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BOW & ARROW

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| VOL. IX, NO. 3 | SEPTEMBER-OCTOBER 1971 |
|--|--|
| BOW TEST: SHAKESPEARE'S OCALA X-17 | C. R. Learn 1 |
| FEATURES: A MOMENT OF FEVER TO RUSSIA, WITH SHAFTS BROADHEAD ROULETTE TRAIL OF THE RED JINX RELEASES & REACTIONS HOW TO PREPARE GAME DRESSED TO KILL KEYSTONE OF ARCHERY | Chuck Tyler 28 Steve Barde 33 Dennis Ballard 36 Staff Report 44 Burt Miller 48 |
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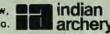
ON THE COVER: Dave Maroon tries his hand at hunting from Ron's Porto-Pak tree stand, using new Adirondack hunting model bow; Microflight 9 fibergiass arrows in the Kwikee Kwiver. In tree, he felt safer with arrows reversed in quiver, He was not yet at full draw, when self-photo was taken. Note Wristscope on arm. Photo by Dave Maroon.

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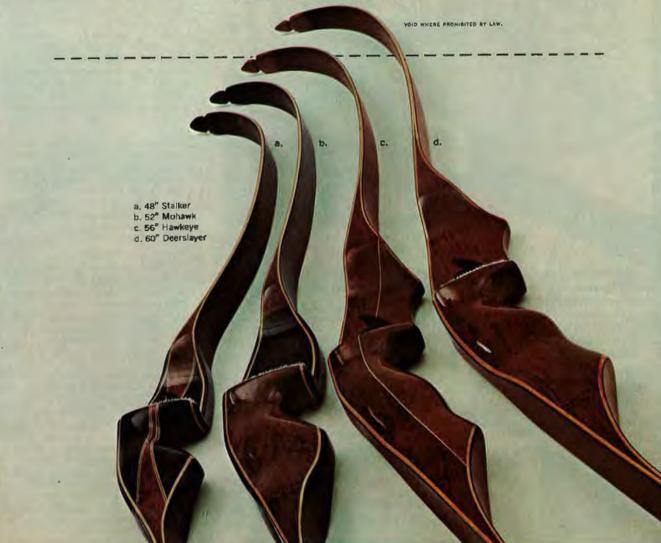
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see the August issue of Outdoor Life, or write Indian Industries for the name and address of the Indian Archery dealer near you.



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HUNTING MORALITY

Congratulations to Doug Kittredge on his fine bit of bowhunting philosophy aired in your January/February 71 issue! He echoes some thoughts I have had for a number of years regarding the effective limitations of bows and the moral obligation howhunters have to both quarry and public.

Nothing is more pathetic than

happening upon the spoiled carcass of an animal in the woods that had been wounded and lost, Personally, the feeling is compounded when the animal is a bow kill. I join with Mr. Kittredge in hoping that more bowhunters will work for the closer shot or not shoot

Dennis Lattery, Anchorage, Alaska

MINIMUM DRAW

A note to explain the reason for the forty-pound minimum draw weight in the State of Washington: It is felt that a forty-pound bow, with properly matched arrows and razor-sharp broadheads that can be handled properly and efficiently, is a better combination that fifty pounds and "struggle." Also, it permits women to enjoy bowhunting, which otherwise could be impossible. I was fortunate enough to witness a kill of a bull elk in Colorado. with a forty-pound bow in the hands of a Pennsylvania archer. The elk traveled only about thirty-five yards before collapsing.

Pounds of pull will never replace a good stalk, a well placed arrow, with razor-sharp broadheads, followed by good tracking.

Dick Thrasher. Hunting Vice President, Washington State Archery Association, Renton, Washington

IOWA HUNTING

I was glad to read that someone finally recognized the fine trophy deer hunting in Iowa. After college, I worked several years as a biologist for the lowa Conservation Commission, which gave me the opportunity to see quite a few 200 to 300-pound deer, while collecting data during the hunting sea-

Many crisp November mornings also found me at a favorite bowhunting stand along the Missouri River near Sioux City, waiting for that big buck to work his way by me through the cottonwood trees.

During those years in Iowa, I was fortunate enough to collect my share of two hundred-pound deer. Probably my greatest present sorrow is the knowledge that Iowa does not allow out-of-state deer hunters!

Bill Welker, Galveston, Texas

Continued on page 67

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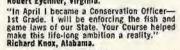
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HUNTING WITH Doug Kittredge ====

LOOKING BACK on it now, nine months later, I can still feel the surge of excitement and the hair lift at the back of my neck as that bull elk made his eerie whistle not more than a few yards away in the fog of the cloud-covered mountain. I looked over at Caesar, my carefree German hunting buddy, to see his reaction, for I didn't know whether to hide, run or shoot, that bull was so close...but that nut, all he was doing was holding his bow like he was about to shoot and grinning from ear to ear. Then we could hear the crunch of the brush. I just knew we were going to have elk on the table that night! But we had a lesson to learn about not counting on the critter being in the pot 'till you start making up the gravy.

Caesar and I were using an elk bugle, talking elk to the bulls to locate them and get them to move in for a fight. We hoped they would think the sound was an invitation to lock horns with another bull as happens during the beginning period of the rut, or mating season. We had climbed to the top of the highest mountain bordering the deep tree-choked basin just as day started to break. It was really quite a sight with the pale light of morning sneaking across the snow fluff that had fallen the night before lighting up a billowy, low-hanging tule fog type of cloud which was creeping up the valley.

We heard our first bugle of the elk hunt off to our left in the lower timber. It didn't sound real! Another sounded off, a little closer to us. And another! The basin seemed full of elk, but the greatest thrill was seeing a group move out of the timber to a tiny meadow that was turning rosy in the new sun and sighting the glinting antlers of three bulls...one huge and two smaller.

The big fellow could easily have been the one that had sounded off only a few minutes earlier. With the binoculars I actually could see his breath in the still air. Then the rapidly moving fog cloud slipped in to cover all, like closing the lid of a box.

We decided to slip into the fog cover to work around the basin to a point above the bulls then give a call or two on the elk whistle to bring these elk right into our waiting arrows. We were both pretty excited as we worked down that steep hillside, trying our best to be quiet, but finding the going like walking on a bed of marbles. The farther down we worked, the more like cold potato soup the cloud became.

The forest was a nightmare of snow-covered deadfalls. After what seemed like at least an hour, but was more like twenty minutes, we figured this was the spot, a bit above where we had spotted the herd in the meadow. Out came the elk whistle. Taking a breath in deep I let 'er go. No sooner had I wound up with a grunt than the bull sounded off a few yards away in answer. I'm not so sure my calling don't sound just a tad better, but his grunt had more authority.

continued on page 14



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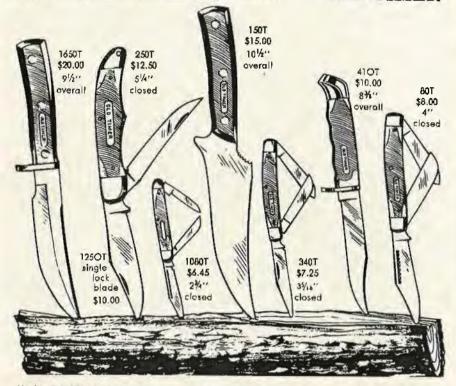
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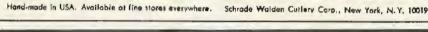
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TECH

WRONG SHAFTS

Last year I purchased a White Wing bow of sixty-nine inches with a thirtyeight-pound pull at twenty-eight inches, and am using a ten-strand string. When I bought this bow I was using number 2 Micro-Flite shafts and only pulling 261/2 inches. I was getting a good, flat trajectory from these

This winter, I purchased a dozen 24SRTX aluminum shafts full length and spined for a thirty-eight-pound pull at a twenty-eight-inch draw length. In shooting these arrows, I do not get a flat trajectory and the bow seems slow. I am using plastic fletchcttes of the slip-on type. With everything being matched, it seems to me that I should get a better flight out of these arrows and that the bow should

Using the ten-strand string, what is the best brace height and fistmele, to get the most working action of the

Could a person go to a smaller or lighter shaft and still be spined for this bow and, if so, what is the recommended size?

In ordering these shafts, I ordered full length. Would they have been spined at twenty-eight inches only?

> William L. Jones, Sheridan, Wyoming

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(We presume that you still are shooting a 261/2-inch arrow. With a bow of thirty-eight pounds at a twenty-eight-inch draw, you will develop about thirty-four pounds at your draw length. The normal Micro-Flite shaft size recommended with such a combination would be a size 3. You must obtain good release to be able to shoot a size 2, with good accuracy. This is a light shaft and accounts for your flat trajectory.

(In aluminum, you can go to the recommended light weight shaft, a 1713. Such a shaft should give you at least the results of the Micro-Flites you were using. We suspect that you may have ordered shafts for a thirtyeight-pound bow, without stating that you were only drawing 26% inches and your bow weight was only thirty-four pounds. If this was the case, you may have been supplied with a considerably heavier shaft than required and thus have seen a decline in your efficiency of performance.

(You should order arrows or shafts by stating the bow weight at your draw. As there is often a choice, the

Continued on page 80

The Reign Bow

A STAFF OF PROFESSIONALS WHO "BRING ON THE REIGN"

The GOLDEN EAGLE Staff examines a shooting machine equipped with chronograph that tests speed, smoothness of draw, and release...

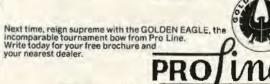
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by Emery J. Loiselle



Which of these bows is mechanical? Which is a machine, or are they all?

CASE FOR THE COMPOUND

On a previous occasion I sang the praises of the compound bow. In view of recent controversy and a recommended modification of the definition of a bow by the AAC Equipment Committee which would rule out the compound in all competition, I feel compelled to defend the compound on the grounds that it is nothing more than an extremely efficient bow representing tremendous progress in the state of the art.

Hundreds of archers who purchased compound bows may have to hang them up. To kill an expensive piece of equipment is one thing. To kill it after so many archers have purchased it is unfair. Perhaps I am a bit selfishly motivated in favor of the compound — ownership by a husband and wife team as in my case represents a \$500 investment laid to rest.

In the same vein, perhaps what prompted some of the new recommendations, not only on the compound but on releases as well, was selfishness on the part of archers who are resistant to change. Objections like this have accompanied every important advancement in archery. The advent of fiberglass for facing and backing brought about greater arrow speed due to progress in materials. The recurve development imparted greater arrow speed due to progress in design. Should we outlaw these advancements and go back to the straight wood bow?

The NFAA by-laws propose to expand and promote field archery. The term, freestyle, connotes variety in equipment and technique at the choice of the archer with freedom for progress in the sport. The compound was legalized by the NFAA in all classes in February, 1970. An about-face at this time is regressive and unjust to archers who bought in good faith.

Game commissions in many states go along with the archery associations on what constitutes a legal bow. Hunters who bought a compound for their sport may find the bow is outlawed in the woods. This is inconsistent. On the one hand a state may require a bow of a specified draw weight for adequate killing penetration in game. On the other hand, the compound, giving greater penetration with

Continued on page 47



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KITTREDGE

continued from page 8

Now what? I'm not much of an elk caller, though I've hunted the animal guite a number of seasons, but never when the rut was on. We waited with bows ready, expecting a charge at any moment. All was silent. Then a crunch, And another. It seemed like whatever was there was moving away. Maybe we should call again.... I did.

No sooner had my call died in the fog than the bull answered back, but a bit away from us. We waited a few more moments when the bull sounded off all by himself, so I answered him, giving a real gutty grunt at the end. He answered back with almost a growl, but again it seemed to be from a different place and bit farther away. That was his last call. We waited for a little while. Called again. Waited, then decided to pussy foot after the elk in a wide circle trying to see them through the murk of fog.

After a fruitless hour of this we topped out of the basin onto a broad meadow, moved to the far edge, and tried another call. Almost at once we got an answer, far away on the side of the basin where we had entered. To try to see a little better, we hiked upwards a hundred yards or so. No sooner had we found a rock and cleared off the snow than the foo lifted, exposing the entire basin and showing a herd of elk right below us hardly a rifle shot away.



Veteran hunting guide Ray Torrey uses an elk bugle to call in a bull in the wilds of state of Idaho.

We tried a call - got an answer, too. In fact, I saw the bull stretch his head out and pull his antlers straight back as he whistled reply to us. Then he did a curious thing. He trotted at one of the cows ahead of him and hooked at her rump with his antlers, prodding her up the hill. He prodded three or four more, moving the entire group of eight or ten rapidly ahead of him. There was no doubt about it, he was moving these elk away from us and over the rim of the valley! More looking with binoculars showed an even larger herd lower down and a bit farther back behaving in the same way. We would call, then watch the bull's answer from time to time, but the effect was to cause them to hustle up the lady elk faster over the hill.

Later I had a chance to speak with an old time elk hunter and the present game control agent for the area. I was told that our elk had apparently already developed their harem of cows and that our bugle would make the herd bull angry enough to reply back, but that he would feel he had his already so why fight. Instead he would move

continued on page 16

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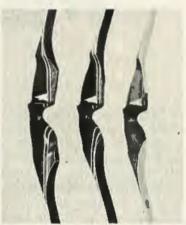
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continued from page 14

his cows off where the challenging bull could not get at them. It seems that single lonely bulls are the ones to search for.

Game calling is like that...a great sport but one requiring a knowledge of the animal being hunted, as well as knowledge of how to speak his language with a call. Calling has become increasingly popular the past few years. A number of bowhunters are taking advantage of the art in bringing game into close bow range.

Much has been written about calling in predators like coyotes, fox and bobcats, probably because they are the easiest to call...the caller does not have to imitate the animal's language, he just has to create a sound the animal is interested in. In the case of predators this call need not sound exactly the same with any two callers.

Have you tried to caw up a crow? Or cackle at a goose? Or turn a flight of ducks? Here you have to learn to master the lingo, with the local accent yet! Of at least equal importance is knowing the workings of the wildlife, or you can blow the call and the hunt, just as Caesar and I did with our elk.

The number of animals that can be lured is surprising. When using a predator call I've had badger come running in, gnashing their teeth, magpies flying overhead, numerous deer showing up, to say nothing about a javelina one time. I've heard of other callers getting up a bear or two.

The Indian seems to have known how to effectively call up deer. Alaska guides speak with moose and get paid pretty well for the language lesson, I might add. Have you ever looked at a call maker's catalog? It's hard to believe the variety of models being made — just about one for every type of critter. These same call makers say you can learn to talk any one of these animal languages easily through written instruction and phonograph records.

Decide on what sort of calling you want to try, then jog on down to the local sport shop and look over the selection of calling equipment. If the dealer is a caller himself, he can be quite a help in selecting a call that is easy to blow and has an acceptable tone. Buy a learning record so you can play the sound you are trying to produce with the call, then work at it until the two sound identical...a quick way to learn the proper sound technique.

Try to locate other hunters who successfully call the same animal, and see if they will take you out during a hunt to see how it is done or meet with you to hear how you sound. Read all the information you can about the habits of the animal or bird so you have as much knowledge as possible of when and where to call.

A macaw may learn to say hello with such a perfect accent that you couldn't tell him from your best friend in the living room, but if he sounded off in the pitch black of your bedroom when you didn't expect a soul around, you would hardly react casually. This is what can happen in the field when you say, "Hello there," to a moose, only to have him throw up his head and take off like a locomotive to stomp you right into the ground!

Don't lose confidence. The greatest mistake in learning to call is giving up before you really learn how. Calls work when the caller knows what to do. If you don't pull in something today, you will tomorrow. Keep listening to the record and perfecting your technique. Keep looking for successful callers with whom to talk. Learn every way of presenting your call while hunting. If nothing else, your constant practicing will give you a continuing excuse to get out of the house.

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HE LONG, NARROW box, accompanied by a smaller one of similar shape, had the bold printing on it that proclaimed it came from Shakespeare's Archery division in Kalamazoo, Michigan. The bow turned out to be perfect for my coming whitetail hunt. It was a sixtyinch Ocala X17 bow in fifty-pound draw. The length would be good for shooting from trees and the poundage adequate.

The second box contained a dozen of Shakespeare's new Thunderbolt arrows with bright fletch and four-blade broadheads. These shafts were thirty inches long! With my 27½-inch draw, that left a lot of arrow hanging out. My worst problem was that the arrow couldn't be shortened. The fletch would have to be cut off, a nock insert placed in the aluminum shaft and refletched. The tip couldn't be cut, since the broadhead is an integral installation itself without a ferrule.

The bow was braced, a few practice shots made to set my nocking point, which was crimped in place using the Saunders Nokset. A spare string was quickly produced and shot in with a few arrows and the nocking point set and tightened. The new Ocala and the Thunderbolt arrows were packed into the car along with one of my old bows as backup. A spare bow is not only good insurance but good common sense.

In Albuquerque, I picked up Jack Niles and other hunters going on the trip. In Abilene, Texas, an early phone call rousted Joe Mathews.

Mathews is a soft-spoken Texan and a devotee of bowhunting. He had promised deer running through camp, but I have heard that story too many times to get excited.

He told us to follow him in his pickup and gave directions in case we became separated. He warned that it was locked gate access, so we had to go in together.

Ed Hanna, Lee Burnett, Bob Norman, Curt McClanahan, Richard Dix, all from Albuquerque, were to join Mathews and us, along with Ed and Ron Wintz out of Colorado.

