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BOW & ARROW

MARCH/APRIL 1967

Alaska:

**BOWHUNTERS'
BONANZA**

**CROSSBOWS
FOR VIETNAM!**
**VOLCANOLAND
HUNTING**

Profile Of A Champ:

JIM STAMETZ

Advance Look:

THE PEARSON OPEN



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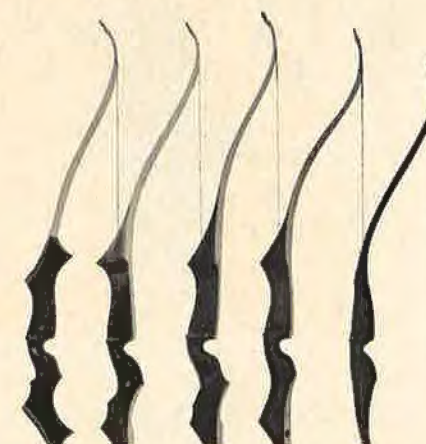
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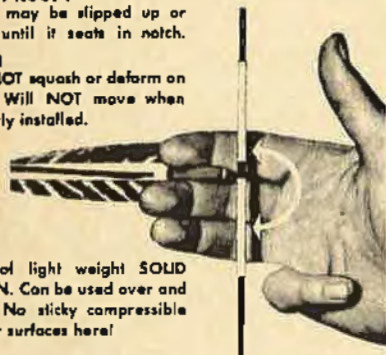
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PUBLISHERS: Ray Rich & Jack Lewis

EDITORIAL DIRECTOR: Jack Lewis

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FIELD EDITOR: Jim Dougherty

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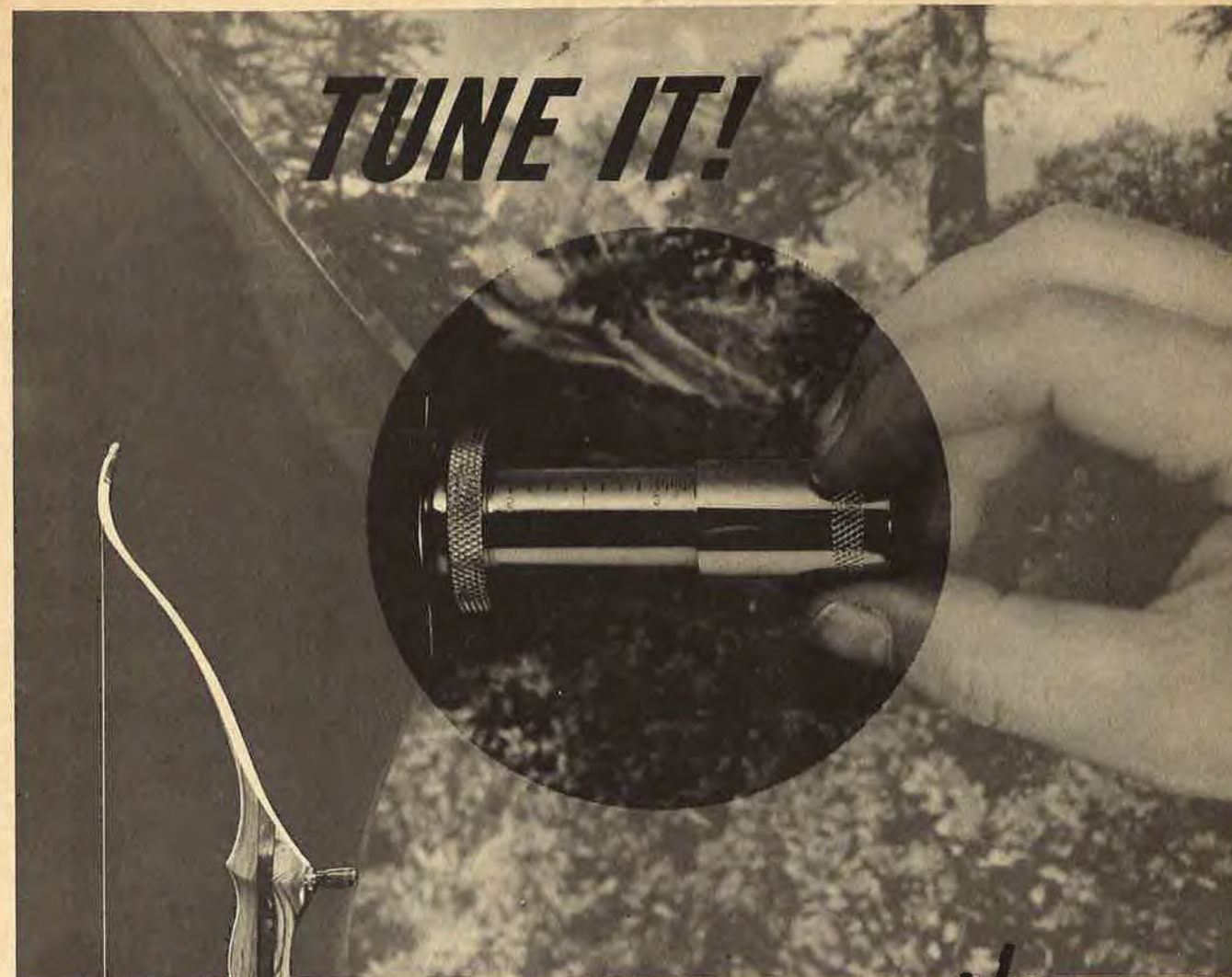
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ON THE COVER: Pert Pat Phelps checks her target score after using a Browning Challenger bow with arrows of matched Forgewood. Her leather accessories are by King. Photo by C. R. Learn.

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LONGEST BOWHUNT

I would like to congratulate you people for a great magazine. I really enjoy it and it has given me lots of information on hunting, bird and animal calling, and just general archery.

I enjoy the articles by Jim Dougherty; the hunting tips by Doug Kittridge are very good. I also enjoy the series on the *World's Longest Bowhunt*. When the boys come back from their hunt, would you congratulate them for me?

I am leaving for the Navy, but when my subscription runs out, my mother will send you the renewal.

John L. Ahrens,
Granby, Connecticut

(Podell and Stephens finally have made it back to Terra Firma, U.S.A., and their final chapter of their wanderings is contained in this issue. However, they're dreaming up some other gambit such as going around the world in the opposite direction, passing over both poles. They may be shooting polar bears and penguins the next time you hear of them!)

PIN-POINT ACCIDENT!

Enclosed is what is left of a perfectly good Herter's aluminum arrow that my archery partner, Dick LaRose hit.

We were standing side by side at twenty-five yards, shooting at a twelve-inch field face, when his Easton 1816 arrow hit my Herter's 1816 and passed through the nock and the swaged end of the arrow, then down the shaft about three inches.

The weight of his arrow broke off the end piece of my arrow, but the feathers held the two pieces together until we pulled Dick's arrow out of mine.

I broke off the end and pushed it into the small piece to show you where Dick's arrow stopped inside of mine. Because of the odds of such a thing happening, I thought it might be of interest to you.

Raymond Alberti,
Granby, Connecticut

(Now if it had been intentional, we'd say that was some shot!)

AUSSIE REPORT

I read the story of Hal Stephens' *The World's Longest Bowhunt* in your Sept./Oct. '66 issue with great interest. The story sounded like our whole country was uninhabited and no bow-hunters exist in this land.

As I am domiciled in Sydney and

Continued on page 42

The bow that won the most money—ever!

Which is the greatest money bow of all time? It's Bill Bednar's CHEETAH SUPREME, by American. The impressive tournament record of man and bow stands as a symbol of the perseverance, the performance and painstaking perfection of both.

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1965-1966 State, National, International Records Held by Bill Bednar and his CHEETAH SUPREME

1965	
February	Ohio State Fillet Championship — Perfect Score 560
February	Mid-Atlantic Open — 1st Place — Score 291
March	Ohio State Chicago Championship — 1st Place — Score 846
April	International Open — Tied for 1st Place — Score 584
July	P.A.A. Championship — 1st Place — Score 1164
July	Ohio State Target Championship — 1st Place — Score 1192 FITA — 780 American
July	N.F.A.A. Tournament — 2nd Place — Score 1053, 1072, 546
August	N.A.A. Championship — 2nd Place — Score 1163, 977, 776, 782 for 3696
September	Ohio State Field Championship — 2nd Place — Score 1572
1966	
January	U.S. Open — 2nd Place — Score 295 and 288 Total 583
January	Mid-Atlantic Open — 2nd Place — Score 292
March	Galaxy Open — 1st Place — Score 292
March	Ohio State Indoor Championship — 1st Place — Score 295
April	International Open — 3rd Place — Score 294 and 290 Total 584
July	P.A.A. Championship — 1st Place — Score 297, 294, 293, 292 Total 1176 (all time high)
July	Mald-of-the-Mist Open — 1st Place — Score 290
July	Ohio State Target Championship — 1st Place — Score 1146 and 774
September	Ohio State Field Championship — 1st Place — Score 1595 (state record)
National Records still held by Bednar: P.A.A. Outdoor Round of 297 and record total-1176 — Championship record of 860 for Chicago Round — Indoor 20 Yard Fillet perfect score of 560 — FITA Round of 1192 and Double American of 1568 (total).	



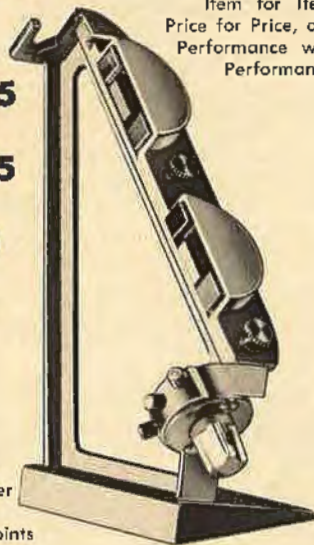
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HUNTING WITH Doug Kittredge

NOISE can help you get more game! The right sound, at the right time, can be pure magic for the knowing bowhunter. The trick is knowing what sound to make and when to make it.

Sound plays a most important part in the life of wary wild animals. Much of what action they take is based on the sounds heard or not heard. Some sounds are instantly frightening, while others cause a reaction of alert attention, but do not cause instant flight. Sound can arouse curiosity or soothe an alerted animal. Some can attract and bring the animal within close range; others can cause him to leave the protective concealment of heavy brush in headlong frightened flight.

Anyone can learn to make a number of useful hunting sounds with the natural voice, materials at hand or a commercial game call. The knowing bowhunter can use sound to bring the animal to him, to stop it, or to move it into a better shooting position. Oftentimes sounds occur from other sources than the hunter himself and knowledge of how the game will react gives the hunter opportunity to put himself in an advantageous position for a shot.

Outdoor sounds fall roughly into four categories: (1) Those that alarm and frighten into instant flight; (2) those that alert and get attention, but do not cause the animal to run; (3) those that attract the game to come into the sound; (4) those that calm, soothe and reassure.

Sounds which alarm and frighten game are sometimes used to flush game from dense brush. In India loud noise plays an important part in moving game to the hunter during organized drives. How often have you passed a dense clump of brush or aspen and thrown a rock into the center of it to flush game out on the other side?

