that makes lead an outstanding contender in the field.

To understand this, we must understand the reason why a long-range bullet, or bullet material, should have a high density. This is a necessary consequence of the requirements that such a bullet must first have stability in flight; second, have as flat a trajectory and as high a remaining velocity as possible; third, have as high a striking energy as possible; and fourth, not be inconveniently large.

By "stability" we mean that the bullet must resist the tendency to tumble or "keyhole." It is for this reason that a bullet is given spin. There is a mathematical formula that tells us what the minimum rate of spin must be for a bullet of given size, shape and density if it is to be stable in flight. This formula tells us that if two bullets are of the same size and shape, but one is less dense than the other, the lighter bullet must have a faster spin than the heavy bullet.

Obviously, if the required minimum rate of spin becomes too high, the twist of the rifling may be so steep that the bullet would strip in passing down the barrel.

The same formula tells us that it is more advantageous to have a short bullet than a long bullet of the same weight and diameter if we don't want the rate of spin to be too high. This condition of maximum stability with minimum spin is thus seen to be met most easily when our bullet is made of a material with a high density.

A flat trajectory is a very desirable feature for a bullet, since this reduces the precision with which the shooter must guess an unknown range. This condition is best met by a bullet whose initial velocity is high and which, also, has the ability to retain its velocity well in the face of air resistance.

The shooter also wants, and properly so, high striking energy. The striking energy depends upon the weight of the bullet and the velocity at the target. Obviously, the high density bullet weighs more. The matter of size is more or less obvious. If, to obtain a bullet of desired weight, it were necessary to give it a very large diameter, or excessive length, the problems of gun design would be made more difficult, as would the problem of carrying a large number of rounds.

The list of elements with densities higher than lead is an interesting one. Here it is: gold, iridium, mercury, osmium, palladium, rhodium, ruthenium, tantalum, thallium, thorium, tungsten, and uranium. All of these are extremely rare, very difficult to work, very expensive or physically unsuited.

Insofar as bullets and shot are concerned, lead is one element which seems to be truly "born for the job."

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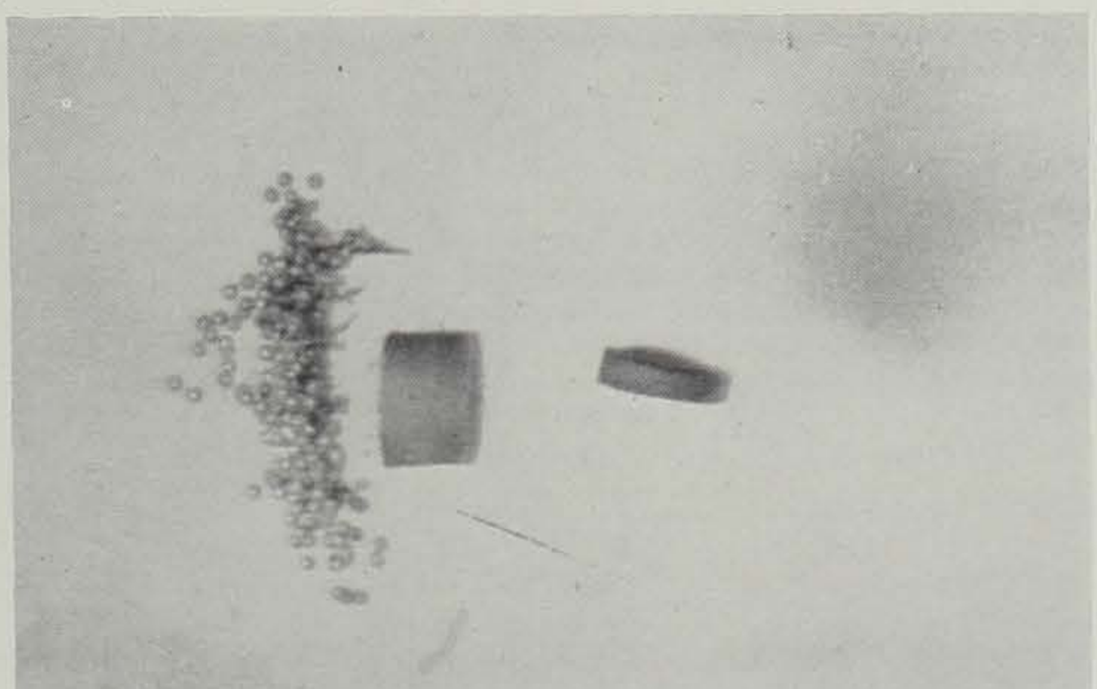

Western Cartridge Company credit.