Burnett is New Mexico barebow broadhead champ; McClanahan is a top target shot in the state, while Dix had won the trip in a drawing in Nile's

Hanna is a top target shot as well as a guide in the New Mexico hunting areas and Norman is an avid bowhunter, when duties with the Albuquerque police department allow. The Wintz brothers own cattle ranches in the high country near Creede, and guide during the Colorado seasons,

We wheeled into an oak grove and set up camp. A big army surplus tent would take care of most of the group. A few would go into the other tent brought by Norman and I planned to sleep in my station wagon, out of the Texas frost.

Camp set up, we gathered around the fire ring to get a run down from the ranch owner. We were allowed

three whitetail on our \$25 nonresident license. The rancher wanted to thin out his deer population and requested that we shoot only one buck and two does to fill our tags.

With turkey season open, we could take a gobbler if we found one with a beard six inches or more. He also wanted us to shoot all the nutria and armadillos we saw.

The nutria were taking over the water areas with their prolific breeding and the armadillos dig big, deep holes that break legs on livestock.

There was about two hours before

dusk, so we took bows and some cull arrows to expend on critters.

Groves of oak and pecan were littered with, dry leaves carpeting the ground to make walking noisy. The ground was rolling, with nothing high enough for a landmark.

When Mathews had said there were deer on this ranch he hadn't been pulling a Texas tale. Every thicket seemed to produce a flag running away. These Texas flaggers average about fifty pounds dressed and, when they broke cover, they ran without a bouncing run like a muley, not stopping to look back. Stalking on the leaf littered ground proved impossible due to the brittle crackling underfoot.

The first impression of my new camo-sleeved Ocala bow had been good. I had taken some field-pointed shafts to shoot the bow for performance and to become accustomed to it. Hitting well on stumps, clods and dirt banks at various ranges, I took one of the Thunderbolt arrows from my bow quiver to see how it would perform, These shafts are designed and made by



Shakespeare to be shot from bows ranging in draw from forty to sixty pounds, using the same size arrow.

The Thunderbolt has a bright orange and black shaft with two orange and one yellow fletch. These are laid down the shaft almost straight. The four-blade broadhead is inserted into the point of the shaft with notches cut into the end of the swaged shaft to fit the blades. When I had touched the blade with a file to sharpen them I had been surprised at the toughness of the steel. They sharpened hard. With eight of these in a Bear bow quiver, the bright fletch. called Vista Vlage by Shakespeare. made the arrows easy to find in the heavy leaf-covered ground or in an open field. At the same time, they made me equally easy to find by other hunters and whitetail.

I always carry a couple of blunts in the back of my modified bow quiver to allow me to shoot continually when game isn't in the area. I found the Thunderbolts didn't lend themselves to stump shooting. If I hit a soft bank the blades stayed where they should but on wood or an unseen rock the sections flew all over, the notches cut in the swaged tip bent back and the shaft was unuseable. That presented no real problem, as the ferrule or swaged section of the shaft had a five-degree taper that allows the addition of a standard broadhead or field point.

Up and out before dawn, I passed a clump of oak and flags moved out the other side. Deer were more than plentiful. I ambled to the creek, a jumpable stream in most places but also with areas of backwater that resounded with the splash of nutria hitting the surface at my approach. Nutria are like overgrown muskrats and a nuisance in the south, but I had never even seen one. Now was the time.

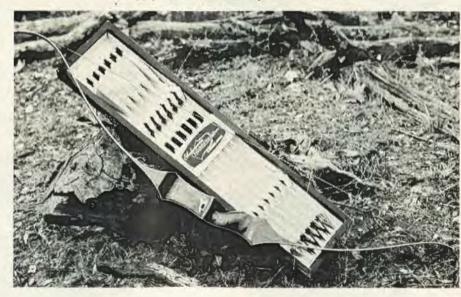
I saw a likely spot in the creek ahead, a bushy section with limbs hanging over the water and plenty of cover. A fat, ratlike character was perched on a limb over the water just ready to plop in to safety. I detained him with an arrow right behind the head. I had held for the area just behind the shoulders. The shot was from the bank at about ten yards, it had to be a hit or chalk up one lost arrow. My first game with the Ocala kicked in the water where my hit had placed it and managed to get upstream.

When I pulled the shaft from the bony area it had hit, preventing the arrow from passing on through, the blades came off the tip.

Mcanwhile, Richard Dix had perched in the overhanging limb of an oak



Above: Rod Wintz and Lee Burnett drag their bucks to pick-up point. Flat country is covered by pecan, oak. (Below) Test tackle consisted of 60-inch, 50-pound bow, supply of 30-inch Shakespeare Thunderbolt arrows.



over the creek a few hundred yards from camp and took a nice whitetail buck for first meat in camp the first day. The racks we had all seen in the morning hunt hadn't been trophy caliber, but there were nice ones seen on the far hills. While I had been plinking varnints, the others had been down to serious hunting.

Night found three deer hanging. Lee Burnett and Curt McClanahan had gone over to the north pasture, climbed an oak and waited. They had both been rewarded with bucks. Everyone commented on the number of armadillos in the area and some of these had been taken with expendable arrows. I had seen game, but hadn't drawn on a deer yet. I had better stop plinking

and rambling and start stalking and

The method of hunting had been from tree stands. They had found a likely crossing or well used trail, crawled a tree and waited. I hate sitting and waiting for game, but I would have to give it a try.

The next morning I shivered until ten on a tree stand that had all the prescribed conditions: well used trail, crossing area, plenty of feed, in sight of the creek where they went to water. Thes factors produced but one lone-some doc crossing the creek over two hundred yards away.

Monday night found more game hanging. Burnett had his second, while



Thunderbolt arrows were tipped with four-blade heads. A hit in rocks can result in damage at left, (Below) Burnett lugs his buck, taken from a tree stand.



McClanahan also had filled his second tag. Dix had come close again from his lofty perch and Mathews found the area he felt would produce for him. Dix had taken a tree stand and had nothing but bucks under him all day and, since he had filled his first tag with a buck, he couldn't take another.

I had spent time to get up on the sharpest eyed critter on any legs, a wild turkey. I found several flocks that day and had spent hours trying to see if I could find a legal bird with six-inch beard. I could have had a fifty-yard shot, but when I stood up, they took off at a turkey trot to become lost in the brush. I have never tried to hunt anything as cautious as those birds.

Tuesday saw the end of my

armadillo jinx. I took six that wouldn't dig any more holes for our rancher friend. The Thunderbolt shaft and point had great effect, until I tried to extract the arrow from the armor. The blades pulled off again and I had a soft-nosed field point in my quiver. If you ever get the chance for an armadillo, use old arrows. When hit, one will take your shaft down a hole with him and break it as he makes the dive or roll with the shaft and break it.

Wednesday, I found a tree that looked great. There were trails crossing from the oak thickets and another from a stand of pecans. I found a limb I could reach and lifted myself into the tree. I had placed my Ocala on the ground with my mylon line I always carry hooked under the string on the upper limb. When I tried to hoist the bow into the tree, the line didn't catch. Here I was with the sun starting to break in the east, my bow on the ground and I didn't want to make any more noise by getting in and out of the tree again.

I took my oversize bowlock off my wrist, tied it to the end of the line and lowered it down. The lock hooked under the string. I moved it up until it caught and lifted the bow into the tree. I perched there until 10 a.m., feeling more like a vulture than a hunter

Since I have trouble waiting, I had a paperback book that morning. I had covered most of it by ten, but still had a few chapters to go. I would read a few paragraphs, look over the area and go back to the book. This may sound a bit nonchalant, but it was the only way I could prevent taking a long shot that I didn't want. I have no idea what the book said as I read it but it did keep my mind off the big doe that was moving my way.

She moved up under my tree and look right up at me. The book was in iny caino pocket and my Ocala in hand with that bright fletched shaft on the string. I froze, cold, but from movement so she wouldn't spook. I had waited over an hour for her to move this close. She gazed at me, then dismissed me. She moved off toward the trail, stopping to nibble at certain tufts along the way. I was in position, shaft nocked and told myself, if I missed at twenty feet, I'd fall on my head. She took two more steps, lowered her head to take another nibble and I picked the third rib back and high to get a good lung shot. I came to full draw on the fifty-pound sixty-inch Ocala and watched the bright fletch zip through her right behind the third

When the arrow hit her she whirled

to her right, backtracked, then stumbled as she made another right turn out of the area.

I jumped down from the tree, knowing she couldn't be more than eighty yards with that hit. No need to wait with a lung shot like that. I moved to the hit area to check for blood and found none. I moved down to where my Thunderbolt had been stuck into a dry oak limb as the doe had turned. With my high angle from the tree and her closeness the arrow didn't have room to pass through; it hit the ground and stuck there, pulling out when she left. When she staggered at the other turn she had lodged the shaft into the limb.

No blood there either. I was positive of my hit area and this blood trail problem wasn't new on this hunt. There had been several deer hit in these leaf-littered groves and the blood sign was blown away with the wind and the leaves. It did make tracking almost impossible. I scanned the entire area, noting a clump of down brush, dry and windfallen.

I nocked another arrow, moved slowly toward the windfall and nothing happened. I glanced back toward the slight gully heading from the last point, where lay my first whitetail, down and very dead, not eighty yards from the hit.

McClanahan had his third deer tagged and lying by the road, where we added mine for later pickup. Burnett had towed a trailer down to take the meat back and, although we had been skeptical, we were now very glad he had done so. When someone had a deer down, he brought it out to one of the ranch roads. It got warm enough during the day to make it advisable to put the carcass in the shade until picked up.

That afternoon I had returned to camp to replenish my dwindling armadillo arrow supply. I had broken two more shafts to account for two more, when Mathews came across the dam below camp with a buck on his shoulder.

"Caught him coming around the fence corner. There must have been forty deer between me and him," Mathews recounted. "I waited and he came within forty yards, so I put one where it would do the most good."

Mathews had been hunting this ranch for five years with the bow and this was his first kill. But he tagged two does to fill his limit before the hunt ended.

One morning, Burnett said he would go to the east fence and drive the deer back to us. He had his three hanging in camp. I was ambling down

With two female deer authorized for the hunt, as well as a buck, B&A's Bob Learn had to settle for one doe.



Almost hidden in the shade by his camouflage clothes, Richard Dix poses with some of Texas whitetail taken.



a double truck track about 10 a.m., changing location, when I heard Burnett bellowing on the east end. I broke into a trot to get to a stand I felt would be perfect for this time of day. I never made it. Deer came busting over the top of the small rise all around me, fifty would be minimum. I stood there, greedy for a buck; they all were gone as I sent a last desperate shaft at a big doe. The deer had been moving between Burnett and myself and, had I been two minutes earlier, they would have all passed under the stand I didn't make.

Of the twenty-one deer taken, there were a twelve-point, two ten pointers, two eight pointers and one four-point. Rod Wintz had been hunting in the west pasture, when a nice buck came up about sixty yards from him running. Wintz was shooting a forty-five-pound bow and took that buck at over sixty yards through the heart.

One noon, after lunch, we sat cussing and discussing the high wind that had come up. Dix said that this didn't get any deer on the hanging tree so he was going to go out and pop one. Thirty minutes later, Dix came back with a nice doe on his shoulder.

We accused him of sandbagging and having hit her earlier, but the carcass was still warm. He had been heading for his favorite tree stand on a fence corner, when he saw her feeding. The wind was right and strong helping to cover any noise he might make; the ground was open with no leaves so he decided to stalk her.

He moved when her head went down and got to within twenty yards of her before shooting. When she lowered her head to browse he placed an arrow right through her.

My bow went onto the mass weight scales minus the bow quiver and camo sleeves and balanced at 2½ pounds, a light bow that had proved deadly. The riser of bubinga with white glass accents on the back and belly. The hardrock maple core is covered face and back with brown Gordon Bo-Tuff and dark tip overlays. The glass extends the entire back of the bow and has all except the handle cutout on the belly covered. The length of this Ocala is sixty inches and, when braced with the factory string, it drew a true fifty pounds at twenty-eight inches draw on the bow scales. A few pulls up and down the ruler at different draw lengths proved the smooth draw in practice was shown in the gradual buildup in draw weight on the ...

The Ocala has a 5½-inch sight window, which is big enough for sight mounting. The shelf is square with the

Continued on page 78

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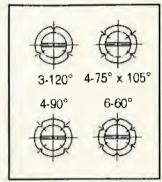
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A Moment Of By Roy Hoff Fever Tever

One Of The True Bowhunting Pros Recalls Some Of The Less Admirable Adventures Of His Long Career!

A hunting buddy once said to me, "When I no longer get buck fever, I'll become a drop-out of this bow hunting sport of ours!"

Here's a guy who says he needs it. By golly, he can have it; I don't want any part of it! Few hunters have survived a big game hunt without at least a few symptoms of this dread malady. Some have been so badly stricken they actually have wrapped an expensive 'scope-sighted rifle around a handy pine tree. I always have been one of those wretched creatures listed in the latter class.

Many years ago I got hooked on this bow and arrow hunting business. My rifle-hunting buddies would look at me as if I were some kind of a kook and, with tongue in cheek, would ask a tot of silly questions such as, "Didja get skunked again this season?" Or, if I did manage to hang some venison on the meat-pole, they'd ask, "Who shot 'im for ya?"

It's conditions like this which make a guy really susceptible to buck fever. And, the harder you try to make these so-called buddies eat their words, the more shook-up you get.

I remember one time when my bow arm acted like an old gate swinging on one rusty hinge. It was like this ---

I was standing on a four-foot-thick Ponderosa log. It was an ideal spot for a stand which provided a clear view of about an acre of chapparal. It was nearing sundown. If a deer were to become a victim of my hunting ability, he'd better show up soon.

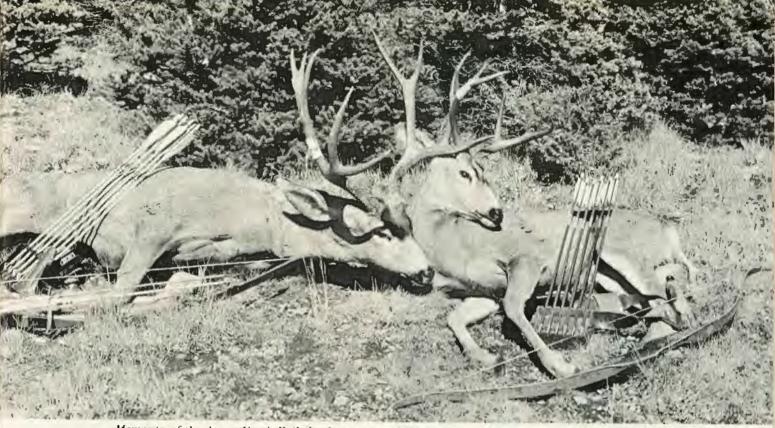
ing ability, he'd better show up soon.

The great moment finally arrived. A forked-horn buck was spotted at the edge of the clearing, nibbling on some buckbrush. I could see his antlers just barely in view above the top twigs. He was either awfully small or the brush was much higher than I thought. I tried my best to find a spot through which I could shoot a broadhead. No dice.

Buck fever was creeping on. There was a buck right out in front of me, within easy bow range, but I couldn't even get one shot. He'd feed toward me and my spirts go up. Then he'd decide the eating was better over the other way. This was just not my night. Then when it looked like all was lost, here he came again

Mayhe not the biggest, but he sure looked good. That happy grin spells success, near Mt. Charleston, Nevada, after ten years of dogged, patient endeavors to steer an arrow in right direction!





Memento of the day at North Kaibab when my hunting buddy and I double-scored.

right toward me, biting off a bush-top here and nibbling a choice morsel there. Still no way to get off an arrow. The longer I waited, the more I became unglued. I had to spraddle my legs to keep my knees from knocking together.

About fifteen yards directly in front of me and right in the general path of the feeding deer was a small clearing about ten feet across. Right in the middle was a little patch of grass which looked like a big shaving brush turned upside down. Boy! If he'd just come out into the open and take a bite of that grass, we'd have deer liver for dinner.

As if in answer to a prayer, that's exactly what that deer did. He suddenly stopped whatever he was doing and trotted right out into the clearing, dropped his head into the grass and started grazing. All this, mind you, was taking place within twenty feet of where I was standing. (The distance between where I read my evening newspaper and the fireplace in our home.) The big event soon would be over. Just draw the arrow, aim and loose. Dead deer!

Things didn't exactly work out that way. I tried to pull my bow but my arm was so limber it was like ballbearings were in my elbow. In desperation, I held my bow downward, stiffened my arm and locked the wiggling elbow, raised the bow from that half-drawn position and let the arrow fly. I didn't aim very good for the arrow hit the ground right in front of the buck's nose and splattered numice neither over his head.

nose and splattered pumice pebbles over his head.

The buck must have thought lightning had struck.

He knew danger was near, but from which direction he couldn't tell. In an effort to locate the source of the disturbance he hopped around in the chaparral on his tip-toes like a kid on a pogo stick.

I grabbed another arrow out of my shoulder quiver and tried desperately to nock it onto the string. My hands were shaking so bad I couldn't hold on to the shaft. I dropped it and as it went clickity clack across the log. The deer disappeared into the forest.

That, fellow archers, is buck fever. I have tried to explain the cause and effect. Now, let's see about a possible cure.

When you have suffered an attack of this rather prevalent "disease" it usually gets worse instead of better. Actually it gets so bad it changes from the knee-knocking variety to freezing on the string. I suspect I'd better explain this condition, for it's rather rare in its side effects.