During a deer hunting trip this fall we were hunting some rocky outcroppings in extremely steep canyon country where it was almost impossible to see what might be below us. With two of us working each side of the canyon, one group would locate in a position where it was thought the game would run by when spooked from the other side. Then the other group would move forward and roll rocks off the outcroppings and down the steep draws, finally advancing beyond the waiting hunters on the opposite side, then reversing the procedure to gradually work each canyon out. A number of deer were thus run by the hunters and eventually a nice four-point was taken. When shot it had its full attention on the noisy rock rollers two hundred yards across the canyon and had no idea more serious danger was at hand right beside him.

The popular Herter's Rabbit Flusher call is designed to make a high pitched scream such as a hunting hawk might make, a noise calculated to cause rabbits to move so the hunter can see them and get a shot.

Sounds that alert game but do not cause flight can be of use when a couple of hunters are working an area together. A few years ago I was working down a steep canyon into a feed area where several nice bucks were browsing.

Continued on page 41

6-GOLD "MAY REVOLUTIONIZE ARCHERY BY Contributing to UNPRECEDENTED ACCURACY"



*New Industry, Product Unveiled

A new Albuquerque industry and a new product were introduced here Tuesday

Its first product is a ring-shaped trigger release for archers — an item which may revolutionize archery by contributing to unprecedented accuracy.

From the Albuquerque Journal



\$2.95

These Archers Had Never Handled a Bow Before 1965



6-GOLD is slightly larger than a silver dollar, but shoots like a million. Archer-inventor Glen Klaurens claims the 6-GOLD can do more to improve an archer's score than anything yet devised. "When an archer uses only his fingers," says Klaurens, "he causes the arrow to oscillate laterally. The 6-GOLD causes the arrow to fly straight and true, increasing the speed when released." With 6-GOLD releases, many archers will be able to shoot vanes — something they had heretofore been unable to do. You'll get perfect flight out of arrows from 1616's to 1916's, all shot from the same bow. This is impossible with the regular Mediterranean release.

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City Archers Get Top Honors

Two Albuquerque youngsters, Marshall and Warren Klaurens, took the top two awards in their division in the national first annual Sahara Tahoe Pro-Am Archery Tournament at Lake Tahoe, Nev., the past weekend.

Marshall, 13, captured first place in the junior division with scores of 267 and 275 for a total of 542 out of a possible 600. Warren, 14, took second place with a total of 530. The brothers are the sons of Mr. and Mrs. Glen Klaurens, 10412 Princess Jeanne NE.

Klaurens had entered the open division and was among the leaders until the mid-way point when his bowstring broke and he was forced to continue competition with an unbalanced string.

Both Marshall and Warren began shooting with a bow and arrow about two years ago.

During the Sahara Tahoe tourney, the youngsters shot under Professional Archery Association "rounds" — or requirements.

From the Albuquerque Journal



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TACKLE TIPS

Tom JENNINGS

GADGETS, GOOD OR BAD?

One Saturday morning a young man strolled into my archery shop. I was engaged with several other customers at the time but I could see that he was bitten by the archery bug. His eyes were sticking out like a tromped-on toad-frog's while he handled some of my custom bows. When his turn came to be waited on, I said, "What can I do for you?"

"I want to buy a bow and some arrows."

"Have you ever shot a bow before?"

"Yes, I have been borrowing a friend's bow for about a week."

With a certain amount of trying and pulling and feeling, we fixed the man up with a fine Bear Tigercat, a set of matched wood arrows cut to his draw length and with a glove.

With a completely new archer, as I knew that he was, we usually give him a few minutes at the target butt behind the shop and pass on a few basic instructions on shooting a bow. He was well coordinated and a few minutes of instruction got him started with a good anchor point and relatively good bow arm follow through. He departed the shop in a state of ecstasy as only the badly bitten archery bug can radiate.

The next day, bright and early, our new archery fan was waiting at the door when I opened the shop. He made a beeline for the pegboard where all the little gadgets are hung. Every old time archer knows that there is no other sport with more gimmicks and gadgets to try to aid the shooter than is found in archery. Our inspired champion reached up on the pegboard and pulled down a card full of clickers. "I want one of these."

"Why do you want a klicker?" I said.

"Because," our new champion said, "there was a fellow on the range where I was shooting yesterday who was putting them all right in the middle and he was using a klicker."

A few minutes of gentle persuasion was of no avail on our new hero. Now I am in the archery business to sell tackle and I cannot refuse to sell an archer anything that he has the money to buy, so our friend departed with his klicker.

Now here is the point. This man was a brand new archer whose draw length probably would change four or five times before his form stabilized. Without stabilized form, a klicker would be a detriment to this man. Don't get me wrong, I am not running down klickers. I couldn't do that, because some of the finest shots in the United States use a klicker very effectively. My contention is that the brand new archer should steer clear of the gimmicks until he has built the muscle to pull the bow and develop some sort of stabilized form. I have had this same situation occur when new archers have seen somebody using a level, a string peep sight, a kisser button, prisms, even telescopic sights. These things all are available and displayed in most completely equipped archery stores. It is only natural that the beginning archer will see these things and expect them to make an "instant" champion out of him. On the contrary. I think that for the novice archer to jump to the gadgets and gimmicks too soon will create excessive tension

which, in turn, leads to the common malady called freezing or, a better term, psychological block.

Our young friend in question was back the following day. "I don't like this klicker," he complained.

"Let's step out to the hay and find out what's wrong," I said. A new archer usually will grow an inch or so in his first month of shooting. Consequently, I cut his first set of arrows a little long. Of course, I knew this was his problem. While trying to draw the bow through the klicker, he was getting his form all out of shape.

This archer was now ready to listen to what I had to say. We removed the klicker and set it aside for future reference. We stepped up close to the straw and proceeded to learn a little basic form. This little story has a happy ending. I was able to prevail on this archer for a few months to stay away from the gadgets until he stabilized. Now, some six months later, he is shooting excellent scores and he is using several of the gimmicks, including the klicker, with fine results.

I think the novice archer should be given plenty of time to work out a basic form without the aid of gadgets. All of the archers who have been around the sport for more than twenty years can remember the beautiful, fluid look of a fine, instinctive archer. (There are no true instinctive archers in competition today. They all use a more complicated, involved sighting system than the sight shooters.) The instinctive champion of twenty years ago made it look easy. Standing loosely at the shooting line, he would make a smooth, quick draw. The good ones would anchor for a second or two and release with a breaking action you seldom see today in a tightened-up sight shooter. He developed this form and technique entirely by feel and the senses. When you were sharp you were so sensitive at the anchor point you could feel the pores of the skin on your face. You used to hear archers say, "I was hot today. I couldn't do any wrong." This feeling is a wonderful feeling and will seldom ever come to you if you start immediately with mechanical devices to line and level and draw check your form.

Twenty years ago, we still had freezing and psychological block. However, it was about as rare an archery disease as elephantiasis is a medical problem in this country. In the last five years freezing and psychological block have been killing off archers faster than automobiles do on a three-day holiday. I contend that it is the tension created by the mechanical aspect of our style of shooting. Students of archery nowadays never seem to hear the instructors say, "Relax!" For one thing, it is too difficult to relax when you have so many mechanical things to do. To keep from getting over-gadged, I think the accomplished archer should study his form and only use the gadgets where they are needed. Why put on a klicker if you have no draw check problems? Why use a peep sight if your line is perfect? Why use a kisser if you have no elevation problems?

If you are not scoring as well as you think you should, have a competent instructor watch your form and pick out your major problem. Don't promiscuously go out and hang every gadget you can find on your bow and expect it to iron out your form perfectly. I have seen archers by the hundreds literally frustrate themselves out of archery because the gadgets did not deliver the perfect score. ♦

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SHOOT AT NIGHT

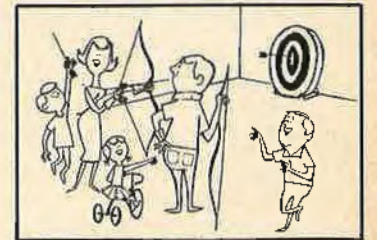
A simple spotlight and an extension cord make your backyard an archery range. A few shots daily improves form best.

Soon your family and friends will be shooting with you too! Archery's great relaxation.



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TECH TALK

SHORT ARMS

Is there a bow designed specifically for a short draw archer? I gather that some speed is sacrificed in bows due to deflexed limbs to prevent attacking at full draw. I draw only 26 1/2 inches and my bow will be used for hunting, so speed is a primary concern. I do not want a bow shorter than fifty-eight inches.

Don Lorig,
Oshkosh, Wisconsin

(There are several bows that might fit your need, and the Red Wing Hunter is one of them. Another that is excellent from the standpoint of speed is the Black Widow H-101.)

FOUR-BLADER

I enjoyed Jim Dougherty's Corsican Ram Va Pasadena Ham in the Nov/Dec 66 issue. I was interested in the four-blade Little Shaver broadheads he used during this hunt. Could you tell me how he transformed the original two-blade model into a four-blade type? Is there some company that makes them up into the four-blader?

Thomas F. Alex,
Aurora, Missouri

(The four-blade Little Shaver is a modification of the regular head, having industrial razor blades broken at an angle in a pair of pliers, then glued in place with epoxy cement or

soldered. There is no such blade on the commercial market at present.)

FLETCHING PROBLEMS

I am writing in reference to an article in the Sept/Oct 66 issue. The article was *One Step More* by C. R. Learn.

Learn is talking of Rube Powell. The terms, *helical*, *spiral* and *straight* are used in reference to fletching. I understand the straight, but what is the difference between helical and spiral? I have understood the terms to be synonymous.

Gary Sides,
Lubbock, Texas

(Straight fletching, of course, is a straight feather aligned directly down the axis of the shafting. Spiral fletching is the same straight feather, but it is glued on an angle to the axis of the shaft, normally about one-eighth inch out in a five-inch length.

(Helical fletching requires a curved clamp to hold the feather and results in spiraling the feather around the shaft much like the strip on a barber pole.)

As I have, in the past year, begun fletching my own arrows, I found the article, *One Step More* by C. R. Learn, very interesting. Yet I believe

Continued on page 51

HELICAL FLETCH

What is the purpose of helical fletching? I am a right-handed shooter, so which direction should the helix be? Left or right?

Jim Kleist,
Madison, Wisconsin

(Helical fletching is designed to permit the feather to screw its way through the air rather than serve simply as a deflecting vane, which is the situation with a straight-fletched feather set only at an angle.

(By theory, this eliminates drag and it shoots with a maintained greater speed. It also is felt by many that such fletching stabilizes a broadhead better than a straight angle. It makes no difference which feather wing you use; just be sure all arrows are fletched the same.)