A charge of shot photographed at 4/100,000,000 of a second. Lead, a dense, soft, common metal, was born for this job.

WEATHER SUPERSTITIONS

By David H. Thompson and Roberts Mann

Charles Dudley Warner, not Mark Twain, made the famous wisecrack—"Everybody talks about the weather but nobody does anything about it"—when our U. S. Weather Bureau was in its infancy and reliable local forecasts were not available. There are still no accurate forecasts of what kind of weather we will have in the next 30 days, to say nothing of what will occur six months from now. That is important to the farmer. In many localities he gambles on certain signs and what an almanac predicts.

Since time immemorial, men have been trying to outguess the weather. Many local superstitions developed, some of which have come down to us in well-known rhymes. Some are logical deductions from certain signs—such as smoke rising vertically from a chimney, indicating fair weather—but most are pure superstitions. Many are still believed and stoutly defended in the more remote regions. A few are subjects for discussion even in our modern cities.

Most famous is Groundhog Day when the woodchuck is supposed to awake from his long hibernation, come out of his burrow, and if it is a sunshiny day so that he sees his shadow, go back to sleep knowing that there will be six more weeks of winter. It is generally observed on February 2 but there are thousands of people in Missouri and Arkansas who regard February 14 as Groundhog Day and who, if it is dark and cloudy, begin to spade up their garden patches.

In southern Illinois and the Ozark hills of Missouri, "goosebone" weather prophets examine the breastbone of a wild goose killed in autumn. If it is thin and rather transparent, that predicts a mild winter; if thick and opaque, a hard winter; if white, much snow; if reddish or redspotted, cold but little snow. It is commonly believed that muskrats build bigger lodges and the fur is thicker on muskrats, raccoons, skunks and other furbearers before a severe winter. The woolly bear caterpillar is supposed to forecast a mild winter if its middle band of reddish brown is wider than the two end bands of black, and a hard winter if it is narrower. Such conditions among animals have natural causes but nothing to do with what the weather will be in later months.

There are similar superstitions that a frost will occur six weeks after we hear the first katydid; that tree frogs trilling, or a "rain crow" (yellow-billed cuckoo) calling, predict rain; that bad weather is coming when we feel twinges of rheumatism or aching corns and bunions; that a red sunset or a

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Rex Pendry Photo.

Deer hunters took to the trees in rough, brushy parts of the state.

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Report . . .

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deer hunters was in Allamakee County in the Lansing area, with the bulk of nimrods hunting along the Mississippi River bottoms between Lansing and New Albin. Fifty deer were brought to the Lansing checking station on opening day, and federal agents reported seeing 83 deer taken from the river bottoms during the opening. In spite of many hunters, vast areas of rugged Allamakee County were virtually unhunted.

Just as in 1953, some strange stories came out of the 1954 deer season. A southern Iowa hunter travelled to Lansing for his hunt, only to find on his arrival that he had forgotten his gun. A hospitable Lansing hunter loaned him one.

In the Amana Colonies, conservation officers were told of a hunter who beat the brush all day without even seeing a deer track. Returning to his car at the end of the day, he flushed a big buck that ran to the road and stopped in line with the hunter's car. The man fired, missing the deer but bagging his own automobile. The heavy rifled slug smashed the left headlight, passed down inside the fender and raised a long groove the full length of the new fender. *Himmelkreuzdonnerwetter!*

A full summary of the last deer season will be released as soon as it is available, probably sometime in late winter.

Commission biologists are urging all Iowa deer hunters to fill in their hunt report cards and return them to the Conservation Commission in Des Moines if they have not done so. This is the only way that a full picture of the deer season can be obtained, and the general health and condition, sex ratio and size of the Iowa deer herd can be estimated.