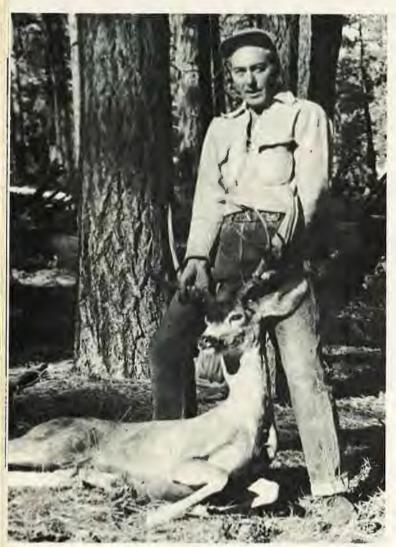
Five deer seasons had come and gone. The same of story to Frieda: "Oh Dear, no deer!"

This year, after scouting the area during fishin' season, I found a certain "can't-miss'er-spot." On opening morning, before daylight, I was on a pre-selected stand, on top of a small flat-toped pile of lava rock. My back was toward a huge uprooted tree stump which would shield any slight movement visible from the rear. On each side of my stand was a shallow guich. This was a spot where any deer in the area likely would pass right under me on one side or the other.

An hour or so went by. The sun was up. No buck fever, 'cause I hadn't seen hide nor hair of a buck.

One more look around before returning to camp for breakfast. Suddenly I lost my appetite. Coming toward me from the left side and in back of my stand was a forked-horn buck ambling along up a little trail right toward me. Midway between the deer and me was a small Christmas tree. I leaned back so the deer couldn't see me. He hadn't a care in the world. Just walking along swinging his antlers gently from side to side.

No buck fever this time. I came to full draw and aimed at a spot just in front of the little tree. When the buck came into view I'd plunk him with the arrow. No chance to miss because the distance was only 15



I was so anxious to be photographed with my Kaibab buck that the little chore of field-dressing had to wait!

yards. Here he came, Now let 'er go! No, might as well let him get a little closer. No chance to miss now. Something's stuck. The string won't go. Dog-gone it! Where'd that deer go? He must be under the rock I'm standing on, Deer don't crawl into holes and he hasn't come out! Better take just a little peek over the edge. Bow still drawn. No chance to miss this time, Distance only two or three feet!

That deer was as trapped as if he were in front of a firing squad. He didn't dare to move. But when I stuck my head over the edge of the rock and looked him square in the eye. He didn't wait around any longer. It seems unbelievable, but I still couldn't let loose of the string. That is, not until the deer had reached the . safety of the woods. When I finally did get the shot off it probably resembled some kind of a flight shot.

All I can remember is I shot an arrow, and it fell to the ground I knew not where.

Talk about a drop-out. I was ready for the nuthouse. Something had to be done to cure this business of getting shook-up every time I saw a deer.

Before next season I had lots of time to diagnose my condition. For the next two years I adopted a sort of couldn't-care-less attitude. I deliberately hunted good areas and when I saw bucks I passed them up. When the gang wanted to participate in drives, I accepted the job of bird-dog and let the others do the standing. If we road-hunted I did the driving. There finally came a day like when I was sitting in a tall tree stand over in Utah. A herd of six bucks and four does were feeding out in the alfalfa field. Instead of grabbing my bow and make a wild dash into or around the meadow, I spent some time photographing the animals and watching their behavior. I learned much I never would have known if I'd been intent only on making

Then there was a time when Waldo Wilcox and I were building a blind. Within a hundred yards were two deer, a buck and a doe, grazing peacefully. We con-tinued our chores without disturbing them. I assumed the attitude they'd be around if and when I wanted

In 1952 we opened the archers-only deer season in the Kaibab of Arizona. As we approached our destination we spotted two bucks standing among the trees a short distance from the road. There was a four by four and his little brother a forkey. I stopped the car, grabbed my bow and reached for a broadhead. Hey now! Just a dog-gone minute! Let's take a photograph first and bag a deer later. I was more proud of the photo I got than the big three-pointer I bagged later in the season.

I finally was cured of buck fever, Almost, that is, Deer after deer went down for the count with an arrow through the heart or other vital organ. To be sure. I had a guickening of the pulse each time, but nothing resembling the buck fever of old. But there came a day. It was 1969, I was in a tree stand over in Colorado. Small bucks had been around my stand for an hour or more. Nothing worth shooting so I passed 'em up.

The sun went down. About an hour left of day-light and shooting time. Off to my left and uphill a big buck made his appearance out of the aspens. There was no doubt but what this animal was of record class. He was a foxy ol' guy. That's how he was able to grow such a big rack of antlers. My stand was near a spring. Obviously he was coming down to water. Also just as obvious he was in no hurry. One step at a time then a panoramic look-see for danger.

Suddenly I thought, Here we go again! There was no mistaking the symptoms; buck fever was creeping on.

It has been said, "Anticipation is greater than realization." Maybe so, but anticipation also creates buck fever, and you'd better believe it. I figured I'd better have a little talk to myself. It went something like this: Now look, ol' guy, you've been waiting 30 years for a trophy like this, now don't goof! Don't even look in his direction. Don't even reach for that bow. See that spot down there where the two trails meet? Well, keep your eyes glued right there. Don't even blink your eyes until he reaches that spot. I kept the mental dialogue going full blast. It paid off. The big buck walked right to the spot. I was above him so he couldn't see me. The floor of my stand is carpeted so he couldn't hear me. The slight breeze was drifting my scent down the canyon.

No need to go into the "how I done it" details. Suffice to say later that night when I called Frieda out to see my prize in the pickup. She said, "I'll bet ya got buck fever!"

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TO RUSSIA, WITH SHAFTS

U. S. Archers Invaded - By Invitation - The Soviet Union, As A Forerunner To This Year's International Competition!

AMERICA'S DOREEN WILBER topped all other women archers at the Russian Invitational International competition. Her score of 2391 in a double FITA round won the ladies' event, outscoring shooters from nine other nations.

At the invitation of the National Archery Association of the USSR, four top American archers - plus Clayton Shank, NAA secretary - traveled to Moscow to participate in the Russian sponsored event, along with Denmark, Finland, Poland, Czechoslovakia, Mongolia, Italy, Great Britain, East Germany and Russia. More than seventy of the world's top archers participated in the event, during May of this year.

Representing the United States were Hardy Ward, world champion; John Williams, runner-up to the world champion, Doreen Wilber, runner-up to the ladies world champion, and Nancy Myrick, national ladies champion

The trip was paid for almost entirely by the Russian hosts, who provided one-way air transportation on Soviet jet airliner, lodging and meals, the balance of the funds were provided by the American Olympic Committee and Bear Archery.

An exclusive interview with Mrs. Wilber tells the story of the Russian shoot. Here is what the champion had to say. "We left Des Moines, Iowa, by

Russian jet and our first stop was in London to refuel, from there, on to Moscow. When we touched down in the Russian capital the temperature was cold, almost freezing. The cold weather continued for the first few days of practice, but warmed up for the competition shoot.

"Most of the visiting archers stayed at one hotel, and frankly I couldn't pronounce the name while there or now"

"The hospitality of the USSR was warm and gracious, the Russians provided an interpreter who took the American team on a shopping trip and a tour of some of the city's famous landmarks. Most of the time was taken

up on the field either in practice sessions or during the actual competition. There was little time for any extensive sightseeing.

"The shooting field was excellent and beautiful. It was just beside the Moscow Lenin athletic stadium. We practiced for two days and then shot the double FITA rounds over a fourday period," Mrs. Wilber related.

For those who are unfamiliar with the FITA round, it is shot with 144 arrows, over a given distance. For the gentlemen's round thirty-six arrows are shot from each of the following distances; 90, 70, 50 and 30 meters. The ladies shoot the same number of arrows but from the following dis-

Right: The U.S. women's team seems pleased over the reception given them by their counterparts on team of the Soviet Union,





The U.S. team is composed of (rear row, from left) George Helwig, coach; Joe Thornton; Edwin Eliason; Larry Smith; John Williams; Marv Kleinman, manager. Representing the women, (kneeling) are (from left): Nancy Myrick, veteran competitor; Victoria Cook; Doreen Wilber, Linda Myers.



tances, 70, 60, 50 and 30 meters. When shooting the two longer ranges there are six arrows in each end and when at the shorter ranges there are three arrows shot during each end. The longer range target has a 122 centimeter diameter and the two shorter range targets have 80 centimeter diameters. The maximum possible score is 1440.

"The first few days of the practice in Moscow, the temperature was down to thirty-eight degrees and a little cold for the outdoor tournament, but when we started to shoot for score, it had warmed up to a nice sixty degrees and was excellent for the tournament," the champion recalls.

"The Russian invitational was the toughest shoot for women in which I have ever participated. The Polish girls are outstanding and the Russian ladies are also great. They won the team event at the World Championship at Valley Forge and did well at the Russian shoot.

"It was a great trip for all the Americans with one possible exception and that was the food. We all had diffi-

On male team for U.S., ages of the participants and their experience ranged from oldtimer Thornton on left to young Hardy Ward at right. culty, because the meals were mostly fish, then we had some mutton, I think, but what cracked the whole thing was mashed potato and hot dogs for breakfast three days in a row. That's when we didn't eat sardines for the morning meal.

"I'm also a big coffee drinker and I guess what bothered me the most was no coffee for the ten-day trip. We did try some of the Russian coffee but it was so thick that you could almost make a sandwich of it."

"The tackle used by most of the foreign shooters visiting for the Russian International was American made, with the exception of the Russian team their bows were Russian copies of a U.S.-made bow. All the shooters used aluminum arrows and most had plastic fletching and dacron bowstrings.

"The return trip after the shoot was by Russian jet, much like our 707. We went via Paris, to Montreal, then home.

"It's a trip that I'm sure we will all remember a long time and our hosts were most gracious and kind. If I had the chance to go again, I'd be happy to accept, but I'd be sure to pack some instant coffee in my tackle case." Of the American team, Hardy Ward placed sixth in the men's division with a score of 2300; John Williams was thirteenth shooting a 2252. Nancy Myrick placed thirteenth in the ladies' division.

A Special Invitation To The NAA Resulted In Door-Opening Diplomacy!

The Russians won the men's event, with Denmark second. In the ladies event, Mrs. Wilber, representing the U.S., was first while Polish and Russian ladies took second and third place respectively.

Tryouts for the 1971 United States Target Archery team were held June 19 and 20 at St. Louis, Missouri. The eight winners represented the U.S. at the tweuty-sixth World Target Archery Championship at York, England, during July.

During lull in the actual competition events, shooters

found their Russian hosts interested, also interesting.

The team is made up of Nancy

Myrick, Pompano Beach, Florida; Victoria Cook, Minneapolis, Minnesota; Dorren Wilber, Jefferson, Iowa; and Linda A. Myers, York, Pennsylvania, in the ladies division. The men were: Joe Thornton, Tahlequah, Oklahoma; Edwin Eliason, Seattle, Washington; Larry Smith, Glen Rock, York County, Pennsylvania; John C. Williams, Cranesville, Pennsylvania. The shooters are listed in the order of their scores.

Hosting the bi-annual tryouts was the St. Louis Archery Club. The event took place on the Forest Park archery range operated by the club. The range set up was excellent, according to many archers present, but the weather wasn't the greatest with the temperature in the nineties and the humidity also hitting close to the one hundred mark, it made for hot sultry shooting by the fifty men and twenty-one ladies trying out for the U.S. Team. There were twenty-two states represented at the tryouts.

Coaching the U.S. team has been NAA vice president George Helwig. The manager is the NAA president, Marvin Kleinman.

John Williams and Doreen Wilher finished in second place in the World Target Championship at Valley Forge State Park, Pennsylvania, in 1969.

Joe Thornton was world champion in 1961, placed second in 1963, 1965 and participated in 1967. He holds the U.S. Amateur Archery championship. Victoria Cook was world champion in 1963 and participated in three other world target championships. Nancy Myrick is the U.S. amateur ladies champion and participated in the twenty-fourth World Archery Championship.

With the FITA round's possible score of 1440, anything above 1200 is considered a super score and the archer must be considered a super star. America's Doreen Wilber not only won the ladies division of the Russian invitational shoot but her score of 1188/1203-2391 topped the closest man by 54 pounts.

Another interest point concerns the ages of the 1971 U.S. amateurs team. Five of them are 30 years old or older and the other three team members are 24 years and younger.

Two members of our U.S. team going to York, England, are from places named York in the U.S., Smith is from York County, Pennsylania, Myers from York, Pennsylvania.

BOW & ARROW Magazine will feature complete in-depth coverage of the 1971 World Championship in the next issue. Ray Robarts, a regular contributor to the British Archer, will be representing BOW & ARROW at York.



HERE IS YOUR CHANCE TO HELP ARCHERY!

We will forward all donations direct to NAA Travel Fund. Here is a simple coupon that will make it easy for you to offer support.

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30



Roulette



You Pay Your Money And Take Your Choice, But Here Are Some Sharp Points On How To Stay Ahead In The Game

> by Steve Barde

BROADHEADS HAVE COME quite a way since the Stone Age, though the basic design hasn't changed much. Folsom man developed a more sophisticated killing head, when he added a bleeder groove to his stone point.

American Indians used a wide variety of stones in their war and hunting arrows, and when the wagons started moving west, the Indians discovered the advantages of iron and used it whenever they could obtain it

We use metal in our two-edge heads, two with bleeders and three and four-blade hunting broadheads.

Which type is best? The one that suits you Some archers say they can't shoot a two-blade head, since it planes on them. Others say the two with bleeder give a better blood train to follow. The arguments or justification for using a

particular head can fill up all the time you have to listen. Let's take an impartial look at broadheads, if that can be

There are several qualities you want in a good head. It should have good steel that can be made razor sharp and it should hold that edge. It must have a true ferrule, so it can be aligned properly on the shaft to prevent planing when

Planing can be caused by many factors. One is getting the head on the shaft crooked. If that happens, it takes an amazing amount of feathers to hold it true—and that doesn't always work. Some heads are too big for the type of fletch on the shaft. A head that flies well with a helical fletch might plane with a straight fletch.

Assuming we have good steel and a true ferrule, what else do we look for in a head? How well will it take impact. A brittle head will break, if it hits or slides against a bone. One that is less brittle will go around or bury in the bone.

Brittleness can be measured by a Rockwell tester which uses a C scale. This compares the different steels by lowering a needle point on a section of the steel, actuating a weight, and noting the amount of indentation on the steel by a needle gauge.

Chuck Buck of Buck Knives, Incorporated, of El Cajon, California, told me "A Rockwell test tells us the hardness of the steel on the C scale, but it doesn't tell us the composition of the steel. As a comparison, our knives have a hardness range of 57-58 on the C scale.



Chuck Buck sets up Rockwell test equipment for author to conduct hardness tests on steel used in broadheads. The unit measures hardness, comparing one type with another.

"A broadhead must withstand hitting impact. The higher the Rockwell test results, usually the higher the carbon content of the steel. Hardness is determined by the composition, heat treating and tempering of the steel."

A variety of heads were tested on his machine. The ones which tested out to lowest were the blade insert types such as the 003 or the Little Shavers. These heads are not meant to have hard steel, since they rely on the razor blade inserts to do the cutting. The point must withstand the impact and the inserted razor blades do the actual cutting.

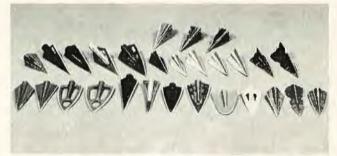
If the steel is low on the C scale for hardness it won't sharpen. The steel just isn't there to hold an edge. The three-blade heads proved out one of my basic theories. You can't form hard steel into a three-blade head. They were next on the scale above the low-rated insert types. The four-blade Copperhead tested in the high 30s. It will take a good edge.

The easiest broadhead to make and one you can put the hardest steel into is the two-blade head. You can add inserts such as Bear does or bleeders such as are on the Black Diamond to make a larger bleeding slash, but the basic construction is two-blade. A two-blade can be made with hard steel, since all that is required is a blade blank and a method of holding the blade to the ferrule.

The multiple blades must be spot welded or otherwise joined, and a press often is necessary to obtain the desired shape. Hard steel doesn't lend itself to this.



Broadhead is in position on the flat surface required for accurate reading. Lever on the left is lowered and the scale in front will read the hardness of the metal.

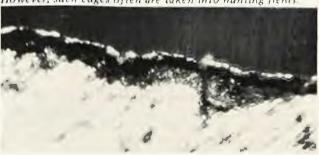


Variety of broadheads is representative of those being marketed today. In front row are two-edge types; middle row includes two-edge types with bleeder or inserts, as well as three-blade types. In the back row are full four-blade broadheads made by Copperhead. Author found that, regardless of the design, types of steel vary.

There used to be only a few ways to put a good edge on steel points. Now there are many. The method usually used by beginning archers is the file—it is one of the best.

No head is ready to take into the hunting field when it arrives from the manufacturer. They all should be reworked and sharpened to obtain the best edge possible.

Highly magnified, this is the edge of a standard factoryproduced broadhead, after it has knocked about for a time. However, such edges often are taken into hunting fields



A small vise helps in filing the first edge on your broadhead. Place the blade into the vise up to the ferrule, but leave an angle so the tip of the blade can be filed to the point. I prefer a ten-inch mill file, since it will cut the steel without going too deep and leaves a fine serrated edge when finished. The large file is to keep my hands and fingers away from that blade in the vise. If you sharpen a head prior to the hunt and cut your fingers, you will be a sad hunter, provided you can even draw the bow.