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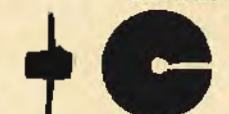
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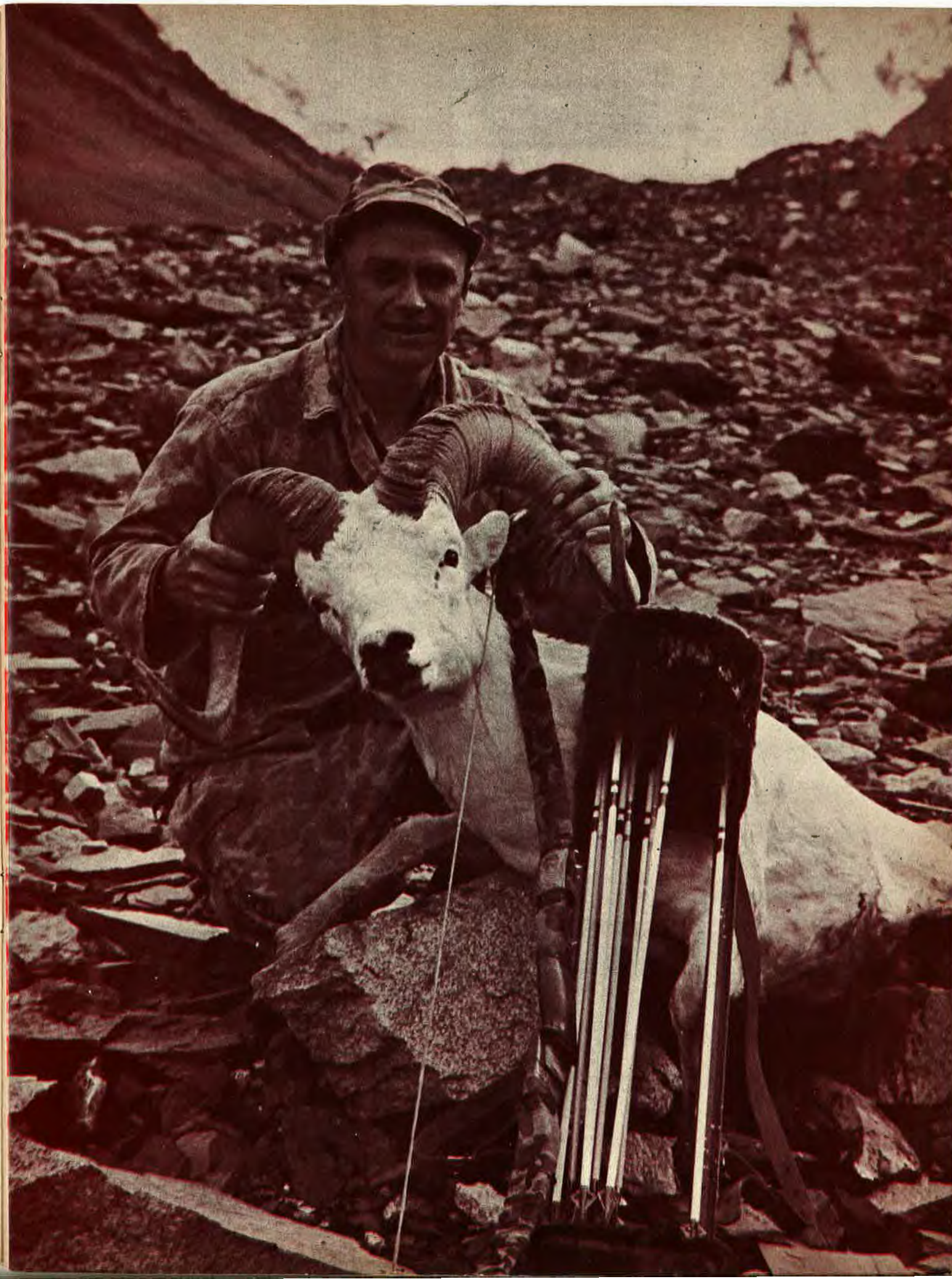
By Keith R. Clemmons

BEADS of perspiration coursed off our foreheads and dropped lightly on sweat-soaked shirts. The morning sun was warm on our backs even though a crisp breeze caressed the glaciers surrounding us.

A fantastic panorama of color lay before us as Mount Hayes thrust its snow-capped peak high above into a cloudless blue sky. A hanging snowfield on steep slopes clung desperately, then, with a voice of thunder, slid into a narrow valley joining the giant glaciers which surrounded our emerald island of grass. We stood spellbound by the stark beauty of this scene, unable to drink in all its grandeur. Scenery of this caliber, although magnificent, is commonplace in the Alaska Range where my partner, Ron Miller and I, were spending a thirty-day leave from nearby Eielson Air Force Base, Alaska. We were after the elusive Dall ram.

Ron and I were standing on a high ridge, about a two-hour hike from camp, surveying a lush valley several hundred feet below when we spotted what appeared to be a small band of sheep, but it soon grew to over forty ewes, lambs and a few immature rams. Since there weren't any legal rams, three quarter curl, in the group we moved closer to take pictures and practice our stalking techniques. We managed to get within fifty yards before one alert mama spotted us and gave the alarm.

It seemed as though we would have no difficulty locating sheep. What we needed was a ram with a 270-degree curl, or a three-quarter curl — one about five years old. We found several of these and some that





This is typical sheep country of the North Country. Snow-covered Mt. Hayes is 14,000 feet. In the bowhunter's camp, one tent is for sleeping, the other cooking, at 4,500-foot level.



would go a good full curl, or in the forty-inch class. We hunted hard for the remainder of the day. However, due to circumstances such as inexperience, bad luck or you name it, we were unable to get close enough for a decent shot.

The second morning of the season found Ron and me high above camp. We had been climbing for several hours and had not seen so much as a ground squirrel. At lunch time we were stopped on a wind-swept ridge munching a sandwich when Ron nearly choked, "There's a dandy." We put the scope on the ram and sure enough it was a full curl.

"He'll go over forty inches for sure," Ron exclaimed.

The ram was directly across the canyon lying at the base of a huge outcropping of rock. "He's your ram," I said. "What's your plan of attack?"

Ron studied the situation for a few moments and said, "I'm going to drop off of this ridge, completely circle around the slope he's on and come up from behind."

"That's a good idea. That way you'll be behind cover during the entire stalk," I agreed and he started out. Ron and I previously had worked out a series of

signals so that we could help guide each other during a difficult stalk. It was well over an hour before I spotted Ron casing over the ridge behind the ram. I always get a kick out of watching someone else make a stalk and was enjoying myself when I suddenly had a horrible realization. Ron was stalking the wrong boulder. I grabbed the aluminum foil our lunches had been wrapped in and frantically signaled him. He caught on and I directed him to the sheep much as the flight officer on an aircraft carrier guides planes onto the deck of his ship.

Within minutes he was in position, but Old Lady Luck kicked him right in the chops when he slipped on a loose rock and startled the ram. The sheep made one jump and was running full speed when he came into Ron's view at about forty yards. He left the first arrow in his wake and the second hurried shot passed over his back. Before Miller could get a third shot, the ram was gone.

Two dead tired, frustrated bowhunters staggered into camp that evening and even our usual excellent dinner and rowdy heart game couldn't shake Ron out of his black mood. Our bad luck continued for several more days.

The last day of the hunt broke clear and bright. As Ron emerged from the tent he announced that, "today is our last day and I don't want to leave Alaska without a ram."

He had given in and was going to hunt with his rifle. Had I had a rifle I might have been tempted myself but I didn't. Before we started this hunt I promised myself that I would get a sheep with my bow or I wouldn't take one. I must admit however the temptation born of frustration was great.

Footsore and weary after days of climbing and rough hunting, we decided to hunt at a lower elevation than usual. Traveling up a small glacier stream about an hour out of camp, we stopped to rest and check the hills about us. We were glassing the slopes above when, to our surprise, three rams came walking out of a small canyon slightly below us and about eighty yards away.

None of the rams were full curl; however, one was a mature animal with exceptionally heavy horns.

"The last one looks the best," I remarked as the blast from Ron's rifle drowned out my words.

The shot startled the sheep and two of them took off up the steep hillside. Ron's ram managed only a

few steps and dropped in his tracks. He fell about sixty yards from us and never moved a muscle. Ron was elated and we slapped each other on the back and danced a half-crazed dance. The sheep wasn't a record buster but still a pretty fair head. At this stage of the game even a ewe with her tiny horns would have looked good to me.

In a couple of hours, we had the ram back in camp. Miller still was jubilant over his kill, but sensed my disappointment. He suggested we fix a quick bite to eat, then try to locate me a ram. By now I was pretty skeptical of my chances but agreed to give it a try.

"There must be ram around here someplace," muttered Ron. We were about an hour out of camp and glassing the steep canyons and open meadows when I detected a slight movement.

"Got one!" I announced. "Put the scope on the big rock just below the notch on the crest of the hill."

The twenty-power spotting scope revealed a nice ram with what appeared to be a full curl. Evidently he had been lying down and had just started feeding when we spotted him. He was moving toward a small saddle on the ridge several hundred yards above us.

Continued on next page

To get a shot at this ram, I would have to be on the crest of the hill when the sheep reached the top.

The saddle lay several hundred yards up the ridge from where we were standing but the ridge offered good cover all the way to the top. All I had to do was beat the ram to the saddle. The ridge was covered with caribou moss and low bush cranberries which made travel easy and quiet. In a matter of minutes I was in position behind a strategically situated pile of rocks on the far side of the saddle. All I had to do was wait, which proved to be more difficult than climbing the mountain. From my rocky blind, I could not see down the mountain nor could I watch the progress of the ram.

In my hunting career I have taken upwards of a hundred big game animals with bow and rifle, but I must admit that I was experiencing a sensation never felt before. The only explanation is I was getting a touch of buck fever.

My knees began to shake, my hands trembled and felt damp and my mouth became desert dry. Thoughts ricocheted through my mind. What if the ram should go the other way? What if he should take a different trail?

I could stand it no longer. I had to have a look. I eased out from behind the rocks and started belly crawling towards the edge of the ridge. Just before reaching the edge, I caught a glimpse of the ram's horns. He was grazing towards me, unaware of my presence and completely at ease. I froze on the spot and at that instant wondered how do you shoot a bow from the prone position?

Each time the ram dipped those magnificent horns to nibble at a lichen or succulent sprig of grass, I would slowly inch my way into a squatting position. When I finally could rise to my feet, the ram was about forty yards away and on the far edge of the ridge. It was now or never! My sixty-five-pound Bear *Kodiak* seemed to weigh a ton as I drew it back to a full draw and sent the deadly razor head on its way. The arrow passed over the ram's head and slightly to the right. The ram bolted and so did my heart.

He ran a few steps, stopped, turned broadside and stood staring at me almost in disbelief. I estimated the distance to be thirty-five yards and once again sailed an arrow at him. Again the arrow passed over his back and clattered noisily down the hill.

What was wrong? I just couldn't miss at this distance, yet I had. To add insult to an otherwise bruised ego, the ram began nibbling grass as though to say, "I may as well have something to eat while you settle down enough to shoot straight."

That did it! A little voice reminded me of something I had read somewhere which said, "A good archer must learn to draw, hold, aim and release."

The white shaft glittered a moment in the afternoon sun and disappeared between the ram's ribs, glancing off a rock on the far side and arching erratically into the boulders below. He was hit hard but running. As he passed, I could see that he wouldn't travel far. He was heading toward the glacier which lay far below and disappeared around a small hill. I could hear his progress as he half slid and half stumbled across the loose rocks of the talus slides.