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The checking stations showed the following totals:

1953		1954	
Lansing (Allamakee)	110	Lansing	107
Osceola (Clarke-Decatur)	14	Osceola	15
Garner (Hancock)	18	Pilot Knob (Hancock)	43
Sioux City (Woodbury)	27	Sioux City	13
Spirit Lake (Dickinson)	99	Inwood	54
Cedar Falls (Black Hawk)	94	Bremer County	52
Avoca (Pottawattamie)	125	Glenwood (Mills)	11
Boone (Boone)	34	Marion (Linn)	11
Totals	521	Totals	306

Echo Valley . . .

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western limit of the area of outcrop. Probably over 200 feet of the Niagaran lie below the surface here. There are many cavernous openings in the rock walls, made by weathering.

The two creeks have made the valleys in which they flow. They have carried away the broken rock and sediment produced by weathering and abrasion. They have also carried away much material in solution. Valley widening and deepening is of course still going on. At points not far apart the stream is cutting against the cliffs on opposite sides. The cliffs became undercut, and with loss of support the upper part breaks away and falls to the stream level. Gradually the bigger pieces are broken up by frost action, and all the while the running water is at work shifting fragments downstream. This load of coarse and fine material carried by the water abrades the rock bottom, and at the same time the pieces become smaller. Thus the valley is deepened and widened, and the excavated material carried on downstream.

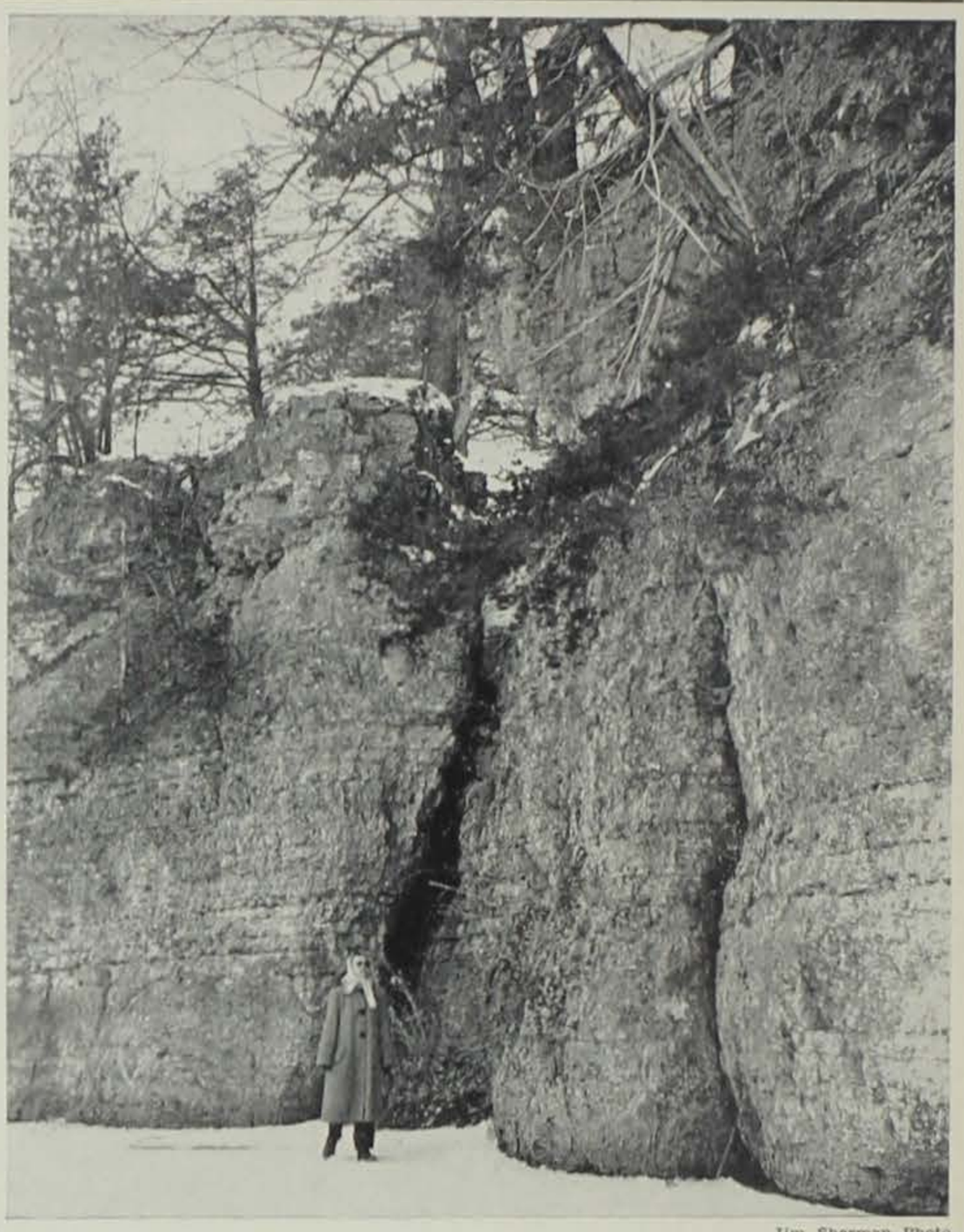
The vertical cracks of the rock help in the erosion. Water getting down these cracks, called joints, dissolves the rock. Freezing water and plant roots also work along the joints. Thus the cliffs have assumed a scalloped form. The projecting parts are often called buttresses.