File from the back edge of the wing to the point. I move from side to side and actually lower the grind mark of the manufacturer to give me a wider and more even edge. Move the file forward only. Do the opposite side, and after a few passes you will have it started. Turn the head over in the vise and do the other side.

When you have the edge where you like it, lighten the stroke on each side and the burrs will be reduced until you have a sharp serrated edge. Many hunters never go any further than this for their broadhead sharpening. Fred Bear uses only a file on his heads.

There are many schools of thought on sharpness. One faction advocates the serrated edge. The argument is that the jagged edge will pick up the arteries and cut then in passing, as well as saw its way through the hide and flesh to reach the vitals. It has been proven time and time again that the heads kill and kill cleanly, only if file-sharpened.



This is the edge of the broadhead after it has been filed with a mill file. Note channels formed by the file teeth. Sharp enough to kill, it cannot be called shaving sharp.

(Below) Same edge after it has been honed; some of the file marks still are visible away from the honed edge.



The other school would side with my bowhunting doctor who wants his heads razor or scalpel sharp. That is absurdly hard to get. The argument against a shaving edge is that you aren't cutting hair but flesh, and a butcher doesn't use a razor; he uses a good steel knife. Surgeons use scalpels, so who is right? You can get a razor edge on your head by several methods.

Charlie Farmer showed me a Pearson Deadhead that had been filed first, honed on a fine hone, then stropped on leather, you could shave with it, and the proof of the edge showed up in a microscopic comparison. Let's see how this was done.



Loray broadhead sharpening kit allows one to file the head, then follow through with a small hone as shown.

File the edge, moving it back toward the inside of the blade with a fine mill file. Then take a good stone such as carborundum or Arkansas stone. Hone the edge of the blade, stroking first one side, than the other, until you have it sharp. You also can move down to a finer stone and hone some more.

Many archers never go beyond this point of sharpness, and they still have a sharp blade to use on any game. However, there are more steps you can take to refine the edge. Take jeweler's rouge and work it into a piece of stiff leather, then take the broadhead that has been filed and honed and work it down even more. If you don't have access to the fine rouge, you can take a piece of heavy, smooth leather and strop the blade on this.

There are devices on the market to put a sharp edge on steel. The Razor edge comes in a zippered leather pouch and contains a broadhead sharpener and knife edge sharpener consisting of two stones, one fine and one medium, and an allen wrench and clamps. You insert the two-blade broadhead into the clamp, tighten with the allen wrench and draw the head toward you on the stone, applying pressure lightly on the edge. Reverse the head and sharpen the other side.



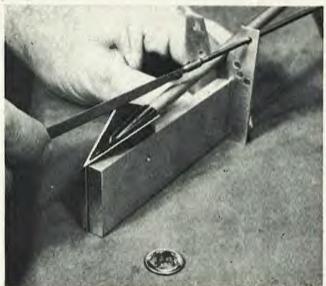
Another broadhead sharpening device is the Razor Edge, consisting of clamp that holds two-bladed head, set of two stones. Allen wrench is used to tighten the head. (Below) This is edge of a Bear Razorhead after honing on the Razor Edge unit. Note the sharp hevel, cutting edge.





Razor Edge device, author contends, fills its title in the fact that with less than forty strokes on alternate sides of the stone, blade is sharp enough to cut hair.

Another satisfactory device, is the Loray sharpener. A clamp holds the broadhead between two aluminum jaws. A small three-edged Swiss file with a long rod soldered on the front tip inserts into a hole on the upper end of the device to give you the proper angle to get the sharpest edge on that blade. The first unit I used had a unique little clamp with two arms that folded down. I carry their newest unit in the field.



Using one of the Loray multiple units, a three-blade head by Hi-Precision is sharpened. The dime in foreground is used for loosening the clamp which holds the head tight.

Using the file and vise technique you can sharpen two, three and four-blade heads, but you have to watch the file angle on the multiple blades. Honing three and four-blade heads is a different story. Many prefer to lay the head on the stone and move it down the stone honing two edges at the same time. The four-blade is honed in a similar manner by holding it flat on the stone doing two edges at one time.

When I get to the hunting camp I usually touch up the edges with an Arkansas stone. There are many field sharpening units available.

The first method is the pocket file. Bear makes a 5½-inch file with sheath that fits on the belt. They also have a Neet file with a three-inch blade in a molded vinyl case. This small field file also will replace rapidly the dulled edge on your arrowhead in the field.

Saunders Archery has a new item that features a file molded onto a plastic handle with round steel sharpeners. You can take the rough edges off with the file and put on a keener edge, using the rollers.

continued on page 74

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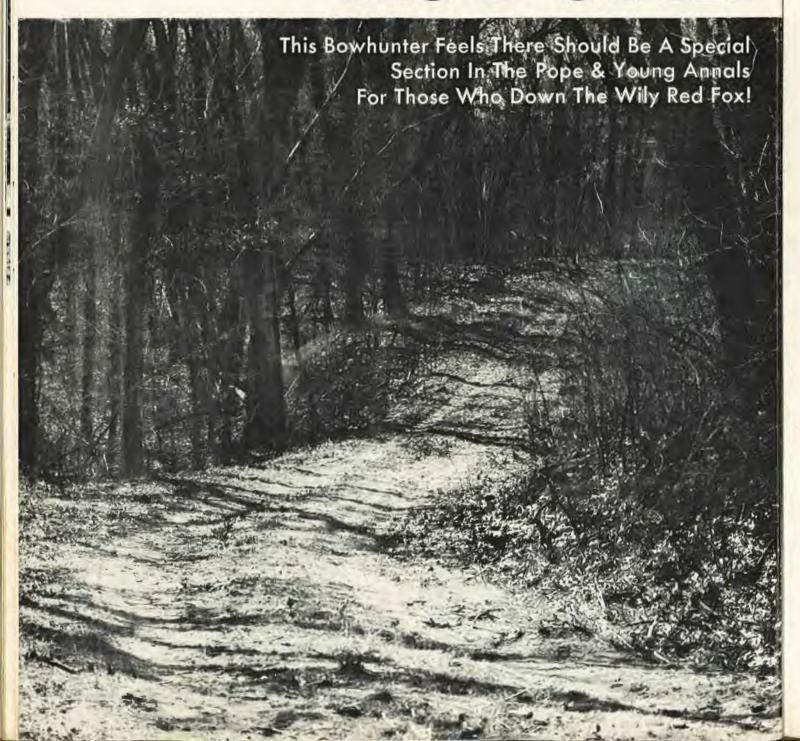
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Trail Of The Red Jinx



An EARLY MORNING hike, some years ago, found me skirting the edges of bottom-land timber along southwest Iowa's Nishnabotna River. Deer season was still six weeks away, but I was in the coverts anyway, searching for an opening day hot-spot. I moved quietly along the timber's border, stopping now and then to plink at leaves and twigs on the ground with hunting weight, blunt-tipped arrows, sharpening my eye for that moment of truth with a white-tail.

Rounding a turn, I spotted a movement in a stubble field far out from the timber's edge. Deer? Maybe. My binoculars would decide. A turn on the center wheel of my seven-powers cleared my mind of any doubt it was a fox. Not just any fox, but a red fox.

Within seconds of the first quavering cries of my fox call, the red was loping my way. I nocked a broadhead arrow to be ready and hid in the shadows of a nearby elm. The agonizing screams, faking a rabbit in distress, completely duped the fox and he closed steadily. At fifty yards, I pocketed the call. My bow was up, string taut. A final lip squeak convinced the red that dinner was waiting and he trotted in with ears erect and searching eyes.

The varmint was literally at my feet, begging, when I let the serving roll. I can still see the gleam in that redskin's eyes today, as he looked up at my full draw with a smile on his lips. Could he speak, I'm sure I would have heard him say, "Oh, it's only a bowhunter!" My shaft chunked into the sod, a clean miss.

But one miss on a red fox doesn't set me apart from other bowhunters. It could have happened to anyone. The other misses, however, make me a candidate for Colonel Elott's Archery College 'cause, since that first day, I could have carpeted the Rose Bowl with the foxskins I've missed. It's more than bad shooting, though; it's a Red Jinx.

Varmint calling is tailor-made for bowhunters. Bedecked in full camouflage, a hunting archer, tooting a call, becomes a fox's prey and most anything can happen. For me, it's been a decade and a half of frustration trying to X a redskin's hide with an arrow. I'd like to think bagging a red fox with a bow is akin to a hole-in-one in golf, but others have dropped reds. In fact, some of those successful so-and-sos were shoulder to shoulder with me in the same blind.

Fox hunting with a bow and arrow is an exciting sport. Luring red or gray foxes in close with a fox call necessitates a thorough knowledge of the species you're hunting, good calling technique and nerves of steel. You'll know, straight away, if you're ready for that close-in meeting with a whitetail, if you can keep your cool when a fox charges your back side in answer to your call.

Iowa bowhunters are fortunate to have both red and



New Bear take-down bow is perfect for the bowhunter who pursues both large and small game. Author snaps light limbs into magnesium handle for a fox hunt.

gray foxes to hunt. Red foxes are distributed almost statewide, while grays are limited to the big timber areas of eastern and southern counties. I've hunted both and find there's a big difference in the way the two varieties answer a squealing rabbit call.

The gray fox is a bowhunter's dream come true. Susceptible to rabbit squeals, they come readily when the set-up is right. A gray usually charges the caller and, once in, is reluctant to leave until he's sure the noise is not a potential meal. It's not uncommon to get two or three shots at a gray fox. Even though your first arrow misses, a little lip squeak will bring a slightly spooked graycoat back for seconds or thirds.

Cloyd Whitlock and I were set up in a good gray fox timber one fall morning, ready for any and all varmints that might be suckered into our ambush. Cloyd would be the caller, I was thirty paces downwind of him to surprise any fox that dared to circle for scent. This flanker technique works well for all varmints. We sat for a few minutes to let



The Bear magnesium-handled take-down bow not only has variations in limbs, but choice of sizes of the grip.

the woods get back to normal. Soon, songbirds and squirrels flitted through the timber's canopy, seeming to accept our presence or missing our camouflaged forms altogether.

The short, raspy screams on Cloyd's Weems call shattered the serene woodlot. I tightened my fingers around my bowstring and scanned back and forth for any sign of approaching fox. Two minutes, no longer, had passed as Cloyd began a series of very agonizing cries of rabbit despair. He paused briefly for a gasp of air and we both heard the tell-tale sounds of a fox coming in through the heavy leaf litter. It was a gray.

Gray foxes are fearless and this one epitomized the trait. He came straight at the call, ten yards and closer, before Cloyd could draw an arrow. His shot was deflected by a twig, but the shaft slapped the gray a broadside blow and spun him around with a yelp. Quickly, Cloyd shelved another broadhead and lip squeaked to the fleeing gray.

Leaves poofed up in front of the fox as he set his brakes. That mousey squeak had really taken hold of him and brought him back on the run. I watched helplessly from thirty yards away, screened by brush too heavy to shoot through, as Cloyd anchored on the returning gray fox. Zonk! A perfect hit dropped the trophy quickly.

Grays will do that. Return for a second shot, I mean. And it behooves the bowman after a fox to learn the lip sqeak for close-in calling or for coaxing a gray back for another try. It's quite simple to perfect. Make a kissing sound with your lips. That's the basis of a lip squeak, but for best results practice until you can draw the sound out for two or three seconds. You can amplify the sound by pressing the back of your hand, slightly wetted, against your lips as you sound out a squeak. Try it. It's the sound that turns on all meat eaters.

Even I can arrow gray foxes. Over a dozen have fallen to my arrows since I began bowhunting. One of the most exciting encounters I've had with a gray fox occurred last fall while I waited for deer to pass on a trail below my tree stand. Near dusk, I noticed a gray fox sniffing around a small meadow near my position and sent a quick series of squeaks his way. His cat-like bounds brought him in fast. I was up about ten feet and had that big-timber varmint dead-to-rights. But my wood shaft stopped with a thud just beside his hide. The fox whirled and skidded to a stop as he surveyed the situation. Before he could move, I'd nocked a second missile. It, too, only parted the hair on his side, but his reaction was spooky. At the arrow's impact, Mr. Gray squared away to the shaft and stood ready to fight with hackles up, back arched and teeth barred. My mistake was to offer a squeak at that tense moment. That gray devil looked right up at me, teeth still flashing and proceeded to circle my tree, huffing and hissing at my camouflaged

figure. Now I knew how a raccoon felt = I'd been treed.

I finally got the range with my third arrow and ended the gray's fancy ideas.

The record book of the Pope and Young Club now bulges with the names of bowhunters who have downed the elusive whitetail and mule deer, stately elk, trophy black bear and other record class big game. But, if my experience is any indication of its difficulty, you could list the successful red fox bowhunters on one side of a post card! They're tough to take with a bow and arrow. Occasionally, my deer hunting buddies get a pot shot at reds while on stand, but the number of hides stretched still wouldn't cover the "vitals" of a medium-sized go-go girl.

The fox call, used correctly, is still the best method for getting close-in shots at red foxes. Over the years I've come to recognize several behavioral patterns of red foxes that

Ballard screws broadhead to Converta-Point-equipped arrows, which are of cedar and were introduced recently.





Author feels that good fox calls include (from left): Burnham long range, Weems regular, Weems All-Call, Olt.

Full camouflage is necessity when calling foxes. Most important is headnet that is cut to allow visibility.



may hold part of the answer to their elusiveness. While gray foxes usually will charge in to my rabbit squeals, reds follow at least three different patterns when responding to a call, making it difficult to predict their avenue of approach. I label the patterns the unconcerned approach, the charge, and the circling approach.

Gary Lust and I were hunting the Turkey Creek drainage late one afternoon, in hopes of taking a red fox. I was snuggled into the leaf litter of the Turkey's bordering forest with a set of short, fifty-pound limbs snapped into my Bear take-down. Gary, camouflaged to the hilt, set up a few yards away, facing the opposite direction. Our fields of fire nearly encompassed our positions and left few possible approach lanes unguarded. I had screwed well-sharpened four-blade Razorheads to my Bear Converta-Point shafts

Author proves gray foxes are easy. This one was called in with lip squeak, raised on his back legs in range.



after our initial warm up shots at the car; Gary had tightened on some single-blade broadheads.

The high pitched screams from my Burnham call pierced the quiet afternoon and seut visions of a plump bunny entangled in a fence or caught by a lesser varmint, to the far corners of the valley. The third, then fourth minute of continuous calling had passed before Gary's slow move into a shooting position caught my eye. Through the open timber was a red fox, trotting, unconcerned, towards our bows. He'd stop now and then to sniff the ground or to check beneath a fallen log, all the time ignoring my beckoning cries. I switched to a lip squeak to bring the critter in fast but to no avail. Not once did he look directly at the calling, but his path soon would bring him to arrow point. Strange behavior for a wily red fox.

Finally, at fifteen yards, Gary made his draw. The red stopped to watch and saw the olive blur of Gary's arrow pass just under his uose! That was it. The fox streaked out of our company as only a red fox can.

On other hunts, red foxes have shown similar behavior by approaching my calling as though they couldn't care less about hurrying in to a free lunch. It's difficult to understand such action by a normally hyper, ever-alert varmint like the red fox.

Reds will charge an imitation rabbit distress cry occasionally, like their gray cousins. Unlike grays, however, red foxes will rarely stop in front of your position once they've gained the momentum for a blitz. I fell victim to such a charge once, during a jam session on Iowa's vast public hunting ground surrounding the Coralville Reservoir in eastern Iowa.

A buddy and I were tooting two calls simultaneously, for a stereophonic effect, thinking no fox with any moxey at all could resist such a ruckus. It worked, for a big, mature red fox appeared, crosswind, boiling in on us at full speed. He'd revved his powerful running gears to the red line by the time he'd crossed the twenty-yard line and neither of our arrows touched him. To further insult us, the red tossed a couple of hip fakes and shot right between our hiding places! He hardly missed a stride.

The only weather factor I ever consider before a calling session is the wind velocity. High winds make calling foxes difficult. Your call sounds won't carry well against stiff breezes and both red and gray foxes seem more spooky under such conditious. Even when wind velocity falls within acceptable limits, it's always wise to keep your eyes peeled for foxes approaching downwind of your call. Use the flanker system I've described for best results on circling red foxes.

Doran Whitlock and I were watching a red fox circle my calling on one successful hunt. I'd cut to a lip squeak early to bring the red devil in close, but he turned, at the last moment, to check for scent downwind of us. Tall grass obscured all but the fox's head and I let go with a frantic series of squeaks to stop him before he reached our scent stream. Whit was ready at full draw when the red stopped for a look. A perfect strike between the eyes dropped him instantly.

You may as well try a shot at circling red foxes at your first opportunity, because once they get a few molecules of human odor, they're gone! A liberal sprinkling of deer scent or skunk essence will help, but it's better to call from a spot that places undesirable avenues of approach, such as open fields, downwind of you. Many times, you can force a red to approach crosswind and right into your waiting bow.

I'll tip my hat to the bowhunter who can bag red foxes. It's some trick to arrow one of those sly devils and if it takes me another fifteen years, I'll still be trying to break the Red Jinx.