The ram was mortally wounded and I felt he could not travel far. Although my instincts cried out for me to follow, my judgment advised me to wait. Hit the way he was he would have to stop and lie down soon. I also needed a breather, not so much from physical

exhaustion but because my nerves were playing hopscotch up and down my spine. I forced myself to sit down, have a cigarette and wait. I didn't move from that spot for about fifteen agonizing minutes but it seemed more like fifteen years.

I had carefully marked the trail where the ram had disappeared and in a few minutes I could see the entire valley and glacier below. I glassed every inch of the glacier and surrounding terrain and could find no trace of the ram.

I inwardly cursed myself for not following immediately as my instincts had dictated earlier. Another systematic survey of the area revealed nothing.

"What do I do now?" flashed through my mind as I stood on that lonely, empty mountain.

The ram had been traveling on one of the several deep worn trails when he disappeared, so I decided to follow along it. I had moved only a few feet when I discovered a large splotch of blood. Throwing caution to the wind I hurriedly moved along the trail. There was sign everywhere and his route was clear.

It was just a matter of minutes before I spotted him barely visible behind a boulder far below and out on the glacier. Cover was non-existent but the wind was in my favor. The ram lay with his back to me and I silently worked my way to within eighty yards before he sensed my presence.

Eighty yards is a terribly long shot for me but I had no choice. My luck changed, as the ram struggled to his feet and valiantly tried to run. The arrow struck him in the hip and he staggered momentarily, then collapsed. I approached cautiously but he was finished and I was suddenly very tired.

The horns were long, clean with a nice full curl. I remember, standing there viewing that beautiful animal, of having a sensation of regret. Not for the killing of the animal but rather for the accomplishment. I had done what few other bowhunters could claim and wondered if the ones who had felt the same as I.

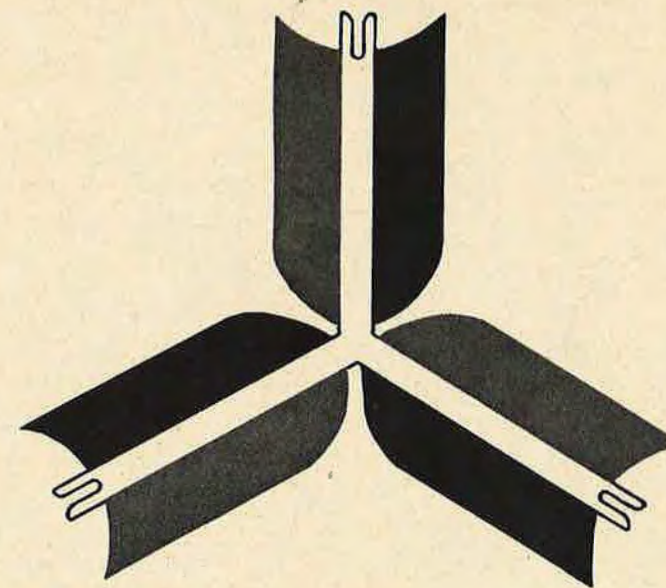
In a few minutes Ron came panting around the mountain. When he spotted my sheep, he gave a whoop of excitement, then shook my hand. He had our packboards, so we dressed the sheep and packed him back to camp.

In honor of the festive event, Ron decided to shave off his ten-day growth of beard. A man could not have suffered more on a medieval torture rack. In fact, I was concerned that I might have to give him a transfusion. To prevent infection, I did allow him a small shot of *Seven Crown* to dab on his face to cleanse the wounds.

What a celebration we had that night. Broiled ram ribs, baked potatoes and peas all topped off with a blueberry cake. The few minutes of twilight we had that evening were brightened by the revelry going on in the tent.

The evening didn't last very long, however. A combination of aching muscles, good food and maybe a too generous offering of cheer soon put us in a sleepy mood.

Next morning the Super Cub from the Frontier Flying Service was to come and move us to another camp for a moose and caribou hunt. But sleep came slowly to me for each time I would close my eyes, I would see those arrows passing over the ram and sailing out into space. I don't know if it was a nightmare or just being tired, but it gave me a lot to think about. •



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A: The AMERICAN ARCHERY COUNCIL

Q: What does the American Archery Council stand for?

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Randall finally bagged this whitetail in northern Michigan, using a Pearson bow. He still hunts Florida area.



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This popular Randall-made knife features a seven-inch blade and stag handle. Each knife comes with its sheath.

BO RANDALL: ARCHER \ KNIFEMAKER By Milt Lewis

WHEN I started some research to find out what constitutes a good hunting knife, I was told to write to W. D. (Bo) Randall of Orlando, Florida. The suggestion came from a noted knife collector and an expert on firearms, knives and swords. He said, "This Randall really knows his craft and I'd say he makes the finest knives in the world. All his knives are hand-made and you can tell their quality by the great amount of pride and workmanship that goes into the making of each knife."

During our correspondence, Randall mentioned that he also shot both hunting and target archery. While attending Ohio State in the Thirties he became interested in archery and won a few medals in the target events.

Years later he started to hunt and spent many seasons trying his bowhunting skill in northern Michigan, hunting for whitetail deer.

He said that this was one of the most challenging types of hunting, where one must outthink, outwit the most elusive whitetail.

In 1954 he downed his buck with his fifty-five-pound Pearson *Palamino*. Since that time he has been busy managing his six hundred acres of oranges in

Florida, plus making knives. His only complaint is that he can get out only occasionally to hunt small game and target shoot.

While in Michigan in 1936, Randall saw a friend scraping the bottom of his boat with one of the most beautiful knives that he ever had seen. It was a Scagle, made by a man Randall considered one of the greatest knifemakers that ever lived. There are only a couple hundred Scagles in existence today and these are collector items. After seeing the Scagle knife, Randall concluded that he must own one. He managed to buy one with a six-inch blade, and after studying it closely, decided to try to make one like it.

In his Florida garage, he set up his knife-making in his woodworking shop, which really wasn't adaptable for metal work.

He started with an automobile spring, which he still considers good steel for a knife. It took twenty-four hours of hard labor to shape it out. With a piece of elkhorn as a handle and some leather washers, he made a good looking knife. He took it on one of his hunting trips and a number of men wanted to buy it. One person was so persistent that he finally sold it to him. Upon his arrival back home, he started another

knife. This one didn't last long either and before long he was making more.

The tempering and shaping of steel blades has for centuries been recognized as an art. Ancient craftsmen have jealously guarded their secrets, and the sword-makers of old Japan were treated as nobility. Damascus steel and the famed Toledo blade became bywords.

Similar acclaim came to Randall, as the word spread about his knives. Hunters from all parts of the globe used them and found out that they not only were beautiful, but held an edge that none other could come close to. In 1938, Von Lengerke & Antoine of Chicago ordered some knives; soon Marshall Field, Brooks Brothers, and Abercrombie & Fitch sent in orders. Knifemaking took a rapid turn upwards, and Randall started looking for an assistant. He found one in Bill Platt, whose father and family had been knifemakers in Sheffield, England for generations. Together they put their talents to work as World War II broke out.

The Marines in the South Pacific found that the knife was not an obsolete weapon, but one that could save your life where a gun or bayonet wasn't the quickest way to dispatch an enemy creeping into a

foxhole at night. A few Marines carried their Randalls into the South Pacific, and it wasn't long before the demand for his knives was on. One Marine pilot had his plane shot out from under him, ditched in the water, then couldn't get the canopy open. With his Randall, he hacked his way through the aluminum fuselage. A short time later he had to use the knife again and it hadn't lost its edge. On Iwo Jima, Major Richard Bong, the air ace, bought a Randall knife for three bottles of Scotch and three British pounds. If you can remember what a bottle of Scotch went for during the war, this is an eloquent testimony to the knife. In Bo Randall's files are hundreds of letters describing their uses from hunting stories to hand-to-hand combats. Today, as during the Korean War, he is making a special knife just for jungle fighting in Vietnam.

The hardness of steel is determined largely by its carbon content. Alloys such as nickel, manganese and vanadium add special qualities and are essential to a blade. Nickel decreases grain size and improves the shock resistance. Vanadium decreases grain size and increases toughness. Manganese adds strength, but the carbon content is the main ingredient that determines



These knives differ from standard Randall patterns in that each was designed by customer, built to his order.

real hardness of the metal. Randall uses a Swedish tooling steel with .9 percent carbon.

"There is probably just as good steel made in the USA, but there isn't any better, so I use the Swedish Dannemora tool steel that I have used for years."

Randall says, "Your basic steel is really the heart of your knife, so start with a high-grade steel."

Tempering and forging, along with grinding and sharpening are the fine arts that go into making a fine knife. He has no super secret for his tempering processes, as did the old swordsmiths of Toledo blade fame who used only water from the Tagus River. Others through the years held goat's milk or even human blood as the key. To all of these legends and secrets, Randall says, "Nonsense. Proper cooling is important, and I simply follow the advise from the metallurgical scientists who have developed and used a special oil designed just for quenching hot steel."

Among modern knifemakers, the cutlery of Sheffield, England, and Soligen, Germany, have acquired

the greatest reputation and to bear the name of Sheffield or Soligen, a knife must be good. But these knives represent the work of hundreds of factories, and there is no way to determine individual quality. Some are hand-made, others are machine stamped from a wide variety of steels. In Germany, about eighty percent of all cutlery made in that country comes from over 1,000 firms in Soligen employing over 14,000 workers. The plants make everything from dinnerware to screws.

Randall, since 1936 has made just over 30,000 knives. He doesn't claim his knives are the best, "but they are the best I can make. If I can learn how to improve them, then I will."

If you're getting the urge to make your own knife, before you start, by all means send twenty-five cents for Randall's catalog. In it he gives a step-by-step process, and if one follows instructions, he can make a good knife. I got the bug and made a beautiful knife, but I put in close to sixty hours. If you order a fin-



Actor Robert Middleton, currently in ABC's "Monroes" TV series, uses this knife for many purposes. (Below) In forging, Swedish tool steel is used to form the rough blade. It later is hardened, then tempered in oil bath.



ished Randall knife, it will take from eight to twelve months for delivery.

The demand is great and many famous people have waited the time to obtain one. To name a few: Generals Curtis Le May, Westmoreland, Wheeler, McDonnell, Armstrong, Picker; writers such as Ian Fleming of James Bond fame, Warren Page, Townsend Whelen, Elmer Keith, Erwin Bauer, Ken Purdy; movie stars Robert Taylor, Bob Stack and Robert Middleton.

When you buy a knife, Randall suggests, buy the best one that you can afford. Don't rush into buying one because it is pretty or the firm has a good advertising campaign. This is your most important piece of hunting equipment next to your archery tackle and boots. The most practical blade size is about six inches. A thin-bladed knife can be sharpened more quickly, but loses its edge faster. A thicker blade takes longer to sharpen, but will hold its edge three to four times longer.



Randall (right) and son Gary inspect the knife which was carried into outer space by astronaut Gordon Cooper. This is one of seven blades ordered for astro use.