There used to be a small artificial lake in the park, just below the lodge. Like most artificial lakes, it was made by damming up the valley. But the years have gone by, and gradually the lake has filled with sediment carried in by the stream. Now, instead of a lake, there is a level area covered with vegetation. Of course most of the lake-filling occurred during floods. Ordinarily the water is clear and carries but little sediment. The filling up of the lake basin in a relatively short span of years affords striking evidence of the amount of sediment carried by the stream. It also confirms our belief that the valley is largely the work of running water.

The dam is one of crib construction, using timber and stone. There is a concrete spillway, through which the stream flows when it is at normal level. When the stream is in flood however, it spreads over the surface of the lake-fill and pours over the dam. A falls is thus developed, and the erosion proceeds as it does at most falls. The falling water cuts away the bottom, and little by little is undermining the dam. In the natural course of events the dam will gradually be destroyed, and then the stream will proceed to slowly carry away the lake-fill.

The park has an interesting relic of the industry of an earlier day. This is a lime kiln, long since fallen into disuse. The lime was made by "burning" the limestone, believed to have been secured from a quarry in the park. This quarry is a short distance downstream from the dam. The limestone was dumped into the top of the kiln. It was then "burned" by a fire set in a fire-box at the base. Today the manufacture of lime is concentrated in large installations. There is none made in Iowa, but Missouri, Ohio and Pennsylvania have large productions. It was more widely used in mortar before the development of Portland cement. It is still used in plaster and stucco, and also in water softening, metallurgy, and paper-making. Thus the deposits of an ancient sea, converted to lime, enter into our daily lives. Possibly the presence of chert in the limestone here made it rather unsatisfactory for use in the manufacture of lime.

Although the cliffs in the park are rough from weathering, how slowly weathering affects limestone is shown by the condition of the stone in the railroad bridges in the park. One bears the date 1890, and the stone still appears relatively unaffected by weathering. The source of this stone is not known to the writer, but it probably came from one of the quarries in the Niagaran dolomite. Its lasting quality, for our use, is a fine tribute to the work of the Niagaran sea, and the subsurface water which has cemented the sediment together since its deposition.



Jim Sherman Photo.

The triple echoes produced by these cliffs named the park—Echo Valley.

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Then there's the story about the guy who shot game so far away that he had to use salted bullets. With ordinary bullets, the meat was spoiled by the time the hunter got there.

LOOSENING UP THE FISH LAWS

By K. M. Madden

Superintendent of Fisheries

In the past 15 years, as research has revealed more about fish, their life habits, and conditions under which they grow or stunt, fishing regulations in Iowa have been liberalized.

Fortunately for Iowa sportsmen, the 1937 legislature wrote the "Biological Balance Law." The intent of the lawmakers was to give the Conservation Commission the authority to issue administrative orders to regulate public harvest of fish and game as their habitat, populations, fishing or hunting pressure or future biological balance might vary from 1937 conditions. Under this "Biological Balance Law," fishing seasons have been extended or shortened and size, catch and territorial limits have been changed.