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RELEASES REACTIONS

The Feelings Of Archers Regarding Banning Of Compound Bows, Releases And String Walking Are Mixed — And Mixed Up!

THE FINAL RESULTS of the voting by the Professional Archers Association were completed in late May and the pros voted in favor of adopting the recommendations of the American Archery Council's rules committee. Some thought this meant that all other archery associations automatically enforce the rules. However, because the PAA vote did not include an effective date, the adoption of the ACC rules by both the PAA and the NFAA will not be effective immediately. All current rules will remain in force for the present.

It would seem this would almost close the door on any further action by the proponents of the release, compound bow and string walking. The vote may be in and counted, but the controversy rages on.

Since the announcement of the AAC committee's recommendations in Detroit, the NFAA is in the middle of a legal hassle with one of its members over the compound bow, and the PAA also has come under judicial fire from members.

It's unfortunate that an organization formed to unite archery has had the opposite effect and, if anything, there is more disunity now than before the AAC was formed.

The tragedy of the entire matter perhaps is felt most by the archers who tied up hundreds of dollars in compound bows, while they were sanctioned for competition and now have had the rug jerked from

Affecting even more archers, both new and old, is the outlawing of the release. The many new faces that have been winning at Cobo and Las Vegas may disappear and only the company-sponsored pros will be on hand to shoot the top scores.

The ultimate direction of target archery may not have been decided completely by the 187 members of the PAA who voted in favor of adopting the AAC recommendations. It well may be decided at the Las Vegas U.S. Open next January. Releases are in for the 1972 Vegas

shoot, the biggest money tournament in the world.

We at BOW & ARROW don't think this matter has been settled in the best interest of all archers and our mail indicates there are far more shooters in favor of settling the release and compound controversy by formation of an additional division or other simple solution rather than by harsh, blunt action of the AAC rules committee, which outlawed them completely.

In our last issue, we asked our readers to express their feelings on this vitally important matter; here is what some of them say:

The compound bow is a marvel of engineering - perhaps the greatest archery invention of our lifetime. It is unfortunate that the greatest step forward in bow design and principles has been wiped out and the wheels of progress brought to a standstill. Changing of the heretofore legal bow definition to exclude the compound is as improper as changing the Constitution of the Federal government.

I object also to the ruling on release aids for similar reasons of progress and constitutional change. The one-part release has been with us since ancient times. These rulings undoubtedly were influenced by those who cannot or will not adapt to progress. The argument about boredom, etc., when so many archers are shooting perfect 300s is sophistry. Has no one considered the simple solution of making the spot smaller?

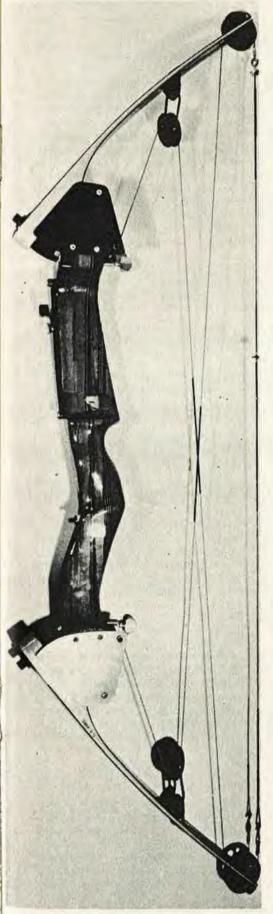
Emery J. Loiselle, Burlington, Massachusetts

On March 25, 1971, in Detroit, Michigan, there was a meeting regarding the use of releases during tourna-

The officers and members of our club hail the decision of this meeting as a milestone in archery. We cornpletely support the use of FITA rules in all tournaments.

We extend our congratulations to all those organizations and thank them for taking a positive stand together on the equipment and rules for all arch-

> Al Brown, Chairman, Wildlife Archers of WCW. Bothell, Washington



The board of directors of the Ohio Archers, Incorporated, voted to accept the American Archery Council recommendations in their entirety. All Ohio archers' competitive programs and championship events will be operated under these new rules.

This as an asinine statement and the action of the board is detrimental to the progress and sport of archeryl

> Howard E. Myers Heath, Ohio.

Free style to free style and bare bow to dust! The words, "bare bow and string welkers" have left a bad taste in the mouths of most free style archers, especially when some of the bare bow scores are higher than those of a lot of free style shooters.

For those who do not know what a "string walker" is, I will try to explain. He is a dedicated archer who has put in many hours of hard work to master this art of shooting a bow without a sight. In changing distances, the string walker also must change distances on the string, moving his hand up or down, depending upon the yardage he is shooting. Sometimes he changes anchor points.

Should the AAC rule recommendations be passed, my fellow string walkers should all bend over, for you all will be shooting with the shaft in a different location. Which only leaves three words left to say and they are said in a whisper. "All together now... Break it off!"

> Don Rudolph, Brazil, Indiana

It would appear that something is gravely wrong with our great sport of archery, if a perfect score is so easy to attain by so many on the fine PAA round we already have.

People like Vic Berger, Steve Robinson, Bob Rhode, Jim Pickering, Hugh Shaw, Jim Ploen, Bill Bednar and others have put in years of rigorous training, working on self-discipline, concentration, skill, body and mind control - just to get to the top, to perfect archery as it was intended to be played, then these truly fine archers are beaten by release alds shot by those who just picked them up.

I, like thousands of others, love this rigorous, frustrating sport of archery that teachs, probably more than any other sport, the power of concentration, self-discipline and really tough competition with one's self as well as all those other archers...and I don't want to see the sport ruined.

> Larry Skinner, Larry's Sport Shop, Moberly, Missouri

I would like to cast my vote in favor of the release. In my opinion, it is the answer to target panic, the most discouraging malady affecting archers.

After shooting tournaments for fifteen years. I was about to give up. I tried a release and within three months, have increased my score by thirty points on the twenty-eighttarget field round.

Keep plugging for the release and archery will grow.

Bill Willets, Mid-Michee Bowmen, Saginawi, Michigan

Everyone wants the edge, but fails to realize what it can mean when everyone has the edge. The edge is fine in any sport, as long as it does not change the basic method or guts of the sport, is needed for the basic sport, and is earned and so deserved.

But to have the edge given easily to everyone leaves a bit to be desired.

We, as professional archers, are on the edge of the ledge. We are on the verge of being shoved over the edge into limbo, chaos and possible obliv-

To get to brutal facts, here we are again, trying to save the quitter, the low scorer and the ones who will never normally excel in archery. We are trying once again to buy archers in mass numbers at good shooters' expense.

With the advent of archery in the Olympics in 1972, I say we are on the road to an archery boom, Archery has made great strides forward in the past five years. Archery has become a recognized sport in many schools and universities across the country.

Unless we outlaw all triggers and release aids, I think that archery has just been dealt the death blow for future growth and life. At Las Vegas, with all the 300s being shot, a person shooting a perfect 600 and still not winning, leaves much to be desired.

The last thing archery needs today is another division. All the handicap systems ever devised have not helped archery to grow. All they have done is to bring the tyro up to compete with that professional that has spent years attaining the skills and technical knowledge to perform consistently at

When everyone hits the spot most all of the time, there is nothing left except boredom, shooters and spectators alike. Mass perfect scores will be the death of archery and the death of any existence of a professional archery association. When this association dies. all chance of big money shoots and promotional aspects die with it.

Phil Grable, Lansing, Michigan

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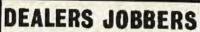
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I'm not much of a target shooter, but do consider myself a fair hunter. The compound bow, with its pulleys. cables, etc., is, to me, taking away some of the old original pride from archery today.

Sure, an archer should have a bow of comparable power, enough to get good penetration on the animal he is hunting, but he should be able to pull it by his own strength! The same principle applies to the target archer; however, I don't want to get into that now. To me, a kill is not a kill. It's how it's killed and the feelings and memories that go with it.

I think the compound bow should be in the crossbow classification. As a concerned archer, who takes much pride in his deer kills. I think I'll stick with the good old long bow.

Raymond J. Parker, Jr., Jeffersonville, Indiana

We of the Saginaw Valley Archery Association saw our numbers of archers start to nose-dive in the early Sixties, when the NFAA changed the "instinctive" division to the "hare bow" to use different anchors, walk the string, count stitches on their shooting tabs and threads on their string serving levels, in order to get an aiming point at every distance. This caused the downfall of our recruitment of bowhunters into tourney archery.

I could see a glimmer of hope at the 1970 NFAA Nationals in getting bowhunters back into tourney archery through the Bowhunter division of competition with its simplified rules. It also appeared that ladies and young adults, plus the average man, could enjoy this division and compete without the use of a too-heavy bow, which leads to bad shooting habits, by the use of the much easier drawing and holding compound bow.

The NFFA declaration that the compound now is illegal for the Bowhunters, division could carry over in various state game departments, who then will outlaw this bow for hunting. The NFAA is creating a terrible injustice to hunters by setting this precedent.

> John R. Houvener, Sr., Midland, Michigan

How much longer do the associations think they are going to last, catering to a certain few and throwing the shaft to the rest of us? I foresee a release aid association, a barebow string walking association and few members in the now existing associa-

> Larry A. Brown, Nottingham, Pennsylvania

TACKLE TIPS Continued from page 12

a lighter draw weight while allowing for more accurate aiming, is outlawed. This just doesn't make sense.

Consider that a member of the fair sex might well hunt with a forty-pound conventional bow. But with her short draw the available poundage may be in the low thirties, and penetration may be shallow. The same lady with a compound of similar weight delivers the full forty-pound force despite her short draw, with additional benefits of greater cast and an easy hold for accurate aiming. With the compound she can drive the arrow completely through a

The capability of a bow for hunting should be predicated on cast, not draw weight, and certainly not on visible design. An efficiently designed bow of forty pounds can feasibly cast a given arrow farther than a poorly designed bow of fifty pounds.

A simple test might require that the hunter's bow shoot a test arrow of a given weight a stated distance. While on the subject, a simple accuracy test should also be given to weed out once-a-year duffers who account for the greatest portion of wounded game.

At the other extreme, there are states allowing or considering the use of so-called poison arrows. This innovation is unrelated to the hunter or his bow. True, use of the pod might result in more humane kills, but the overall result could ruin the sport. It is dangerous to human life, A little nick from the broadhead could be fatal. Hunters may shoot at a patch of brown instead of waiting for a clearly visible and known target. The woods could be overrun with unskilled bowmen looking to hit any part of a deer. The thrill of the hunt would definitely be gone. No longer could a skilled archer take pride in downing a deer with a wellplaced arrow. The public would never accept this and would look with disgust upon bow hunters. It is nauseating even to archers.

Back to the tournaments. Attempts have been made to kill the compound under the delusion that it does not meet Webster's definition of a bow. My dictionary defines a bow as "something bent into a simple curve, A weapon made of a strip of flexible material (as wood) with a cord connecting the two ends and holding the strip bent and used to propel an arrow."

Does the composite wood and fiberglass laminated bow we use today satisfy the definition "a strip of flexible material," or does this mean one solid kind of material? Does even the term "something bent into a simple curve" rule out the deflex/reflex design of the recurve bow? There was no compound bow in Webster's day. Certainly he did not intend to rule out progress.

Now the AAC Equipment Committee has manufactured and recommended a new definition which would kill the compound. Stressing string nocks (the compound has none), the new definition says of the limbs, "each ending in a tip with a string nock," and continued "the bow is braced for use by a single bow string attached directly between the two string nocks only." The committee may as well have named the compound and saved words. This is definitely discriminatory and regressive. It puts the brakes on progress and disqualifies bows of new design which would use the archer's effort more efficiently.

A turnabout by the associations after so many archers have purchased the bow is totally unfair. Wouldn't this country be in a mess if the constitution were changed at will? What would be your reaction if, after contributing to Social Security for a lifetime, the Government simply decided to rule out benefits?

Continued on page 76

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CONSIDERING the anticipation, time expended, cost, effort, inconvenience, distance traveled, and often disappointment in the results obtained, loss of status and blow to the ego suffered, too little preparation is directed toward care of the spoils of the hunt; no pun intended

Even the experienced big game hunter often has ended up with spoiled meat and a ruined trophy, because he failed to prepare himself for the occasion when professional assistance was not available. Although past trips may have given him rudimentary knowledge, he probably never took advantage of the opportunity to learn nor to acquire any of the near mandatory items necessary for him to take care of his own kill.

There is seldom an excuse for spoiled or tainted game; a poorly placed shot in the paunch or hind quarter, a crippled animal that runs to finally die from exhaustion, or shooting an animal where the location precludes getting it out before it spoils.

None of the above are fully justifiable excuses, particularly shooting the animal so far from transportation or in an area where it cannot be recovered and it is abandoned.

Deer is the animal that is hunted by the most people and undoubtedly more venison is thrown away than any other game. Emphasis therefore will be placed on deer, although the basic rules will apply to all hoofed game as well as the carnivores such as wolves, coyotes, bob cats, etc. when only the skin and/or scalp are involved. As far as bear is concerned, some consider it excellent meat and some even consider the mountain lion a delicacy!

In the majority of cases, the larger or more exotic game is taken care of by professional guides with little chance of spoilage. This would include such game as moose, caribou, elk, mountain sheep and mountain goat. Another saving factor is that seasons and altitudes contribute to cold/temperature, eliminating the greatest problems faced by the early season deer hunter; i.e., necessity of immedi-

ate dressing, possibly skinning out to assist cooling; blow flies and protection from rain, yet providing for the circulation of air.

The desert areas and the California Coastal region (where the season opens, for some reason in mid-August) are probably the most critical not only on the fresh killed game, but the hunter as well!

Temperature may range up to the nineties with hunting conducted in the cooler morning and late evening hours. This limited, relatively cool period creates its own problems. The animal killed in the morning at the foot of some ridge requires assistance, prompt cleaning and immediate removal to a vehicle and on to cold storage. Unskinned, the meat can spoil in a matter of a few hours. Trying to carry a deer out of a brush-filled draw during the heat of the morning and up a mile long

ridge has resulted too many times in heat prostration or heart attacks. The average person is not conditioned for such effort.

During the evening hours, if the animal is shot at a distance from transporation, it may be necessary to clean and skin the animal, then move it in the early hours of the following day. A sprained ankle or broken leg or simply a bit of cactus and severe scratches can result in trying to move the animal out during hours of darkness.

Hunting in the more typical areas of the Rockies or High Sierras simplifies the problem, but spoilage can easily occur when the temperatures reach 70 degrees at mid-day.

There is no reason why any ablebodied and relatively competent individual cannot take care of his own deer. As stated before, the rules will apply to all big game and there may well be an occasion where moose, elk or antelope are taken and the individual is on his own.

Skinning tools and procedures are virtually the same, but handling the larger carcass probably will require skinning and quartering before moving and may well require back packing to transport the meat to the vehicle. The animal will have to be skinned out on the ground using only its own hide to keep the meat free of dirt. It will pay to get help as soon as you can, but generally the lucky hunter tries to tote a quarter or some carrying-size piece to camp; this is particularly true, if individuals are hunting in areas widely separated from each other. This is a violation of the most common of safety rules - don't travel alone even in familiar areas.

Before taking to the hills, look over your inventory of equipment and make sure you have basic essentials. You have a sheath knife but is it of suitable size, of good quality that holds an edge and is it sharp?

You will need a good pocket whet stone and preferably another larger stone for camp and/or home for the final butchering. I would strongly recommend the Arkansas stones rather than the man-made carborundums. These stones are considerably more expensive, but they are worth the difference and are a pleasure to use as they produce a razor sharp edge with a minimum of time and effort. A four or five-inch knife blade is ample. The folding, two-bladed hunting knives are excellent. Use one blade for the fine work and one for the rough going. Carry a pocket knife of the Boy Scout type and keep another kitchen or hunting knife in camp. These will take over rough usage that will preserve the edge on your primary skinning and butchering tool. Another aid is a file six to eight inches no. 2 mill cut.

Take along a saw of some type to assist in neatly cutting up the animal. A full size 2½-3 pound poll axe is a camp necessity in any case and can be used to split the back bone and cut the ribs, but the ideal tool is a regular butcher saw, particularly where the larger animals are involved. Any coarse-toothed handsaw will do, if nothing else is at hand.

If you expect to have to carry out the cut-up carcass, a GI packboard is about as good an item for the job as you can find. It is not ideal for hunting with an assortment of equipment tied on it, if in brush country, but it is well worth having if hunting at a distance from camp. It provides a means of carrying survival items, lunch, binoculars, a hand axe, deer bag, plastic bags for the liver and heart, a heavy plastic sheet to use during skinning and cutting up the meat as well as to wrap the meat in while carrying it out to keep it clean and keep the blood off your clothes and pack equipment.

The large heavy garbage bags can serve well for the above uses as well as for many other camp chores. Do not, however, store any meat, unless frozen, in any air proof bag or container. Allow the air to circulate.

Plain cheese cloth will substitute for a deer bag, when game is hung to drain and cool in camp. It is essential that the animal be covered with such material any time it is warm enough for blow flies during mid-day. If heng ten feet above the ground, flies will seldom bother, but unless a winch is

available this is difficult at best and a strong limb twenty-five feet up is needed. It will help cooling, of course, and if enough man power is present and if you can start from a pickup bed an ordinary half-inch manila rope or better will do. Rope of some kind is always of use. For the pack board, use nylon shroud line at least fifteen feet long.

In timbered areas, one of the compact hoists using nylon cord will make skinning out and gutting a deer much easier for the lone hunter.