The bevel and cutting edges of knives are important and should be shaped to give maximum strength and be capable of holding a razor-sharp edge. A hollow-ground blade, shaped and sharpened like a barber's razor is unsatisfactory for a hunting knife because its thin edge is likely to chip or break and dulls rapidly. The blunt chisel-type wide V bevel often found on some commercially produced knives will not take a keen-edge.

Handles are very important. Leather is the most popular and is durable. Stag handles are Randall's favorite, because one can maintain a good grip on the knife while cleaning out a deer or animal, no matter how bloody his hands and knife get.

Randall's biggest complaint about knife sheaths is that most aren't well designed and the leather is of poor quality. A good sheath should have a pocket for a sharpening stone, be made of good, sturdy leather with thongs to tie down to your leg if you get into heavy brush. Knives should never be thrown, especially a good hunting knife for they are not balanced or designed for throwing. If you like to throw a knife, buy one that is designed for throwing. Always clean your knife after each job, especially cleaning an animal or fish, for the blood and animal acids will corrode and stain the metal of a knife. Never use a dry grinding wheel in sharpening a blade. It will destroy the edge. Never use your knife to cut bones, metal or pierce dollars such as illustrated in ads. Most knives can cut bolts or metal, but their cutting edges must be changed to do this. A hunting knife is designed and sharpened for cutting flesh. Keep your knife sharp and remember that a sharp knife is safer to use than a dull one. •



ROUND SHAFT, SQUARE HOLE

By C. R. Learn

With A Minimum Of
Time And Materials,
You Can Rack
Your Arrows For
Convenience
And Safety!



The author selects arrows from rack in background which keeps shafts straight, points sharp, fletches unruffled.

You bought 'em, now what are you going to do with 'em? I'm talking about those shiny new shafts clutched in your hot little hand. They may be a dozen woods for rabbits, a batch of new glass by Gordon or Microflite or did you go all the way and get those long dreamed of XX75s? They might be a special order of Forgewoods.

Now that you've got them the problem of where to keep them becomes just that: a problem. You could leave them in the box — if they came with a box — or you could put them in your quiver to let them hang against each other and ruin the fletch, or you could build, in a matter of only a few minutes, a rack to hold your new and your old shafts.

The arrow rack can be made from almost any material. Many take ordinary peg board, merely drill out the holes and use this to make a rack. If you have the patience and know-how, plexiglass can make an attractive arrow rack but you have to have a drill of the right pitch and the speed of the drill can't be too fast or the plexiglass will shatter. So why not do it the easy way?

Hunting through my clutch pile, I found a piece of good pine 1x10 and some scrap sheets of 3mm hardwood ply left over from some forgotten project.

Another short piece of 1x2 and I had most of the materials needed for a good arrow rack. The needed material was some decorator plastic that is made in sheets 24x24 with square holes one-half-inch wide. This saves

all the drilling and makes an attractive rack when finished.

The size of the rack depends upon how big you want to make it. For a few shafts or a rack in which to put unfinished shafts while you work them, a small size works up just as well as a larger one. The only thing that governs the size is your need. If you think big and keep a large supply on hand you can cut the plastic sheet in half and make a big rack. This size will hold eight hundred shafts! For more practical reasons the 1x10 will make one large enough. Once again the size of the rack in width is governed by the size board you use but the length is up to you, it can go the full twenty-four inches if you like.

I picked a mid-point and cut the decorator plastic to fit the width of the board, then cut the length of the plastic in half to give me two finished pieces that measure 9x11 inches. This size will hold 288 shafts; large enough for most of us, I believe.

One thing I have found with the plastic materials is that they break easily. Care must be taken when handling them and especially when cutting them with a saw. If you plan to use each hole in the rack it works well for unfinished or partially finished work but I found that by spacing my fletched shafts in every other square and alternating on the next row it left plenty of air around the fletch to keep them from bunching and getting pushed out of shape. *Continued on next page*



C

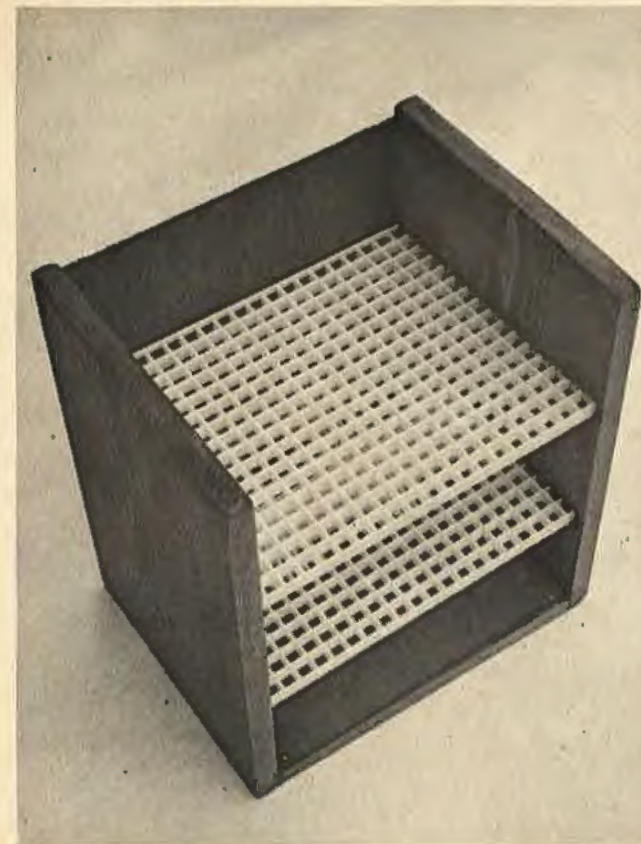


D

The tools for this project would include a fine-tooth saw for the plastic, a standard saw for the wood, a hammer, a few nails and glue. If you have a portable saw or saw attachment for a drill, or better yet, a bench saw, you can dado a cut the width of the plastic and slide it into the grooves, put a section of ply on the bottom and one on the back and you have a finished arrow rack.

If you can't dado, the small strips of 1x2 will work as well or perhaps some quarter round left from that last project might be better. There is no weight on the plastic so all you need is something to support it and hold it in place.

Cut two pieces of the 1x10 fifteen inches long. Mark each piece from the bottom so the plastic will be parallel and at right angles to the sides and back. If you dado, cut at the marks and don't cut all the way through. Stop about a half inch from the end. Take a



E

wood chisel and cut the end of the dado cut square and to the same depth.

If you are using the quarter round, nail it on at the marks. Take the ply and cut a bottom for the rack to fit the plastic after it is inserted in the dado grooves. The best procedure is to assemble roughly the sides and plastic, then make some quick measurements. The same goes for the quarter round. Cut the bottom from the ply, then take the 1x2 and cut two pieces to fit the length of the bottom ply between the sides. These will be glued and nailed to the sides of the rack to form a support for the bottom and to keep the sides in place.

Insert the plastic pieces that have been measured and carefully cut with the fine-tooth saw — a coarse saw will break the plastic — into the dadoed grooves, then measure another piece of ply to be used for the back of the rack. This will give the rack support and also keep the plastic in place. If you prefer, you can stain the pieces before assembling with the plastic or assemble first, then stain or paint.

When the back is in place and nailed on, the rack is complete except for the addition of the arrows you have purchased recently. There will be room in a rack of this size for many more dozens of arrows and for unfinished shafts as well. I keep finished shafts in one rack and have another for the raw materials of Port Orford cedar, glass and Forgewood. When I need an arrow I have a straight shaft that hasn't been warped by having it in a box with something heavy placed on top of it. It makes it faster to work since they are at hand when you need them and can be placed back in the rack as you finish one operation such as cutting the nock taper, then the tapered broadhead cut.

The size of materials and type of construction can be with your own modifications but this gives a fast, convenient arrow rack for storing maximum numbers of shafts in a small space. •



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Here's A Youngster
On The Move In
The Direction Of
An Olympic Medal!

Profile Of A Champ:

JAMES S. STAMETZ

By Joe Higgins

JAMES S. Stametz is seventeen years old. He hails from the country of William Penn — which some call Pennsylvania — from the city of Bethlehem, and he's a senior at the Liberty High School.

Right now, and as a result of his spectacular win at the twenty-first Annual National Field Archery Association Championship shoot at Point Pleasant, West Virginia, Jim Stametz stands a few inches taller than his bowman colleagues. He's the new amateur men's free style champion. And for this remarkable teenager, this is quite an accomplishment.

And the reason for that is when Jim stood on target line he had two thoughts in mind. One, naturally, was to win the tournament's amateur division. This he did. The other was not only to win, but to plan ahead for the 1972 Olympics in West Germany. Half of his ambition has been achieved; the other half remains.

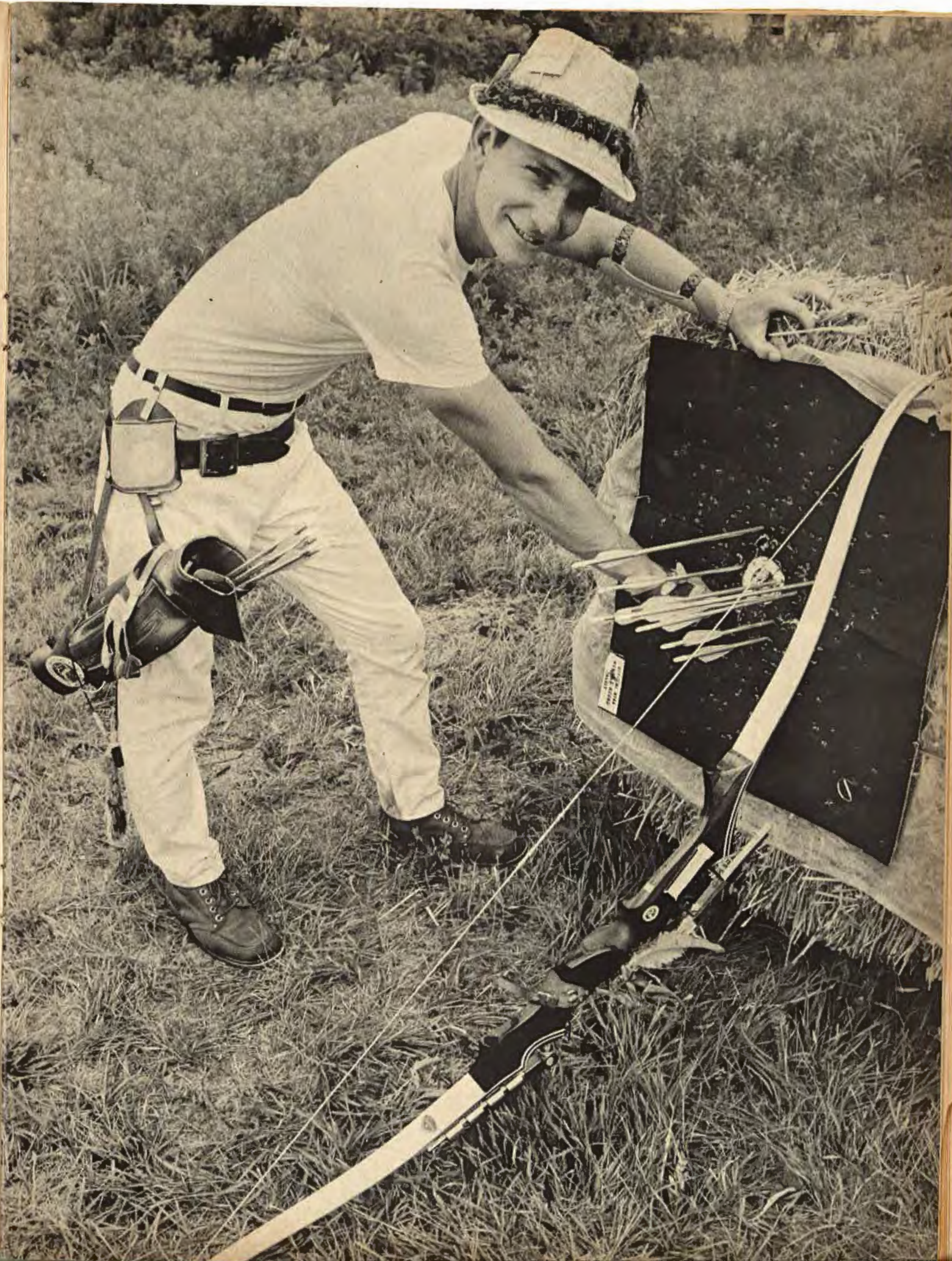
"But believe me," he told **BOW & ARROW** after winning, "I'm going to try awfully hard."