For 15 of the past 17 years bullheads in inland waters have had a daily catch limit of 25 and a possession limit of 50. But in 1946 and 1947, biologists found that Lost Island Lake bullheads were not growing. When creel and possession limits were removed for this lake, public harvest was increased and normal fish development was restored after only two years of liberalized regulations.

Catfish season in 1937 opened on May 1, closed during the June spawning period, and reopened on July 1 to extend through November 30. There was a 12-inch minimum length limit on catfish and catch and possession limits of 15 and 30. The 1943 legislature changed this in the liberal direction to a season from April 15 through November 30, discarding the old concept of protection during spawning season. The minimum length was removed in 1950.

Crappie, perch and yellow bass all appear in the 1937 Code of Iowa on the season list with a daily catch limit of 15 and a possession limit of 30 and a 7-inch length limit. Sunfish, bluegills, rock bass and warmouth bass had a 5-inch length limit. In 1948, as biological studies proved that length limits of panfish promoted stunting and overcrowding, these length limits were eliminated.

In 1939, fishing in new artificial lakes was limited to a June 15 opening and a 12-fish limit for all species of fish, and only seven of the fish could be crappies. Surveys in the natural lake area revealed large crappie and silver bass crops in East Okoboji and Spirit Lake in 1945. The catch limit on stripers was increased for Spirit Lake and the opening for crappies in East Okoboji was moved up to May 15 in an effort to increase the human harvest and reduce natural old age losses. In 1947 most natural lakes were opened to crappies on May 15.

Silver bass and crappies were opened on a state-wide basis on May 15, 1948, and sunfish, bluegills, warmouth bass, rock bass and both species of black bass were moved up to a June 1 opening in all Iowa counties. Scientific evidence had by this time mounted to the effect that regulations could ignore spawning time in areas without injuring the fishing; in fact, continuing studies have shown that fishing is improved by permitting anglers to take fish when they can be easily caught, for the fish might otherwise compete for food and space in overcrowded waters. Crappies were next placed (1949) on the continuous list when it was shown that they sometimes interfered with the development of other species, and in some cases large year classes of crappies even prevented normal crappie growth. Age and growth studies by Iowa Cooperative Fisheries Unit and Commission biologists indicated that these under-keeper-size crappies were much older than previously believed, and were not young fish at all.

Jim Sherman Photo.

These crappies, if kept in crowded waters under tight fish laws, wouldn't be this big. Wisely relaxed fishing laws mean better fish and better fishing.

In 1950 winter fishing in inland Iowa began, made possible by extending the closing date for most species to February 15. Iowa's boundary waters had been open to winter fishing since 1937 without any measurable effect on either predator fish (pike and black bass) or panfish (perch and bluegills). Research, the experience of other states, and the success of winter fishing in Iowa boundary waters all combined to make a strong case in favor of the now popular winter fishing. Creel census records continue to show that panfish have made up a great percentage of the under-ice harvest.

By 1953, yellow bass, sunfish, and bluegills were all on the continuous list. In 1954 yellow perch was added to the continuous list and possession limits were set that provided two full days of limit fishing for all species except trout.

Trout regulation changes have consisted of season extensions of 30 days in 1946 and 60 days from 1947 through 1953. Surveys in 1953 and 1954 showed winter carryovers in our trout streams were higher than suspected, and a continuous open season was set on trout.

In July, 1953, an inland rough fish spearing law was passed, which made it possible to spear rough fish from May 1 to October 31 during daylight hours in all inland waters normally open to fishing. The new law was largely the result of experience of the added recreation furnished by such spearing on the Mississippi, where rough fish spearing has been lawful for years.

The liberalization of fishing regulations is a national trend. Some states are more liberal than Iowa in their fish laws; others more conservative. To show this trend, a recent survey was made to compare the 1949 regulations of nine other central states to Iowa's 1954 regulations:

Length of Season		Daily Catch Limit		Possession Limit		Length Limit	
Predators	Panfish	Predators	Panfish	Predators	Panfish	Predators	Panfish
5 states more liberal than Iowa	none more liberal than Iowa	6 more liberal	4 more liberal	5 more liberal	3 more liberal	4 more liberal	8 about same
2 states about same as Iowa	4 states about same as Iowa	3 about same	3 about same	1 about same	3 about same	1 about same	
2 states less liberal than Iowa	5 states less liberal than Iowa		1 less liberal	3 less liberal	2 less liberal	4 less liberal	