One man can use three poles lashed together at one end with the deer's head or horns at the junction, to raise



a deer free of the ground (here the big axe pays off) by progressively moving the poles towards the center a little at a time. Pick a soft spot to work in or brace one pole against the base of a tree or a rock. To start, raise the animal by the horns as high as possible so the pointed ends will dig in.

Another simple method is to lash as long, sturdy pole between two trees, tie the head or horns to the end of another long pole leaving about one to two feet of slack; tie a longer piece of rope to the other end; push the pole that is tied to the animal over the cross pole. Then, by pulling down on the loose rope, lever the animal off the ground and tie the rope to a convenient tree, rock or stake.

At the start of your hunt, decide whether you want a trophy head or would you rather forego a hig rack and settle for the best of meat. If this is your decision take a young animal or a doe as second choice, if permitted. The odds are more in your favor than if you hunt only for a trophy and the

animal will be smaller, easier to handle and probably closer to your camp and transportation. All of these factors contributing to quicker handling and less possibility of spoilage.

On the other hand, even if in rut, an old buck properly handled will provide a lot of excellent meat. It simply must be prepared in a different manner. You wouldn't fry an old rooster he becomes chicken stew!

Probably the most important thing of all contributing to good meat is a one shot, clean kill.

The "game taste" often is used as an excuse for not making proper use of wild meat. To those individuals who have been guests at a game dinner consisting of meat from a gut-shot deer, found some hours later, then gutted out and dragged through brush and dirt with a few handfuls of hair added, left with the skin on, hanging head down in camp for three or four days in 40-70 degree weather and finally transported five hundred miles next to muffler heat, enough said!

These are typical causes of the gamey taste and it is little wonder that some people turn slightly green upon receiving an invitation to a venison feast

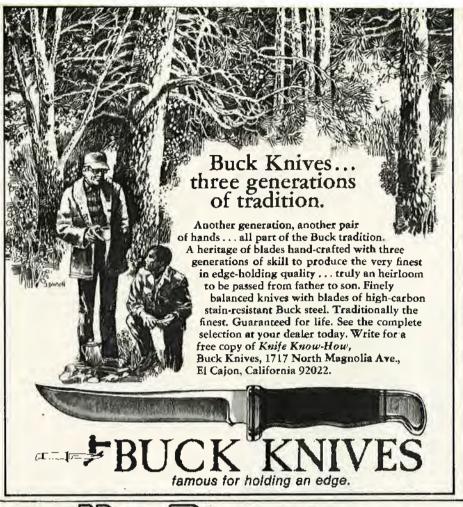
Certain rules must be followed during weather conditions above freezing: Pick your shot and make a clean kill, if at all possible. Pass up long distance or any questionable shot that is beyond your assured capability.

Be prepared with the equipment needed to dress the animal, to protect the liver and heart and proceed at once. Tag the animal and proceed to dress it out.

Do not cut the throat or stick the animal. The blood will gather in the chest cavity and will readily drain. Cutting the throat may ruin a trophy, will make one more unneeded hole in the skin, and help bloody the hide to no purpose. Skin with care. It is a shame to waste the finest glove leather that exists by discarding the skin.

 Remove the tufted musk glands on the inside of the back legs as soon as feasible. It is difficult to handle the animal without grasping the rear legs from time to time and the musk will taint the meat.

To start gutting out the animal, turned belly up and place the head up hill. If the ground is so steep as to cause the animal to constantly slide downhill, tie the horns to something or wedge the carcass with two large rocks or a log. The slope will assist in removal of the intestine and blood. Keep the animal out of the spilled blood. Move it to a clean area a few feet away.



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If an elk or other heavy animal is down on a slope it will slide downhill and take you with it, unless propped, tied or braced, particularly on snow or wet ground. If allowed to slide too far, it will preversely lodge where you can't turn it over to skin or cut it up even with a pry pole. Look over the situation before you start.

If water is nearby wash your hands free of dirt and hair. Do not wash out the body cavity, unless absolutely necessary, because of a gut shot. Even then, use a little as possible. Water aids spoilage. Cut away damaged and blood-shot meat.

Remove the testicles and pens of the buck first. Open the stomach cavity just below the rib cage. Don't hurry gutting. The results can be embarrassing.

The stomach will have dropped away from the area to allow room for the initial cut without puncturing the stomach. Move downward, the knife held edge up with two fingers of the left hand clearing the way, a finger on each side of the blade. The direction of the cut may be reversed, if more convenient, starting just above the pelvis. It will depend on the position of the animal.

Cut around the anus, freeing the colon from the tissue enclosed by the pelvic bone and pull clear. If a saw, hand axe, or extra blade is available, cut the pelvic bone. Tie off with string or cord. It can then be pulled back through and dumped with the viscera as it is cut free of the back and diaphram. Remove the liver and heart and place them in a plastic bag. Don't place it on a nearby rock and forget it, as I'm prone to do! The same applies to your knife.

If the carcass is to be left alone any length of time, drag the viscera some distance away and leave an article of clothing on the carcass to keep coyotes away.

Drag the carcass up on logs, stories or brush to allow circulation of air to help cool the carcass. Wedge the rib cavity open with a stick to assist escape of body heat. Cover with brush for shade and to keep magpies away.

Cover with cheese cloth to protect the cavity and head from flies. Cutting through the pelvic bone will assist cooling. If it is necessary to drag the animal any distance, open the carcass up just enough to remove the intestines and stomach contents. This will help keep out dust and twigs. Finish the job as soon as possible. Remove the gullet at the first opportunity as spoilage starts here.

If the animal is to be skinned, if possible, hang it, using a gambrel (a

strong stick sharpened with blunt points) inserted in a small cut in each hind leg between bone and tendon.

It is much easier to skin the animal while the careass is still warm and greatly speeds cooling. It is animal heat held in by the skin that sours the meat and ruins its taste.

Remember in the larger animals, cooling is much slower and even more critical in the preservation of the meat simply due to the added time required to dissipate body heat. An elk hind quarter may weigh over one hundred pounds. Here early skinning and quartering is essential, unless near-freezing weather exists.

In skinning the animal, leave more than enough hide on the shoulder area than you think is necessary, if the head is to be saved. Skin out from a cut from the top of the shoulders to the horns, above the neck joint, twist and cut free. Salt well.

The most important step of all is to take down the carcass and hang with the hind quarters down. Drainage is most critical in keeping the meat sweet and fresh.

If the skin is left on, the same rule applies; hang by the head to drain.

Three to four days is about maximum time to hang a deer during above-freezing but cool weather, before it is placed in storage for aging. Those four days are a rapid part of the aging process.

One major cause of lost meat is attempting to keep deer in camp that were killed the first day with the hope that four or five people will fill out and all can take out their game at one time. It is far better to drive two

hundred miles to cold storage and back and save the meat! After all a lot of effort and money has been expended and all that is left of the trip is the meat, hide and the head. It is a cheap price to pay!

If horses are used to pack out meat, it is well to remember that the horse you ride in may be gentle as can be, but the sight and smell of a dead deer being hoisted on to his back may cause him to depart, leaving you afoot and with a deer still to be moved! If adequate help is available and you're not sure of the horse's attitude, someone should hold his head or, if alone, and you have to wrestle 150 pounds onto that saddle, tie the horse; if possible to a strong flexible limb so he can't break the reins or halter rope.

With the meat back to civilization, the easiest procedure is to let the local cold storage facility take care of the meat. It should age eight to ten days, then be cut, packaged and quick frozen. Bear in mind that more rigid rules have been applied precluding storage of wild game with domestic meat and many butchers cannot afford separate facilities and no longer will accept game. Locate a cold storage facility before you leave on the hunt and find out the hours. It doesn't help to come in with a four-day old carcass and spend another twenty-four hours trying to find a place that can take care of it!

If the animal is old, have a good portion ground up with added pork for venison burgers. Some of the finest meat I have ever eaten was corned moose from an old tough animal prepared just like corned beef.

While still in the woods, the liver is traditionally the first meat caten and is about the only portion ever prepared before the animal heat has departed. If you're hungry - who cares! It is the finest of eating.

Meat skinned out and allowed to air dry hung high in a tree gets better day by day when temperatures do not exceed 50 degrees. If it freezes at night, slight daily thawing only helps tenderize the meat and improves the flavor.

This used to be the common ranch way to keep a beef for daily use, when the only "cold storage" might be icc cut from the river in the winter, stored in saw dust and consumed during the

Some additional suggestions: carry plenty of pepper to help keep flies off eyes and mouth of trophy heads as well as the exposed meat. You will need about four pounds of salt for a deer cape and skin. Salt freely and roll up. Place in the coolest possible location — not on the ground. Open up and resalt untouched areas every two or three days.

Keep the head as free of dirt, blood and water as possible to assure a good mount. Too many hunters expect miracles from the taxidermist in the matter of repairing cuts, bullet holes and blown apart skulls!

When meat has to be transported long distances and space is at a premium, boning out the cut-up carcass will greatly reduce bulk. As spoilage starts at the bone, the last area to cool, exposing the center of a ham to the air and drainage of body fluids helps greatly in keeping the meat at its best.

Remove the loin from along the back bone, this eliminates chops but leaves the tenderloin in a long strip for fillets. Cut all meat from the ribs, neck and back bone for hamburger or stew. Cut in as large pieces as possible. Hang or lay out to air periodically rather than to set in its own drained juices.

Cut away all tallow and discard or use as dog food mixed with dry or other foods. Deer tallow tends to develop a rancid taste quickly, which is imparted to the lean meat.

With all the emphasis on conservation and sportsmanship, it appears that the proper care of the animal is ignored to a great extent when it is probably the area needing greatest emphasis!

To what purpose is conservation of our wild life if the animal ends up in the garbage can! We have no concern for the individual who has a legitimate claim to the title of sportsman in its full sense; he has long since been observing the basic rules above.

EQUIPMENT FOR THE CARE OF MEAT

Rope; ½" manila 30 feet and/or nylon shroud line 30-50

Knives; sheath or 2-bladed hunting, pocket type and kitchen knife.

Whetstone; pocket type and larger for camp.

Butcher's saw or acceptable substitute.
Pack board (if meat may be carried out)

Deer bags and cheese cloth
Tarp for rain protection of hung animals.

Salt and black pepper

Plastic bags

Axe (double bit is best for chopping, 3½ lb, head) Poll axe, single bit will serve to drive tent stakes, etc. Belt axe (optional) Buy or make a leather case for both camp and/or belt axe.

Flash light; if caught out late!

Gas or butane lantern; preferably two, if you have to skin out an animal at night in camp.

Paper towel rolls for camp.

. Discardable rags from old sheets, towels, etc. for use in field. A great help when no water is available or when weather is freezing. Bury or burn after use.

Admittedly, There Are Some Things One Doesn't Need To Down A Buck — But These Items Should Make It More Pleasurable!

DRESSED TO KILL



WHEN WE begin to feel just about everything has been made that will help an archer down his game, someone comes along with a better idea or new approach in bowhunting equipment.

Most dealers have a good line of hunting equipment and, if not in stock, will order any item the archer may request. Also, many dealers have catalogs either free or at a minimum cost.

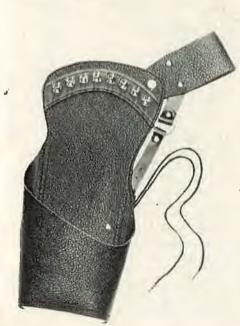
In any event, you can get more information about a specific product by writing to the manufacturer.

The ill-equipped hunter has only himself to blame for that big buck that got away. When you go to the field, have the tackle necessary to make your hunt successful.

Ben Pearson's new AMBUSHER hunting bow combines compact size with long bow striking power.

Forty-eight inches in length, giving the shooter easy maneuverability and fast pointing in thick cover, the bow is stocked in draw weights of 40 to 55 pounds.

Ambusher's sculptured handle riser section is hand-finished select hardwoods; arrows rest on a beveled edge shelf with a carpet rest for quiet, smooth draw. The Leisure Group, Dept. BA, Union Bank Square, Fifth and Figueroa Streets, Los Angeles, California 90017.



STALKER HUNTING QUIVER. Made of beaver-grain split cowhide. Back reinforced with spring steel.
Long swivel belt loop keeps quiver
low, with adustable strap to hold it at
proper angle. Rubber insert in bottom to hold and keep broadheads firm and sharp. Holds eight arrows in metal clips. Black only. Right or left hand. King Sport-Line Company, 328 S. Cypress Avenue, Dept. BA, Alhambra, California 91801.



HUNTING PRACTICE MAT. Lightweight. Use broadheads. Completely weatherproof. Will hold arrows from 65-pound bows. Animal target included \$18. Folding stand for hunting practice mat. \$8. Indian Industries, 817 Maxwell Avenue, Dept. BA, Evansville, Indiana 47717.



The Bear FLETCH-BONE'T covers the fletchings on bow quivers; protects fletching from weather. Completely adjustable to all styles of bow quivers, it reduces arrow rattle. Weighs less than a broadhead, can be stored in one pocket when not in use. Now at all leading dealers, lists \$3.95.



RABBIT FUR arrow tracers that has just enough material for tracers for twelve arrows are available from Saunders Archery Company, The dyed rabbit fur is cut in thin strips and comes with a pressure sensi-

For custom-assembled arrows, see your dealer. The \$4.95 Kit to make three Spiders sold also by

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tive backing. It is attached easily by winding around the shaft between the regular fletching and the nock. The package sells for about \$1 from Saunders Archery, Box 476, Dept. BA, Columbus, Nebraska.



PINE OIL SCENT is a popular new means of covering up the human odor while stalking and still hunting game. Pine oil covers the human odor so animals are not aware of your presence. Other bnck lures and buck scents attract the game and make them aware of your presence, the maker contends. Pine Oil is one natural oil of many being experimented with by the Natural Scent Company, 1170 Elgin Avenue, Dept. BA, Salt Lake City, Utah 84106.



The new mercury-filled SHOCK-ALATOR is available for use on your hunting bow. It has all the advantages that are found in the stabilizers used by target shooters.

It is meant for the hunter who wishes to improve his accuracy, shot after shot.

The Shockalator is only three inches long when installed on your bow. Your movement in rugged terrain will not be hindered.

Write for a free brochure: Shockalator, P. O. Box 604, Dept. BA, Bridgeton, Missouri 63044.



PORTA-PAK tree stand is made of steel tubing, with the scat intact with the platform, therefore giving the hunter nothing to assemble. Fits any size tree that will hold your weight, straight or slanted, holds in excess of 400 pounds, yet weighs only 12. The stand can easily be folded and carried pack-style on the back. Folds back against tree when standing to shoot, giving hunter a 22X22 platform. Complete with carrying straps and camouflage paint finish for \$29.95, Ron's Porta-Pak, P.O. Box 141, Dept. BA, Greenbrier, Arkansas 72058.



HUSH-H-H bow quiver, retail price \$2.95 pair, is economical, for the beginning hunter. Snaps easily on any bow and holds four arrows at top and bottom of handle riser. L.C. Wiffen Company, Dept. BA, 923 S. 16th Street, Milwaukee, Wisconsin 53204.

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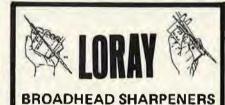
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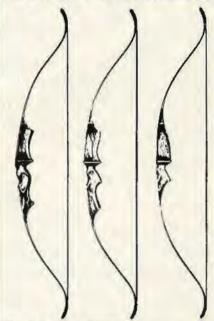
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KILBEAD'S bowstring silencers are efficient in that they allow no flip-flop ears to flutter, there is nothing to hang up. It will convert high frequency noise into what amounts to a whisper, according to the maker, Trueflight, Manufacturing, Dept. BA, Manitowish Waters, Wisconsin 54545.



WING SWITCH-A-POINTS aluminum inserts in Red Wing aluminum and custom glass arrows allow you to switch a point by unscrewing the point on the arrow and replacing it with another. Red Wing aluminum shafts are Easton's 24SRT-X shafting, dull red anodizing to climinate glare, with helical fletching of appropriate length. They accommodate 125-grain field points, 125-grain blunt points and three-blade high-precision broadheads.

Wing custom glass shafts are graded

for uniformity, have a five-inch helical fletch. They also accommodate field points, blunt points and three-blade high-precision broadheads.

Contact Wing Archery Company, Route 1, Dept. BA, Jacksonville, Texas 75766.



The ERYLEEN deersight kit produces a durable one-piece V-type plastic sight, custom-accurized to you alone. Working on the principle that an object appears smaller as distance increases making the target fit deeper into the V, line and elevation for unknown hunting distances will automatically be correct with almost no conscious effort. The kit is available postpaid for \$2 from Eryleen Products, Dept. BA, 361 Cambridge Street, Burlington, Massachusetts



BUCK Honing Kit combines Washita stone, hard Arkansas stone and a can of honing oil in attractive plastic case. A useful knife accessory: \$4.75. Buck Knives, Dept. BA, 1717 N. Magnolia Avenue, El Cajon, Califor-



The SHAFT SPIDER system of bobbin, web, and Velcro tapes in a quality shaft cut to your length and spined to your bow is customassembled by dealers and arrow manufacturers. Shaft Spider parts to fit three of your own hollow shafts, either aluminum or fiberglass, are complete with easy-to-use instructions for only \$4.95. Sold by dealers and Rorco. Dept. BA, Box 1007, State College, Pennsylvania 16801.

Continued in next issue.