He will because he's that kind of a young man. If winning the amateur title is spectacular, so is his background of advancement in one of the most competitive, individual sports of today.

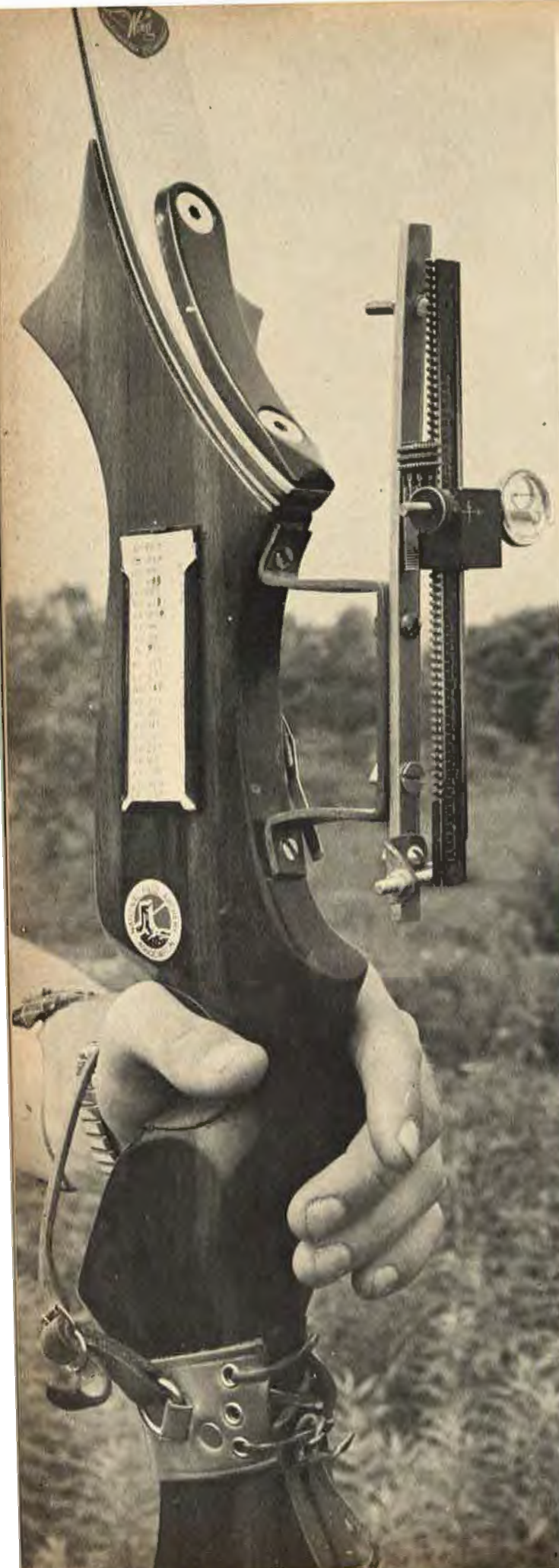
Consider the fact that Jim never used a bow until he was fourteen years old, then consider that his first bow was used on a hunting trip with his brother, Larry. Consider also that at this time, at the tender age of fourteen, he wasn't even interested in tournament shooting!

But it didn't take long. If the hunting bug bit him, so, finally, did the target bug and with friends who shot tournament rounds, young Jim became interested

Jim Stametz appears to have a slight cont to his bow in spite of his championship scores. However, with his own championship form, he is a possible contender for Olympics in 1972. He has been shooting less than three years.



With this kind of arrow grouping at extended ranges, the teenager can afford to smile even during practice.



Left: Jim Stametz has learned to hold his Wing Presentation bow in a loose grip. Sight is Accra with its bubble.

The youngster favors the bottom of the chin anchor for some shots, almost bisecting his nose with string.



in competitive archery, even though he retained his hunting desires and despite the fact that his hunting so far has netted him venison in the form of a good sized doe.

All this was just three years ago. Later, Jim had other boosters, closer to home, in the figure of his dad, Arthur, who now is active in tournament work and who holds a 480 average after shooting for only a little over a year.

The jump from hunting animals to spotting arrows in targets was a short one and Jim made the leap with a vengeance. He started shooting instinctive barebow and shot that way for approximately six months and in January, 1964, began shooting on the Izaak Walton range located on the Izaak Walton Rod and Gun Club in nearby Allentown.

His freestyle shooting with a sight started in July, 1964, and Jim began to pick up quite a few points, shooting then in the early 400s. The combination of basic interest in the sport and developing ability jelled and he picked up the PAA Field and Target Intermediate Boys Title in 1965, shooting field, 489, hunter, 495 and a 504 animal round. He was on his way.

His highest field round has been a 540 in practice and a 532 field and a 538 hunter round in competition; shot at the Izaak Walton Club championship. Meanwhile, he didn't ignore his hunting; he feels that phase of archery keeps his target shooting edge honed.

His victories continued; he managed to win the Mid-Atlantic Championship in 1965 at Watkins Glen, New York. Last year, at the same site, he was beaten only by John Rudy, former national champ, who also won the Mid-Atlantic Championship this year. But that destroyed no incentive for Jim.

"You're never so good that somebody won't come along and outshoot you," he says, with an insight rare for a seventeen-year-old.

Jim kept on the move. He placed seventh at the Pearson Open in Detroit, and on a team with George Slinzer, Sherwood Schoch and Ernie Lehan, won the Indoor Open Amateur Team title. And he also shot a 290 PAA round at this time!

He won the amateur division at the Gray Eagle Open at Point Pleasant, West Virginia, with 507-526-

524-510 field rounds, for an aggregate total of 2067.

A young man-on-the-move like Jim Stametz presents a clear picture to the public. But somewhere along the line, there has to be somebody helping. In this case, it is Paul Marcks of Allentown, a member of the Professional Archers' Association, who has coached Jim and usually accompanies the young champion on the tournament circuit.

"Naturally I'm indebted to my family," says Jim. "I've received nothing but solid encouragement and help. But I'd like to give a lot of credit to Paul as well. He has been a tremendous help and inspiration. I guess that's about the way you'd put it."

To win his most recent title, Jim scored 525-527, field; 538-519, hunter, and 516 animal, for a total of 2625. To accomplish this he used a bow that's well on its way to becoming his favorite, a Wing Presentation II, drawing thirty-nine pounds at twenty-seven inches. He used a Hoyt Flex Rest and Klicker and Easton 245RT shafts, fletched with Deer Flyte Vanes with channels. His sight is an Accra, with pin and bubble level.

He wears a King shooting glove and a Jim Pickering arm guard, a comparatively new product on the market.

What faces a young man of seventeen who has just reached the top-most pinnacle attainable at his age?

At the conclusion of the nationals, Jim's purpose was plain; he planned to head for Flagstaff, Arizona, to compete in the men's amateur NAA Target Championships. And, of course, he planned to keep on putting in hours of daily practice, using and perfecting his methodical and somewhat slow technique.

His future academic plans are as yet undecided; he doesn't plan on college just yet. What he's got his sights set on is an Olympic medal — and after that he plans to join the Professional Archers' Association.

Adults who have watched the teenager perform think he'll go a long, long way in competition — right to the top.

And the teenager involved, Jim Stametz by name, listens and grins and is pleased. He has a few ideas along those lines himself! •

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With the slab knocked off the larger piece, the chipping stone now is used to begin fashioning the head.

HOW TO BE AN INDIAN

This Short Course In Flint Arrowhead Making Can Help You Create Some Colorful Decorations!

By H. D. Wilkinson



At one time or another, while strolling across a pasture or a plowed field, you perhaps have discovered on the ground an Indian arrowhead. You wonder how the redman did such a lovely piece of work in solid stone of the hardest type.

It probably never occurred to you that you can make arrowheads exactly like the one you hold in your hand. You can do even better by making them of colored glass; red, blue, green and orange, also of agate, obsidian and petrified wood as well.

When placed in a picture frame with a white, cotton background, the arrowheads you have made will make a beautiful decoration for the wall of your den and be unexcelled as a conversation piece.

To make arrowheads, you first must select a fist-size, near oval or round rock, which will be our hammer stone. Now hold tightly a nodule of flint in your other hand, leaving about one-fourth of the nodule clear of your fingers. Strike this one-fourth section slightly outward and downward with the hammer stone, knocking thin slabs off the flint nodule. Until you become proficient, these slabs will be small. However, some will make nice bird points, which you will discover are more easily made than the larger points, which require the removal of longer flakes with the flaking tool.

If you happen to live in the vicinity of an old Indian campground which will be easily identified by the many pieces of broken flint scattered about the ground, you will be able to find some suitable pieces of flint which were discarded or lost by the ancient inhabitants. Flint slabs, whether you make them or find them, will be irregular in shape and thickness and will have to be thinned down and shaped.

Now that you have a slab, grasp the flat sides tightly with your thumb and forefinger, the thin edge held upright. If the edge is thin and sharp, strike this edge slightly outward and downward with an egg-size rock or chipping stone.

If the edge is thick, strike it in the same manner, but on only about one-fourth of its thickness. These chips you are knocking off probably will run a half inch or more across the slab. Continue chipping with the rock until you have thin, sharp edges all the way around on both sides. Keep pecking with the rock, alternating sides, gradually shaping it to a triangle.

We now need a flaking tool. Indians used a piece of horn, but as nails are much easier to obtain, let's use a common ninety-penny nail. Drive the nail into the end of a round stick or tree limb that fits your hand. Saw the stick or limb off about four or five inches long. You now have a nail with a screwdriver handle. With a file or grinding wheel, finish the job and make a screwdriver and you have a flaking tool. A regular screwdriver will not work as it is too hard and only slips over the flint. The flint bites into the flaking tool and not vice-versa. Therefore the flaking tool should be made of a hard tough material and should be three or four inches in length, exclusive of the handle.