In the past five years, 10 states in the survey have generally liberalized their fishing laws. In 1954, their regulations, as compared to Iowa's 1954 regulations, were:

Length of Season		Daily Catch Limit		Possession Limit		Length Limit	
Predators	Panfish	Predators	Panfish	Predators	Panfish	Predators	Panfish
6 states more liberal than Iowa	1 state more liberal than Iowa	6 more liberal	6 more liberal	6 more liberal	5 more liberal	6 more liberal	1 more liberal
	7 about same as Iowa	3 about same	2 about same		2 about same	2 about same	8 about same
4 less liberal than Iowa	2 less liberal than Iowa	1 less liberal	2 less liberal		3 less liberal	2 less liberal	1 less liberal

KEEPING YOUR FISH

Every year thousands of pounds of fish are lost by not observing the following simple rules. While these rules are given for trout they will work on almost any kind of fish.

Keep your fish clean, cool and dry. In the field they should be kept in a creel or basket, not in a sack. Clean as soon as possible then dry out thoroughly and don't use any more water on them.

Fish can be kept for several days if the weather isn't unusually hot. Hang them out at night to cool and dry, then pack them well in alternate layers of willow cuttings or grass. Roll them up each day in a bedroll or some other insulating material, but hang them out again each night to air and cool.—*Outdoor Notes.*

Cranes may be distinguished from herons by the fact that they fly with their necks held straight ahead of them, while herons carry their necks curved upwards.—*J. M.*

From 1939 through 1954 the number of licensed fishermen in Iowa has increased from 202,162 to 381,898. We can expect future fishing pressure to increase because of increased appreciation of outdoor recreation, better transportation, availability of new waters, and more leisure time available to the public.

Our waters, fertilized by Iowa's rich watersheds, will continue to produce tremendous poundages of fish of all kinds. Natural losses of fish can be reduced through improved fishing skill and sensible fishing regulations. Fish management history, research and experience all indicate that competition between species has more effect on the numbers of desirable game fish produced than does public harvest.

Jim Sherman Photo.

The tree frog: a weather prophet without honor in his own country. But science thinks he may be right now and then.

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Superstitions . . .

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rainbow in evening insure clear weather tomorrow; that a ring around the moon means a storm is coming and that the number of stars visible inside the ring tell the number of days before it will start.

Other very prevalent beliefs have some justification, such as the fact that sun dogs predict a cold spell; that train whistles sound louder and clearer before a rain, and that stormy weather is probable when the sky is mantled with clouds resembling a flock of sheep. However, the old rhyme—"rain before seven, fair by eleven"—does not always hold true; neither does the fact that chickens foraging outdoors, heedless of a morning drizzle, necessarily means an all-day rain.

If the crescent of a new moon is horizontal, some old-timers say the next month will be dry because it holds water; if roughly vertical, 'twill be wet because the water will spill out. Others believe exactly the opposite, arguing that if the moon is "on its back" the month will be rainy and the hunter can hang his rifle and powder horn on its tips; if vertical, the water has been spilled out and he needs no such place.

Just remember this: "All signs fail in dry weather."

Some of the colors in the feathers of birds and the wings of butterflies are not true colors at all, but only apparent colors caused by the reflection of light from certain special feathers and scales.—*J. M.*

Alligators, like all reptiles, are extremely sensitive to cold. If the temperature of the water drops rapidly the 'gator becomes paralyzed, and may sink to the bottom and drown.—*J. M.*

Few materials in the animal kingdom are as tough as the scales and skin of the gars. In the far south, years ago, the skins of alligators gar were used to face wooden plowshares!—*J. M.*

A REPORTER'S NIGHT HUNT

In our preoccupation with duck hunting, late fall fishing, pheasant and quail, and all the rest of the autumn out-door panorama, we've all but passed by an important segment of the field-sport community—the night shift. We mean, of course, those numerous and rugged characters who spend the hours of darkness following the bay and chop of their redbones and black-and-tans as they course the timber lands running and treeing raccoon!