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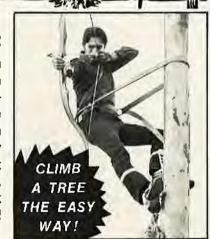
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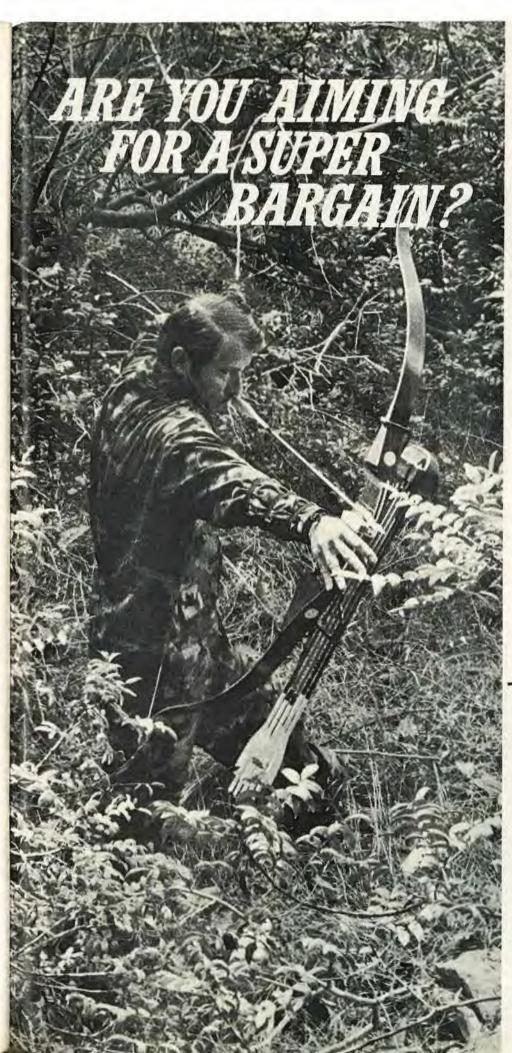
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By Bob Zwirz

CF ARCHERY

Pennsylvania Shooters
Live Up To The
Nickname For Their
State By Turning Out
En Masse To Compete!

Hank Fulmer (center), representing Bear Archery, presents that firm's check for \$500 to help cover cost of team transportation to Moscow, Accepting are (left) George Helwig, vice president of the N.A.A. and Clayton Shenk, at right, Further Donations are welcome.



THERE SEEMS little doubt that Pennsylvania boasts the most loyal and energetic target archery association going, but it took a turnout of 385 shooters in Harrisburg, in April, to prove that the state takes a back seat to no one in the matter of participation.

The response to the tournament surprised the statistic prophets, but did not catch the officials of the National Archery Association napping, since the site chosen for these indoor archery tournaments, back in 1970, was the Pennsylvania Farm Building, a mammoth sort of edifice with a number of separate areas within its walls, covering 180,000 square feet. This year the archers covered 90,000 feet, tomorrow the world! Eh?

The fact that a Chicago Round is shot makes it an easy matter to expand shooting facilities as late-corners register.

The Indoor lasted until 11:00 P.M., Saturday, April 24, and on the following day 132 archers filled the huilding for the Pennsylvania Annual Indoor Team Championship.

For those who like to plan well ahead, arrangements already have been formalized for the third U.S. Indoor and the Pennsylvania team tournament, same place, April 15-16, in 1972

After the archers had registered on Saturday morning a fast look at the forms showed that the line-up represented seventeen states. As a sampling among this first day's tournament entries there appeared such well known names as Joe Thornton, the national outdoor target champion, hailing from the state of Oklahoma. On the distaff side, Nancy Myreck, the ladies' outdoor target champion, from Pompano Beach, Florida.

Also on tap for this spring event were such outstanding archers as Ruth Rowe, who placed second in the 86th National 'Championship, and Linda Myers who placed third in that same tournament. Over on the men's side was Dave Baird, from Michigan, who had placed third in the 86th.

This year marked the beginning of special events such as those held for Intermediates, boys and girls who haven't reached their 18th birthdays. There was another group for Juniors who haven't passed the 15 year old mark. The Juniors shoot 10 yards less





Strings snap and shafts whistle as 2nd indoor tourney commences (above); junior winners of event were Vicki Kimmick (804), Michael Trongone (805).

than the Adults and the Intermediates.

Once the proverbial smoke had cleared, it didn't take long to note that among the Juniors we had a handsome lad, by the name of Michael Trongone who turned in a score of 805 out of a possible 900. Vicki Kimmick, a vivacious young lady shooter turned in a great performance with a close-to-the-winning-money score of 804.

No matter how you slice it, to get a

900 you have to put all 90 arrows in the center of the target, and the man who came closest to that was professional Dave Jackson of Maryland. Scoring 863 he was the day's high scorer. As the fellow says, somewhere during the four hours of shooting, he had a failure of 37 arrows which went into the 9-ring instead of the 10-ring. And that is why it's still a sport!

On the amateur side, we had John

Williams of Cransville, Pennsylvania, who by the way, is the runner-up to the World's Championship Williams came through with an 852. I should add in passing that young Williams, in the opinion of many, is one of this country's most promising shooters. With a mother and father who are also fine archers it isn't surprising that he has received the excellent background and training that shows each time he draws on the target.

The scores compiled at Harrisburg were high and it's most interesting to see such scores being tallied in an indoor tournament. Nancy Myreck made the gals look good, indoors or out, with a score of 818, while right behind her was Linda Myers with an 810. Among the intermediates, Doug Brothers won with an 831, and Donna Link came close in the same division.

The state team championships are conducted under the following terms—the NAA allows eight archers from one club, and out of these, they take the four highest scorers and this combines the team total. As an example: a perfect score is 864 for an individual, and if you multiply 864 by four you arrive at the "perfect" mark. This

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Distributed by Jas. D. Easton Inc. 7800 Haskel Ave., Van Nuys, Calif. 91406 Dupont TM for polyester fiber. specific tournament calls for 20-yard shooting for all.

One of the top items of conversation involved just who among them would be in St. Louis, Missouri, in June, where eight shooters would be selected to represent the United States in the 26th World Target championships to be held in York, England.

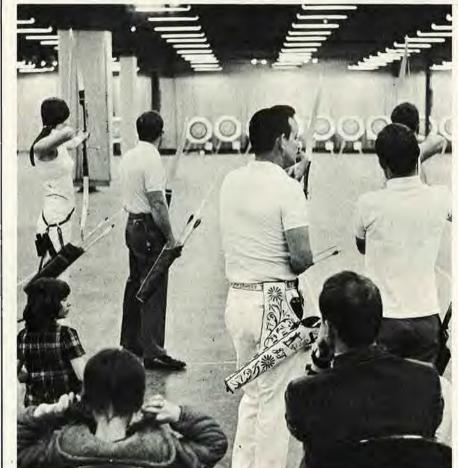
At the St. Lonis tryouts, the participants were to shoot a double round. One on each of two days, with a perfect score being 2,880. This event, is for amateurs and amateurs only. For those who have not as yet been bitten by the competitive, target-shooting bug, the official round that is shot is the FITA round.

For men, each single round calls for 36 arrows at 90 meters; 36 at 70 meters. The target face in this instance measures 122-centimeters. Gentlemen archers then move up to 50 meters, and again shoot the same number of arrows. Finally, they move to the 30 meter mark and shoot their last 36 arrows. In this particular instance the target face is changed to 80 centimeters. A total of 144 arrows are shot,



Dave Jackson (left), a pro shooter, receives gold medal from N.A.A. official Bud Fowkes for high score racked up in indoor event, an 863.

Lady archer, at extreme left, is Ruth Rowe, who placed second at the Harrisburg indoor archery tournament. Well known archer, Joe Thornton, from Oklahoma, is in foreground with fancy quiver.





Though it looks quite thick in this telephoto view, competition proceeded smoothly, unmarred by anyone getting jabbed by arrows.

Thoughtful, dedicated expressions distinguish features of shooters, returning from "wailing wall," intent on doing better next round!



each with a potential value of ten points. Thus, 1440 is a perfect score. The world record, by the way, is 1,250 points for men, and 1,208 for ladies.

In the case of lady archers, they are moved from the 90 meter line, and instead, shoot from 70 meters. They shoot the same number of arrows as do the gentlemen at 70 meters, then, at 60, 50, and 30 meters.

Talking with Clayton Shenk and other officials about these various tryouts and tournaments, I asked how things looked, as far as the '72 Olympic Games are concerned. As most bow shooters are aware, archery will be a part of the games in 1972. Gold medals will be awarded, for both lady and gentleman archers for the first time in some forty-odd years.

Regarding those who will ultimately be chosen to represent the U.S. in the Olympic Games, BOW & ARROW has been told that none will be priviliged to even enter into the Olympic tryouts in the U.S. unless they have personally recorded 1100 points (for men) — and this would mean four scores of 1100 each. For the ladies, 4 scores of 1050 will be required.

These tryouts were to be held in Oxford, Ohio, on the second through the fifth of August. The team selected will directly go into training for the Olympics. The NAA, which is the sport's recognized governing body of the U.S., has the responsibility of organizing and conducting events that must be conducted under the International Archery Federation rules.



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62



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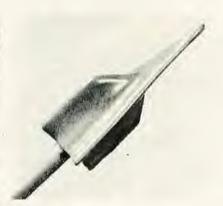
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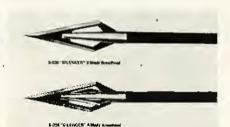


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Molded to fit like a glove, the Protec-to-tip makes hunting arrows easier to keep sharp and clean and safer to handle and carry.
Style III is designed to fit Bodkins,

Rose-3, Hi-Precision and the like. Style IV is for Rose-4, Black Diamonds and Razorheads. They are priced at \$1.00 per half-dozen.

From Plastic-Coaters, Dept. BA, 228 Carlin Court, Hartland, Wisconsin 53029.



BEVELED BROADHEADS

In four-blade and two-blade designs, these Silencer broadheads have extra-long, sharp bevel edges. On the four-blade model, the blades are sharpened fore and aft.

These broadheads have a standard five-degree taper. They are made by Glas-Lite Division, Plas/Steel Products, Incorporated, (Dept. BA), Walkerton, Indiana 46574.



TROPHY ANIMALS

Gaine Trails is celebrating its sixtysecond anniversary with a fifty-six-page full-color booklet devoted to prime trophy animals from around the world. It describes custom mounting ideas and has special sections on the proper skinning of trophies, preparing and shipping hides and tips on caring for finished mounted trophies.

A portion of the book is devoted to unusual trophy rooms. The book may be ordered for \$2 from Jonas Brothers, Incorporated, Dept. BA, 1037 Broadway, Denver, Colorado,



NON-PLANING

A two-blade, non-planing design that slides around bone, sharpens to a razor edge, and fits all shaft materials, including aluminum, wood, and fiberglass, this new broadhead sells for \$1.50 (California residents add five percent) from Cal Coast Suppliers, (Dept. BA), 803 Washington Heights Road, El Cajon, California 92020.



PURE WATER

Safe drinking water can be prepared in minutes with a battery-powered electronic water purifier. DrinKit fits in a shirt or vest pocket.

It converts a pinch of ordinary table salt in a tablespoonful of water by electrolysis into a fresh concentrated solution of free chlorine and other powerful bacteria-destroying compounds.

It gives no chemical taste to the water. Each charge is sufficient to rid up to a gallon of water of microbes. The DrinKit sells for \$9.95, including batteries from Abtronics, Incorporated, Dept. BA, P.O. Box 712, Livermore, California 94550.



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The Powermaster is made of solid hardwood with a hand safety hold. The bow is of aluminum alloy with milled bowends. It pulls eighty pounds. The trigger release is made of steel and the string of dacron, double looped and inner waxed. The crossbow sells for \$34.95 with

target sights or \$39.95 with four arrows and quiver only. Hunting and Continued on page 66







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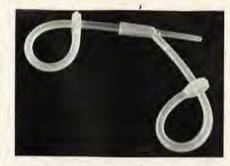
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BOW BITS

Continued from page 65

fishing arrows sell for \$1.25 and target arrows for eighty cents each from Potomac Arms Corporation, Dept. BA. P. O. Box 35, Zero Prince Street, Alexandría, Virginia 22313.



FINGER SLINGER

A new finger style bow sling which is adjustable, light weight and easy to put on and take off is on the market from the Saunders Archery Company, (Dept. BA), Post Office Box 476, Columbus, Nebraska 68601.



SIDE QUIVER

This black leather side quiver with two belt clips, a score card pocket, a large zippered pocket for accessories and a divider strap sells for \$14.95.

The quiver comes in right and left-handed models from Wing Archery Company, (Dept. BA), Jacksonville, Texas.

LETTERS

Continued from page 6

ELOTT BACKER

My wife and I have been in archery about four years and enjoy it tremendously. We have been reading Milan Elott's articles in BOW & ARROW and think many of his ideas, if adopted, would be a big boost to archery.

Changing the indoor PAA target so bounce-outs would be eliminated is one good idea, also that of changing the field round and having them merge with the NAA!

Bob Plankel, Dorset, Ohio

(The field archery association was formed as a split-off from the older NAA in the first place. In recent years, though, the latter organization has begun to include some field events in its competition agenda.)

HUNTER SENSITIVITY

I cannot help but write this letter. The account of Jim Dougherty and his adventure with the great Cape buffalo has stirred me so. The final comments by Mr. Dougherty after "the death," and that one deeply moving photograph of him, the bow and the buffalo tell it all: how it was, how it is and how it will be for all sensitive and sincere humans that hunt. May the forces of nature never allow us to lose those precious feelings that Jim speaks of.

Stephen Blaskevitch, Jr., Philadelphia, Pennsylvania

BELATED THOUGHTS

After reading "Releases: Where Are They Going?" in the March/April '71 issue, I believe the various archery organizations should leave the matter to the individual bowman.

I, myself, prefer the three-finger method only, not using the release. I also believe that, if the bowman wants to use the releases now on the market, fine. If he chooses not to, that's okay, too. I would like to hear from the various archery organizations.

William L. Moore, Ford City, Pennsylvania

(Generally speaking, the archery organizations have been heard from, voting in favor of banning the use of the release. However, in most cases, the members were not polled as to their feelings and the decision was made by committee.)







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DEALER INQUIRES INVITED



A \$15,000 purse, richest in PAA history, has been set to entice the top professionals to the eighth big Pro National Championships scheduled for September 9-12 at Grayling, Michigan.

The top male shooter will walk away with \$1,500 and forty down the list will console himself with \$50. The ladies' champion will receive \$1,000. Current title holders are Vic Berger and Annie Butz (shown).

A field of 200 is expected for the tournament.

WHIZ KID

Mark Wollman, 8, of Los Angeles, California, is shown with his pro coach Clint Moorehouse, who has guided him to wins in the indoor and outdoor California State championships in his division as well as helped him fill his trophy case with fourteen dust-catchers, four medals and ahout a dozen ribbons accumulated over the past two

The youngster shoots a sixteen-pound Black Widow with an eighteeninch draw. He is in the mid-250s on the PAA indoor round and can maintain accuracy up to sixty yards.

HEAVE TO

The PAA ethics committee now is chaired by Karl Palmatier of Hickory Corners, Michigan, who has it in mind to stress ethics in the instructional program for professionals.

The PAA has not been too rigid in the past because our members have not been indoctrinated by a code of ethics since they started archery," he

May we refer him to a letter by Ben Hird sent to the British Archer: "Ours is the only sport, so far as I know, that has a motto as old, and as good as ours. 'Stout arm, strong bow, true eye, union, true heart and courtesy.

ROUND LAKE ON

The second annual Round Lake Open has been sanctioned for September 4 and 5. The event will carry a \$3,000 purse set up in flight divisions paying a total of forty places to the pro open division.

Amateurs will compete for trophies on the PAA outdoor round. As a part of the amateur division a future pro division is planned for youngsters fifteen and under shooting up to fifty yards on the round.

For additional information, contact: George Danyla, P. O. Box 4111, Patroon Station, Albany, New York

TOURNEY TAKERS

Pennsylvania:

Vic Berger and Jim Quarles carded perfect rounds at the Pennsylvania Indoor Open to share the title and split the money in the \$2,500 event.

One hundred sixty-five of the east's top professional and amateur competitors came from a twelve state area. The competition was decided as a result of one round of official indoor

Third place was wrapped up in a six-way tie between Dave Jackson (Maryland), Frank Pearson (Palmyra, New Jersey), John Kleman (Latrobe, Pennsylvania), Dick Volney (Westwood, New Jersey), Dave Young (Niagara Falls, New York) and Andy LaMarche (Baltimore). All six men shot scores of 299 out of a possible 300 points.

In the Ladies' Pro Division, Bette Wirtz of Glastonbury, Connecticut, took the title with a score of 291 Second place went to Pansy Brown of Oxen Hill, Maryland, with the third spot going to Marilyn Webster of Maryland. Amateur winners were Doug Brothers of Ohio with a score of 297 and Donna Schoff of Pennsylvania with a 283.

Wes Hagemeyer of Edina, Minnesota, and Lucy Drake of Danville, Illinois, topped the field at the Nebraskaland Pro-Am Archery Tournament in Lincoln.