You may if you like, make your flaking tool with a piece of deer antler. Simply saw off one of the prongs, cover the butt end with some type of heavy material to protect your hand. It will wear much faster than a nail however.

You now need some type of portable platform on which to finish the triangular point. Logs and buffalo hides are not too easy to come by in this age, so obtain a two-by-six-inch piece of lumber about a foot



Shown here are the flint nodule from which slab is taken; larger hammer stone; smaller chipping stone; flaking tool, corner of the platform used, with finished, unfinished points.

long and onto this nail a similar piece of two-by-four, making a small pair of steps. Cover these steps with sole leather. Place your unfinished triangular point flat upon the leather-covered two-by-six and back against the also leathered covered edge of the two-by-four, holding it down with your thumb.

Take the flaking tool in the other hand, resting the end of the handle in the cup of the palm of the hand. Straighten the wrist so that the forearms and flaking tool are in a straight line. Bring the point of the flaking tool to bear about ten or fifteen degrees high on about one-eighth inch of the sharp edge of the triangle. Now push hard with your shoulder, giving the flaking tool a slight twist at the end of your push. You are pushing ahead and slightly downward and if properly executed, a small chip, running about half way across the point, will shatter off the bottom of the triangle.

Continue this flaking around the entire point. Turn it over and flake the other side, bringing it as near to perfection as you can. You now should have a perfectly shaped, well chipped, sharp, elongated, triangular arrowhead. You may cut any type of tangs into this triangle you may wish. Increase the angle of the chipping tool to about forty-five degrees and start digging into the sides of the point, turn the point over after each chip is removed. When you have gouged out a notch sufficient to suit yourself, duplicate the notch on the opposite side. In this manner you can work on the base of the point and produce a convex or concave pattern. You now should have an arrowhead that would bring joy to the most fastidious caveman.

Remember that when you are using the flaking tool, chip off the bottom of the slab while holding it down with your thumb. You cannot chip off the top as there is nothing to hold the flaking tool against the slab and the tool will only slip. Slabs of all types should be about three times as thick as common window glass or three-sixteenths-inch. Old bottles, plate glass and ornamental glass make fine points for decorative purposes and all that is needed to make them is the flaking tool and platform.

New techniques will develop as you learn arrowhead making by gaining experience. Patience, practice and knowledge will be your keys to the mastery of this ancient craft that was perfected thousands of years ago. •

The Hawaiian lava flows support thousands of these animals. Some billies carry horns measuring to three feet.



Hawaii's
Bowhunting
Is Virtually
Unrestricted,
And Game
Is Plentiful Even
For The Neophyte!

VOLCANOLAND BOWHUNTING

By Frank Hulce

When my good friend and hunting partner, Bob Snelson, passed away November 17, 1965, he left behind some unfinished business. Bob had written several articles for *BOW & ARROW* praising the bowhunting we have here in Hawaii.

I am an Upper Peninsula Michigan farm boy, transplanted to Hawaii, so I have some pretty good country for comparison. When I first learned that big game was plentiful here, with no closed season and generous bag limits, I thought surely this was the happy hunting ground at last. Where else on public hunting grounds can you buy a license for \$7.50 and legally kill a deer and six sheep a year, plus two pigs and two goats a day? On private lands there is no limit to the game one can kill. The best part of all is that there is game to match the laws.

Our most recent hunt to the so-called Big Island, Hawaii, is a case in point. We planned the hunt for New Year's weekend, borrowing the last three days of December to make it a five-day hunt. Four of us made the two hundred-mile trip from Oahu by plane and were greeted in Hilo by my dentist, Dr. Sakamaki, who was raised on the Big Island and was back for a visit. Doc agreed to go along to film some of the hunt and also try his hand at hunting the hard way.

Apart from myself, a twelve-year veteran of bow-hunting in Michigan, Wisconsin and Hawaii, all were rookies on this hunt. Dave Green and Fred Escher, college students who had been shooting only two months, were eager for the trail. Lew Walter had made a few short trips with me for deer on the isle of Lanai but had yet to draw blood.

Arriving in Hilo, we obtained our permits from the local Fish and Game office, rented a state cabin and got keys to the hunting areas. Doc already had picked up a week's groceries, so we were off to the mountain.

The best archery areas are on the slopes of Mauna Kea, Hawaii's highest peak -- 13,796 feet. The cabins are at 7,100 feet and the difference in climate from sea level is unbelievable. I always feel like a completely different person at that altitude. Of course, being in hunting country has some bearing on how I feel, I think.

We reached the cabins at three o'clock Tuesday, December 28, and lost no time getting to pig and sheep country fourteen miles from the cabins and between 8,000 and 9,000 feet elevation. Lew stayed down in the middle of the area, which is five miles square, while the rest of us took the jeep to the upper boundary. A half-mile from the top we ran into two small bands of sheep on the jeep road. Fred and Dave were anxious to stalk them. These bands usually move only a short distance and stop again, so I felt the boys had a good chance.

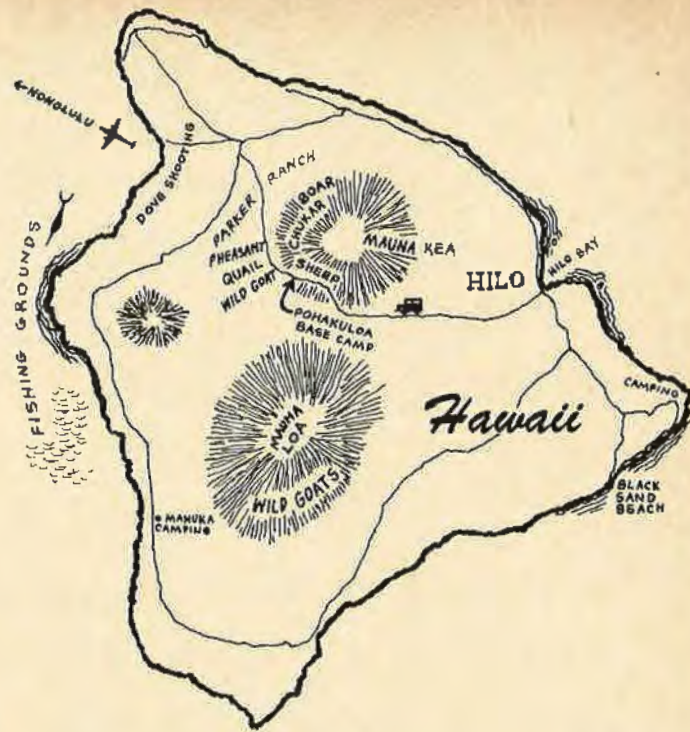
Doc and I proceeded to the top, left the jeep and parted company. Because it was the time when most animals were out feeding, I was on the alert from the moment I left the jeep. I had moved less than a quarter-mile when I spotted a band of twenty sheep feeding. I moved down the hill and worked up a draw that should have brought me within good arrow range but when I got there they had disappeared.

While still debating on the next approach, I heard a terrible squealing just above me. I ventured up the hill to find eight pigs feeding in a meadow-like area. They were scattered but I noticed that two of them were fair-sized boars. These pigs do not see well and the wind was in my favor, so it was easy to stalk them. I tried my first shot from thirty-five yards. The arrow hit a small branch and flew about a foot high. The would-be target ran and joined three other pigs. I crawled up close again and found that the two largest boars were together.

I shot at one that was quartering away from me. Hit just behind the shoulder, he ran off with about ten inches of arrow in him and bleeding well. When he was out of sight, I turned my attention to the others. They had moved behind some brush and were quietly standing. Moving slowly, I approached to within twenty-five yards. They moved out in a fast walk and I drew on a boar with three-inch tusks. I hit him too far back and I knew he was gut shot. When I picked up the arrow, which had gone right through, my suspicions were confirmed.

Two boars hit in minutes! I went back to pick up the trail of the first one. About fifty yards from where he was hit, I saw the grass move. Then he stood up broadside, about fifty feet away. I drew on his neck hoping to stop him in his tracks. The arrow hit on target but didn't drop him. Instead he clacked his tusks and came for me. There was no time to nock another arrow, nothing to do but run -- what an embarrassing situation!

I ran as fast as I could around a small clump of



trees none big enough to climb, glanced back and saw that he had stopped where I had been. I turned around and put three more arrows in that pig, in the neck and shoulders, and each time he would just stagger a little and shake his head. About the time I ran out of arrows he ran out of blood, rolled over and broke all the arrows that were sticking out of him.

When I finished dressing him it was quite dark. I looked up and was surprised to find another pig watching me from about thirty yards away. I had had enough of pigs for one afternoon so I didn't even attempt a shot. I dragged my boar to the trail and went to find the jeep. Doc was there already and reported no action. We picked up Dave and Fred on the way down, and they, too, had done no shooting. Lew was waiting at the bottom with news that he had hit a pig, followed him, then had missed him, although he jumped the pig twice.

By now it was dark, but Lew wanted to find him. Lew took his bow and arrow, I had the flashlight, and the rest of the fellows followed along. We reached the place where Lew last had seen him, and I began to look in thickets where the pig was likely to hole up. I turned the light under a dead log and saw an eye blink at me eight feet away. Lew stepped behind me and shot where I held the light, although he couldn't see the pig. When he shot, that pig took off like a bullet and all I could hear were three fellows trying to climb trees behind me. We couldn't find the pig, so we gave up, hoping the next day to find this one and the other boar I had shot.

Next morning there was frost on the ground at 8,000 feet, and we found both dead pigs a short distance from where they had been shot. The rest of the day we hunted sheep in the same area. I saw several bands of sheep but couldn't get close enough for a shot. Late in the afternoon, Dave followed the boundary fence about a mile down and saw a pig so big he didn't want to tangle with him. He settled for a shot at a smaller one and missed. No one else got any shooting that day.

On Thursday, Lew followed the jeep trail up from the bottom and ran into a herd he estimated at two



Lew Walter inspects sow and boar, both of which were taken on the first afternoon of the hunt. In island's areas where water is plentiful, boar weigh 300 pounds.

hundred sheep. He shot a nice ewe, followed the band a while and missed a couple shots. I was still-hunting all morning, saw about fifty sheep and missed several long shots. We met at the jeep after lunch and parted for the afternoon hunt. I went back to look for the sheep and the rest elected to hunt pig near the boundary of the hunting area.

I came upon a large herd about five o'clock and missed three good shots at big rams from less than thirty yards. I guess my head had swollen so much after taking two boar the first afternoon that I couldn't put an arrow where I wanted it.

After kicking myself down the hill a quarter-mile, I suddenly saw a small band of sheep feeding in the trees about eighty yards below me. I crawled around to get downwind and stalked to within forty yards until it became apparent they knew something was up. The only big ram in the group hid behind a tree and two ewes were looking back over their shoulders at me. I shot at the closest ewe and hit her in the neck. Three jumps and she was down. I couldn't pat myself on the back because I knew I had shot at the body and not the neck.

Carrying that sheep back up the mountain was the meanest hike I've had in a long time, but I still consider it a real part of my hunt. I dropped her when I found the trail and headed for the jeep. Less than a quarter-mile from the jeep I saw a large herd just off the trail and began to stalk them although it was growing dark. They sensed I was there and all of them gathered together to figure out what I was. I was still sixty yards or more away but decided, since they were bundled up so tight, I would try a flock shot. When the arrow reached them they all left but one -- and to my dismay -- quite a small one. I had scored a bulls-eye on his behind that never spoiled an ounce of meat.