The duck hunter can sit in the blind and wait for the ducks to come to him. The lazy-type pheasant hunter can cruise the roads and spot an occasional bird cowering along the fence-row, but there's no easy way for the coon hunter! When the dogs strike, there's nothing for it but to follow them until they tree. If you're lucky, it may be within a few hundred yards; again, it may be a mile or more of up and down hill, crashing through brush, stumbling over fences and falling into creeks, and, at the end, the coon treed, likely as not, in a den tree where it can't be dislodged!

That's the way your reporter spent most of last night—freeloading with the coon-hunting party. Several coon were started, trailed, and treed . . . some in den trees. Some with the results that are good. For our part, the best laugh was the first game started, a fat and stupid possum that escaped the hounds by climbing a sapling that was hardly 15 feet high and so slender that it bent dangerously under his weight.

To our hosts, our thanks . . . and we didn't mean it when we said "You don't have to be crazy to do this, but it sure helps!"—*Davenport Times.*

The shrikes, small predacious birds, are too small to handle the large insects and small animals they kill. So, these insects are impaled on a sharp point such as a locust thorn or a fence barb and eaten at leisure.—*J. M.*

TAN YOUR HIDES!

For the deer hunters who scored this season, and who want something more than a coat rack for a trophy, here are some tips on tanning buckskin from the *Hunter's Encyclopedia*:

A hide is best tanned as soon as possible, but if you can't get to it right away, rub salt evenly and lightly into the flesh side of the skin and store in a cool, airy place.

When you're ready for tanning, soak the hide in clean water until it's softened. Then slake about 5 pounds of lime adding water slowly and a little at a time. Mix this slaked lime in a wooden tub or barrel with about 30 gallons of water.

Leave the hide in the lime solution until the hair can be easily pulled away. This may be about a week or 10 days. Stir the solution and the soaking hide with a wooden paddle 3 or 4 times a day.

When the hair begins to slip easily, the hide is ready for scraping. A "fleshing plank" is used as a support for this scraping. Set a wide plank at about a 45-degree angle across a sawhorse or other support. The top edge of the plank should have its sharp corners removed with a plane until they are slightly convex and rounded. Lay the soaked hide on this plank and begin scraping off the loosened hair. A very dull edged tool should be used as a scraper—something like a very dull drawknife, butcher knife or the back of an old saw blade. All hair should be scraped off, taking great care not to cut the hide.

When the hair has been removed, return the hide to the lime bath to loosen the "grain"—a very thin layer of skin on the hair side of the hide that must be removed in order to make good buckskin. When this "grain" has been carefully scraped away, reverse the hide and scrape the tools over the flesh side, forcing out as much lime water as possible. (At all times, wash the lime solution off your hands frequently.)

The lime can be neutralized and removed by either vinegar or lactic acid. Add 1 gallon of vinegar to 25 gallons of water, or 3 ounces of lactic acid (U.S.P.) to 25 gallons of water. Either of these solutions will neutralize the lime after a couple of days' soaking. Slosh the hide around in the solution frequently. After two or three days, take the hide out and wash repeatedly in clean, cold water to remove the acid solution.

The hide must now be worked over a smooth board until it is thoroughly soft. With a large hide, it's a 2-man job. The hide must be patiently stretched and pulled until it is soft and pliable.

If you want to do it up right, the buckskin may be smoked, turning it to a dark, pleasing gray color. This smoking will also help waterproof it. Use only green hardwoods, never resinous woods like pine or fir. Big hides may be fastened together into a loose tent and a small fire built under them. Be careful not to build a fire so big that it will scorch them. Small hides can be covered with a tarp so the smoke can circulate around them.

The finished, tanned buckskin can be made into gloves, vests, jackets, guncases, moccasins, reel cases, and a number of other articles. One hide will make a couple of pairs of moccasins, a small vest, or possibly a guncase. For a full jacket, if fringed, count on using at least three hides, and it may take four or five, depending on size and fanciness.

The tanned buckskin is easy to cut and sew, and these articles can be made at home. For a fancy job, the buckskin may be sent to a commercial house that specializes in making buckskin clothes; several of these concerns advertise regularly in outdoor magazines.

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Rex Pendry Photo.

Salting deerskin for storage. Later on, a little work can turn this into a beautiful jacket.