Hagemeyer led the field of a hundred professional and amateur archers with two perfect indoor rounds of 300 points. Don Pfohl of Newburg, Indiana, shot scores of 299 twice, while Dean Pridgen of Blue Springs, Missouri, and Gene Ward shot 298's and perfects to join him in second

In the ladies' pro division, Lucy Drake of Danville, Illinois, and Nancy Sanderson of Hastings, Minnesota, tied after two rounds of competition with two round totals of 585. In the sudden death shootoff Sanderson missed the first arrow. Darlene Wells of Lincoln maintained the third spot with a total of 576.



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At the 1971 Culver Invitational Team Tournament for the Junior Olympics, a timing light which marked the two-and-one-half minutes of shooting time for each archer was an innovation. The light will be used at the Olympics in 1972 and will be making its appearance more often in U.S. competition.

Twenty-one teams competed in the event. The Millett Hawks of Lansing, Michigan, topped the list with a team score of 2034 out of 2160. Doug Brothers, NAA 1970 Eagles Cup champion, tied with Richard White for top single honors with 536 out of 540. In the shootoff, White won. Third place, with a 532, went to Larry Webb.

CANADIAN BIG ONE

The Canadian archery championships, in conjunction with the British Columbia archery championships, will be held in Vancouver, British Columbia, July 4-8. Fred G. Usher, president, Victoria Bowmen, 2677 Dunlevy Street, Victoria, British Columbia, Canada, is fielding all the questions on this one.

ROCKY TOURNEY

The 1971 Rocky Mountain Archery Association Target tournament will be held on June 19-20 at Peterson Field in Colorado Springs, Colorado. The tournament will be hosted by the Buckskin Bowmen. The Registration fee (for Six-Gold) has been sent to the NAA. Rules to govern the tournament are Official Tournament Rules of the

Facilities at the tournament include the Rod and Gun Clubhouse for restrooms and serving of meals, with a camping area near the shooting area. The field is 2000 yards long for private pilots. There are restaurants and motels along Highway 24 which runs by Peterson Field.

Pre-registration is necessary for planning, however registrations will be accepted at the tournament site with a late fee added.





Jim Dougherty, with record bear taken during 1970 fall California season.

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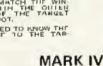
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BROADHEAD SHARPENING Continued from page 35



Another broadhead sharpening device is one introduced in recent months by Doug Kittredge. Simple to use, it produces an outstanding cutting edge, depending on steel.

Bear also has a Cutmaster, a gadget of molded nylon type material with a V slot on one end with two sections of steel in the notch. You run the edge of the broadhead through the V and the steel edges do the sharpening.



For field sharpening after a miss, the Cutmaster made by Bear Archery is compact, easily carried, yet does the job.

Some hunters use a belt sander with a fine grade belt. If you get the head too hot you will change the temper of the steel and perhaps make it soft. Belts, grinders and other power-sharpening methods might appear faster, but unless you know what you are doing, you can ruin the steel in the head.



Author uses a file in his shop, utilizing technique to avoid cutting his hand. He files forward to make ragged edge that will grab arteries in a telling hit on game.

There is another technique wise hunters have learned. When you have the head sharp, check the point where the impact of the hit will be. It is probably needle sharp and

thin. A hit on the bone could turn that point right back. Take a fine-toothed file and gently file the front tip edge of the head. File it against the sharp edge to give you a reverse point on the tip. It doesn't take much, but it makes the tip as thick on the point as it is on the rest of the blade.

If you shoot wood shafts, he certain your broadhead taper is cut properly and evenly on the point of the shaft. It is impossible to mount a head correctly on a shaft that has a crooked tip. Aluminum and fiberglass shafts don't usually have this problem since they are machine-tipped.

Heat the hot cement, place a dah on the adapter, and run it around the tip. Place the ferrule section of the broadhead in the flame. Most archers use small portable hand torches such as the Bernzomatic. You are holding the hot metal broadhead in a pair of pliers, so place the head onto the shaft, turning the shaft to flow the cement around the ferrule of the head. Seat it strongly and set the alignment you prefer along the shaft by sighting down the shaft. I mount my broadheads with the blades vertical. Some prefer to mount them horizontally.

When you have the alignment down the shaft, hold the point of the head on a hard surface and spin the shaft to see if the head is mounted straight.

Just about the time we have it all worked out someone gets wise and makes a broadhead with no point. The Rounder head is two-blade with no point, it is rounded on the tip with no converging point.



When one has filed edge back to obtain slimmer edge on the blade, process is continued; honing with medium stone.

One other factor to take into consideration when choosing your broadhead is weight. Most heads average 125 grains. Some companies make a variety of weights for different heads. The broadhead weight will be out on the tip of your arrow and can take over from the fletch. The heaviest heads will be in the 200-grain range. There are a number of these as well as many in the 165-180-grain range.

The heavier heads work fine from a heavy bow, say sixty pounds or over. If you shoot a lighter bow you should check your head weight.

Here again there are two schools of thought. One says the fast light arrow will give better penetration, since it has a higher velocity. The other says the heavier mass, when under control, will give the greater penetration, since it has more pushing for it. If you try to shoot too heavy an arrow from a light bow the arrow goes down field in a nose down attitude and you are definitely handicapped on the longer shots.

No matter what type of head you choose and what method you choose to sharpen it with, remember that all hunters agree on two points — mount it properly and keep it sharp.



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TACKLE TIPS

Continued from page 46

One of the arguments has been, "If we allow bows like the compound, where will it all end?" Others compare the compound with a crossbow. A legal archery bow has been and should continue to be one which is hand held, hand drawn, and hand released. This excludes gun stocks, cranks, and trigger devices, distinguishes a bow from the crossbow. yet leaves room for advancement in the art of designing better bows.

As long as the bow is held in one hand, drawn with the other, and the arrow is propelled only by the potential energy stored by the archer drawing the bow one time, you have a bow which I feel meets the intended definition of an archery bow, and any advantage of increased cast is purely the result of a more efficient design.

Another argument maintains that the compound gives the archer a mechanical advantage. You bet your bippy it does! But so does the conventional bow. Otherwise we would simply grasp the arrow and throw it at the target.

Perhaps the strongest attempt to kill the compound was made by applying the word mechanical to it. This word is defined in the dictionary, in part, as "Of or relating to machinery or tools. Produced or operated by a machine or tool. Of or relating to manual operations. Done as if by a machine. Relating to, governed by, or in accordance with the principles of mechanics. Relating to the quantitative relationships of force and matter."

The key word machine is defined as "An instrument (as a lever) designed to transmit or motivate the application of power, force, or motion." Note the term as a lever. There should be no doubt that a machine can be a one-piece object. As a matter of fact, the one-piece lever is classed in physics as one of the six simple machines. It follows that if the compound is mechanical and constitutes a machine. then so is the conventional bow mechanical and a machine.

The subject of mechanics goes deeper than the dictionary definition. The counsel of a physicist is in order to qualify these terms. My knowledge of the subject is limited, but here's what I make of it.

Every time you draw an arrow you perform work, known as input work. The bow also performs work, It converts the potential energy you have stored in the limbs with your own brawn into output work to propel the arrow. No machine is one hundred percent efficient, however, and part of the energy is lost to friction and overcoming inertia. Efficiency of the bow is what determines its cast. Continued on page 81



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Continued from page 22

riser and could be used for shooting if the rest came off. Shakespeare's plastic shooting rest proved effective in the field. It has a sponge rubber base that glues on the shelf and above that is a hard plastic shelf. Above the shelf but connected to it is a smaller shelf that has a give to it. This allows for down pressure on the arrow on draw and release. The side plate is of a white material — possibly nylon — that proved soft on arrow release so as not to spook game with arrow rattle. It is

durable enough to withstand all the shooting done and still be in fine shape.

The arrow rest itself will bring the arrow the recommended one-half-inch above the shelf to allow good fletch clearance. The Ocala X17 bow retails at the suggested price of \$74.95.

The Thunderbolt arrows that were left were put through the usual tests. These arrows with the bright fluorescent orange shaftment and black accent were fletched with two orange

fletch with a bright yellow cock feather. The nocks were black speed nocks with index for the cock feather. These Thunderbolts come in two lengths, thirty or thirty-one inches, fully fletched with an almost straight five-inch shield-cut fletch. I would have preferred a slight spiral or helical, but with the broadhead, I had no planing.

The shaft measures exactly thirty inches from the nock inset to the back of the broadhead. I had trouble with these long arrows with my shorter draw, so took two of them and cut the fletch off to give me my desired 28½-inch arrow length, replaced the nock insert and fletched these two with a left wing helical. For comparison I took the two cut-down shafts along with two of the regular shafts and tried them at different ranges.

The shorter shaft flew better for me at longer ranges since I had eliminated some of the tip whip on the longer shaft. The long shafts, factory type, had and did shoot all right up to about thirty-five yards. From there on the length started to tell and if I intermixed the two lengths.

I could put the shorter shaft into my target, but the longer one would be off to the side. If you gap shoot, you can't shoot a longer shaft without problems. On game I try to use instinctive shooting and with as much care as possible carry this over to my practice target shooting.

The spine on these Thunderbolts is rated at 40-60 pounds. Now I have always felt that an instinctive archer could shoot any arrow spine in any bow, unless it was too erratic. I strung up a forty-two-pound bow and took it along, with the fifty-pound Ocala, to the range. I tried the two bows with the two sets of arrows: the shorter and longer ones.

After I overcame the release problem of the lighter bow, I was pulling my bowlock off the string, giving me erratic flight. I could put arrows into a nine-inch pic plate up to thirty-five yards. Beyond that I had problems with the two bow weights and arrow lengths.

When I stayed with either the forty or fifty-pound bow and one set of arrows, I could adjust to shoot and hit. When I mixed them up, the problems became humorous. I couldn't hit anything consistently. You could shoot these Thunderbolts from the lighter bow or the heavier, if you didn't mix them up with any other shafts.

As my normal curiosity became aroused, I placed them on my spine tester. They came out at .350 or seventy pounds approximately. I went



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Tips of Shakespeare Ocala bow are reinforced by fiberglass overlays.



through my collection of Easton shafts and found that the 2020 shaft, on my spine tester, came out to the same spine. The 2020 is what I use with sixty-pound bows.

Since I was trying to find fault with the Thunderbolt I thought of weighing the entire unit on my grain scale. The full length shaft with the four-blade inserts in place and the dirt cleaned off weighed 565 grains. That would be about the right weight for the lifty-pound bow. The shaft without the blades came to 462 grains. That would be your basic weight if you preferred to use a standard ferruled broadhead on the shaft.

The blades for the broadhead insert into slots and grooves on the swaged tip of the shaft. The main blades weigh 66 grains and the secondary blade weighs 42 grains for the total combined weight of 108 grains. If you wanted to use only the main blade as a two-bladed head, you could do so. The steel used in the head and secondary blade is spring steel. They sharpened with difficulty but stayed sharp in the field. They also tested out 47 on the Rockwell C scale for steel hardness.

The Thunderbolt arrow, complete with fletch and four-blade broadheads retail for about \$29.95 per dozen. You might find price differences, but this is the recommended price. That is

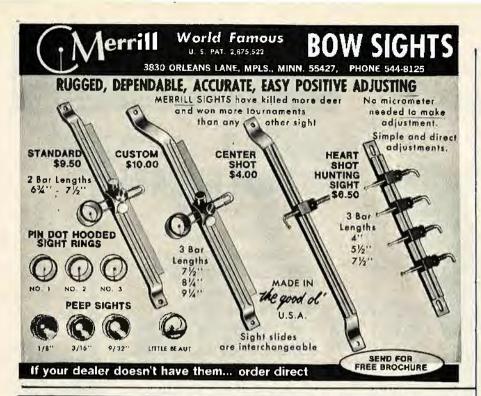
relatively low for a completed arrow to take into the field and hunt with. The main blade and insert blades are also available in packs from dealers.

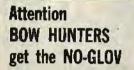
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There were two basic problems with the Thunderbolt for me. First was the length, much too long for my draw and they don't make any that are shorter for us stocky people. The main problem was that the shaft can't be shot in the field with the broadhead attached to check flight without danger of losing the blades. If you try stump shooting you will end up pulling the main blade from the swaged and slotted ferrule. If you carried sharpened auxiliary blades in your pack, all you would have to do would be to insert them into the grooves providing the groove and slot weren't also damaged. I had some of the tips curl back making it impossible to insert another blade. Those arrows will be tipped with the regular ferruled broadheads or field points. It would be awkward to carry both insert blades and regular ferruled blades in the field plus a lighter and hot melt cement needed for field changing.

The Ocala X17 and the bright shaftment and fletched Thunderbolt arrows had given me my first kill in whitetail deer on my first whitetail hunt. Who could ask for more?







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TECH TALK

Continued from page 10

fellow selecting can make in weight. you should also state if you want particularly light or heavy weight shafts.

(With your bow, we do not recommend less than a ten-strand bowstring. This will shoot fine. About 81/2 inches fistmele is right.)

OVERSTRESSED LIMB

I am a junior in archery and I would like some advice about my bow. The limbs of my bow have developed a frosty appearance and are starting to sliver. I would like to know if it can be fixed.

Bart Wagar, Oshawa, Ont., Canada

(From the description, the fiberglass on your bow is wearing out. The frosty appearance generally is due to the finish crazing. By itself, this would not be harmful, but it would show the bow limb was overstressed at that particular point; however, if you have slivers starting to raise on the edge of the fiberglass, this is a good indication the glass is about worn out.

(You can carefully file or sand the edges of the glass round and eliminate the slivers if they are not gone too far into the bow. This may help for a

(The last word, of course, in any bow repair should be by the bow manufacturer and you could write whoever made your bow for their recommendation and action.)

DRIVE HUNTING

I am writing for a little information on rabbit hunting. I've tried walking through the brush in hopes of seeing and getting a shot off at a rabbit, but the results have been a flop. I've also tried taking a few steps at a time, stopping and waiting for a curious rabbit to stick up its head. The result has been that I've just about stepped on rabbits two feet away. I field hunt in cover and grass two feet high that makes visibility poor. Any advice?

Patrick Cheatham.

Hazelwood, Missouri

(The most common method of hunting under the conditions described is by a drive, using from two to fifty people in a single line abreast, walking slowly from one end of a field to another. Generally, one person spooks up the rabbit which runs by one of the other hunters, offering running shots. Not too many rabbits, percentage-wise, are bagged this way, but archers get loads of shooting.

(Your slow couple of steps at a time method is the way to handle it when you are by yourself. The only thing is, you must train to shoot immediately. When the rabbit pops up, get a shot off at him. With a bit of practice, it will surprise you how accurate vou can shoot in a split second at a fast moving object. Don't use your best arrows...you no doubt will lose a bunch.) +

TACKLE TIPS

Continued from page 76

Work (foot pounds) = force (pounds) X distance (feet), The archer accomplishes a certain amount of input work when he draws a bow with a specified peak weight a certain distance to his anchor point, whether the bow is compound or conventional. All types of bows of the same draw weight may not require the same amount of work since the weight at various stations in the draw is variable. But for all practical purposes we might say the rated draw weight is the force and length of draw is the distance.

The output of the bow is equal to the archer's input work less friction (output = input less friction). In the case of the bow, the work loss is due mostly to overcoming inertia or drag of the limbs. Inertia is the property of matter which makes a body at rest tend to stay at rest and a body in motion tend to stay in motion. The first part is applicable where the limbs, string, and arrow are at rest at full draw.

When you release, part of the work you did (stored energy) goes into overcoming inertia to bring the limbs back to the strung position and the remainder is available for propelling the arrow.

Efficiency = output divided by input. A bow which imparts a greater percentage of the stored energy to propelling the arrow is more efficient. The compound bow drives an arrow faster than a conventional bow of similar weight, because it is more efficient.

Due to improved design and working principles, the limbs on the compound need move only a fraction of the speed and distance of the conventional limbs to get the same string speed. Limb recovery (overcoming inertia) does not consume so much of the stored energy. The energy saved is diverted to propelling the arrow with greater speed.

Furthermore, the compound stores and delivers the energy in better sequence of amounts. The conventional bow expends much of its potential is overcoming inertia at the start of the launch, whereas the rocket-like thrust of the compound with its increasing increments of force utilizes the stored energy more efficiently with less loss and accelerates the arrow more smoothly and effectively.

In the name of progress, how can you disqualify a bow because it is more efficient? How can the compound be eliminated as not fitting the definition of a bow? It is hand held, hand drawn, hand released, and derives its power from the bending of the limbs. There are no explosives or rocket fuels to augment the archer's work. Any benefits derived are due purely to the improved design.

The compound is a marvel of engineering, and inventor H. W. Allen should be accorded accolades for his ingenuity in giving us the greatest bow of all time. Like the Tucker automobile, it is perhaps ahead of its time, representing more progress in the state of the art than can be swallowed in one gulp by those who are averse to change.

Should the compound bow be condemned because it is a better machine (and all bows are machines)? Will we not be guilty of stifling the greatest archery invention of our lifetime? It is regrettable that this great bow may become a



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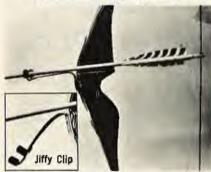
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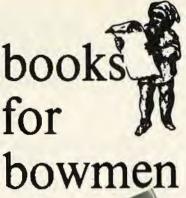
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The book is practical: it tells how to find free or cheap land, how to build a home, find food and preserve it, how to keep warm in the northern climes, how to find employment in such circumstances - even how to get a mail order education out in that area, where man can "reduce life to its essentials and live in great comfort on nature's credit card."

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