Well! my second double-header day. I could feel my head swelling again, until I had to admit it was pure luck and not good shooting.

I finally reached the jeep to find the other boys elated about Fred's pig. It seems that Fred and Dave had been hunting together. Fred stalked a pig and shot him right in the eye. The pig ran around in circles squealing crazily and Fred scored with an arrow in the flank which penetrated all the way to the front shoulder. Everyone had shooting that day



From left: Dave Green, Fred Escher, Frank Hulce and Lew Walter, with the die-hard boar that tried to evade the hunters after it had been hit, but was located in dark.

and we finished up with three sheep and a pig. It was nearly midnight when we finished skinning and had our evening meal.

Friday we decided to try the Lava Flats for goats. We gained several sore ankles and a few close misses but no meat. Doc had to leave us that afternoon, so we quit hunting early and tried to rest for the next day.

Saturday brought us back again to the goat area where we had no better luck than before. We saw many goats but couldn't score. Late afternoon found us back up in sheep territory.

I returned to the area where I killed the ewe and sat down to wait. In ten minutes I heard brush cracking, then I could see a large herd headed right for me. I spied a trophy-size ram, but he was at the rear of the flock. Some of them were getting mighty close, and when a medium-sized ram approached to less than fifteen yards, I could wait no longer: the arrow hit a little far back in the liver area. He took a few jumps and stopped. As he was quartering away ten yards from me, I hit him again. He ran down the hill and halted in the middle of the flock. There were still sheep all around, oblivious of me. They stood around until the ram fell down and died; then they all took off.

When I finished dressing the ram, I stood up to notice that I had an audience: a small band standing about thirty-five yards away. One big ram caught my eye and I reached slowly for my bow. He turned and started to walk away just as I drew. The arrow glanced off his side and only gave him a proper scare. As I was dragging my ram up to the trail I could hear pigs squealing up ahead. They appeared just before I reached the road, and I dropped the ram and started after them. After I missed one shot broadside and another shot running away, I decided I had better quit for the day.

We had half the day Sunday left to hunt, but with eight animals to take back on the plane we didn't try very hard. The worst part of the hunt is leaving an area where game is so thick one sometimes wonders what to shoot first.

It would not be difficult for a hunter to collect four different trophies in two weeks or less and still find a few days to relax on Waikiki beach and take in a little of Honolulu on the side. •

STRING-UP AT TAHOE

By Milt Lewis

Another Annual Shoot-Out Gets Organized In Time For Winners To Make Income Tax Money!



The tournament was held in the convention hall of the Sahara Tahoe Hotel. All rounds were shot at 20 yards.

The trophy shoot's first round was well underway, the contestants were past the halfway point, when several of the waiting money shooters came up and one asked, "Who do you think will win the top money?"

I looked up, frowned a little and said, "I believe it will be Jim Pickering from Utah, then Kozlowski or Leach for the second spot." I no sooner made my comment than I felt a hand grab my arm and as I turned around I looked squarely into the smiling, but determined face of Clarence Kozlowski, one of California's top archers.

"You must be kidding. I'm going to win. I didn't travel all this way just to shoot arrows into some hay."

The Sahara Tahoe's First Annual Trophy and \$1000 — Money Tournament turned out to be a big success. Anytime that a large resort area gets out and sponsors a sporting event, you can be assured that it

has all the makings for success, as they put all of their knowledge and resources behind it. The only question mark in the whole scheme is the attendance. Such was the case with the new Sahara-Tahoe, the latest addition to the Del Webb chain of resorts.

Earlier this year the Sahara-Tahoe staff, looking for a sporting event to sponsor, contacted Archery, Incorporated, to see if it was at all possible to hold an archery shoot at this new hotel. They contacted Archery, Incorporated because of the organization's fine track record in conducting successful tournaments at Las Vegas, Mammoth Mountain and Catalina Island. With a big area from which to draw archers, including the four states of Oregon, Nevada, California and Utah, the Sahara people wanted a successful tournament from which they could build better and bigger archery shoots in the years to come. Following Archery Incorporated's format and using a combination of local archery talent from nearby Reno, they launched their first archery tournament.

The main drawback to having it at any of the big

hotels or resorts, especially in Nevada, is that they have so much going on at all hours, such as shows, music in the lounges, fine food — and gaming tables — that most archers are simply overwhelmed by the pace and forget that they have a tournament to shoot. For many it is relaxing and full of fun, but for the serious contender it takes more concentration and determination not to over-indulge.

The 161 shooters who registered had a ball, and all enjoyed themselves as they shot in one of the large convention halls. The black-and-white PAA targets were set out at twenty yards from the shooting line and scored 5-4-3-2-1 on a sixteen-inch face.

The shooting arrangements inside the convention hall were such that the archers had to be split up into three shooting groups: two for the trophies and one for the money.

Several archers had traveled from as far as Salt Lake City and this contingent was led by Jim Pickering. Louise Snyder from Las Vegas and Lou Shine from Los Angeles were the leading free-style shooters



Joanna Jackson, Miss Sahara, learns about form from Pickering (left) and Kozlowski at halfway mark of shoot.

Each arrow was carefully checked and scored before being pulled. Any scoring question was settled by target captain, whose decision was final.



in the woman's division. A group of California free-style shooting men came to make sure that Pickering had some competition. They included Vic Leach, Darrell Blair and the aforementioned Clarence Kozlowski.

From Oregon came Arnold Manning and Everett Gish, and still other archers traveled from 400 to 500 miles to shoot.

When Kozlowski entered the trophy event, I asked him, "You mean to tell me you don't have enough trophies sitting around your house, that you have to compete in the trophy shoot?"

"It isn't that," he explained. "I just have to get more practice under the pressures of a tournament. Otherwise I just can't get myself in the proper physical and mental shape."

Later he told me he needed all of the top-flight competition that he could find to get himself into condition for the big Colt-Sahara-Easton \$15,000 Tournament in Las Vegas in February. His two rounds of 288 and 291 out of a possible 300 gave him a total of 579 to take first place in the trophy shoot. Scott Ed-



Jim Pickering draws an arrow after catching up with Clarence Kozlowski (in hat) during first annual shoot.

Final winners of the \$1000 money event were (clockwise): Jim Pickering, second; Kozlowski, first; Vick Leach, third, and Arnold Manning, as fourth.



wards was second with 563; followed by Van Marshall's 545 for third.

As soon as the final round of the \$1000 money shoot started late Sunday afternoon, people gathered to watch. Most of the spectators were archers and friends of the competitors. Leading after the first round was Kozlowski, 294; Pickering, 292; Leach, 291; Blair and Gish, 288; Manning, 285.

Within five ends, Jim Pickering had picked up two points to go into a tie with Clarence Kozlowski and my prophesy started to look good. Pickering kept up the pressure on Kozlowski, but never could take the

lead. Finally, with time running out, he faltered and dropped a point, then another, and in the meantime Clarence held his two-point lead and won it with a total of 586 to take the \$150 top loot. Pickering's second spot was worth \$100 with 584. Vic Leach 578 for third, Manning with 568; Blair, 568, and sixth was Van Marshall from Utah with 567.

Louise Snyder from Las Vegas started the women's money round with a 267, a seven-point lead over Lou Shine. She never gave up her advantage and went on to win the free-style money event with a score of 538. Shine had 519; England, 469, and Epperly, 389.

TROPHY WINNERS:

MEN'S FS . . . A — Kozlowski 579; Edwards 563; Marshall 545. B — Moyer 530; Langham 525; Foster Jr. 523. C — Elliott 476; Collins 464; Anderson 458.

MEN'S BAREBOW . . . A — Roach 460; Garner 410; Boylan 382. B — Edson 549; Matzen 498; Diehl 459. C — Capps 480; Bauer 439; Adamson 431. D — Bauer 440; Matheus 384; Sturgill 378.

WOMEN'S FS . . . A — Snyder 551; Rea 208. B — Matzer 448. C — Collins 372; Blair 325.

WOMEN'S BAREBOW . . . A — Williams 385; Hobson 361; Langham 247. B — Mills 266.

JUNIOR FS . . . Klaurens 542; W. Klaurens 530.

JUNIOR BB . . . Ashby 379; Akins 295.

AMATEUR MEN . . . Brinkman 577; Tone 564; McCormick 557.

AMATEUR WOMEN . . . Chevalier 450; Good 395; Brazeal 356.

A Sahara vacation was won for the highest score by Kozlowski; A Bear bow by Ken Moyer. •

HUNT WITH KITTREDGE

Continued from page 8

My hunting partner, Jack Howard, remained high on the opposite canyon wall so he could direct me through the maze of brush. All of a sudden, from his violent arm motions, I realized that I must be close to my quarry. After freezing for a few moments, I cautiously started around a clump of black oak and found myself eye-ball to eye-ball with a beautiful buck not fifteen feet away. He had me riveted with his eyes, his muscles tensed, ready to leap away. I didn't dare so much as bat an eyelash, let alone start my draw. Jack's application of an attention getting sound saved the day. He started whistling softly and waving his arms. The buck immediately turned his head to look up the canyon at Jack and I was left with the most perfect broadside shot a bowhunter could ask for. For the record, I missed . . . but that's another story.

Hunting partners often can make use of a whistle, a grunt or other sound to get the attention of an animal away from a partner, or use an alarm noise to move the critter towards the other hunter. All sounds mean something to a wild animal. He pays strict attention to every sound he hears. If the sound is recognized as dangerous and close to hand, he bolts. If farther away, he moves off more slowly. If the sound is normal to the area and time of day, such as the squeak of a mouse, a movement of other deer, call of a bird, he pays no visible attention. When the sound isn't recognized, the animal comes to full attention and remains motionless until he determines whether it is friend or foe.

A sound which the animal immediately associates with man is highly frightening and will cause him to move away: a cough, voices, ticking of a watch, bumping a metal object. A sound he doesn't understand, like the soft twang of a jarred bowstring, will bring him to full attention until he determines what the sound was and from where it came.

Animals can be brought toward a sound through curiosity. Soft sounds of which the animal does not know the source and can't explain often can cause him to investigate through natural curiosity. An oldtimer I once met in the back country told me he could sit down patiently in rabbit country, and by pecking and scratching the ground gently with a stick, often would have a rabbit or other small animal sneak up to see what was going on. The ticking of a clock left under a pile of pine needles will cause deer to closely investigate during the night as evidenced by the number of hoof prints found the next day. The use of a high-pitched varmint call for a wavering bleat can call up all sorts of animals through curiosity — animals which are not predators, such as deer, antelope or pigs. I carry a Burnham close range call in my pocket when hunting in almost any area. It can be used to call up a coyote seen feeding in a far-off meadow, to soothe an alarmed doe, to spook up an area when used as a hawk call, to cause unseen bedded game to rise up and for many other useful sounds.

Most commercial game calls normally work by imitating the actual sounds of the animal being hunted. By talking his language, you can tell him to come in and see what's going on. You appeal either to his hunger for food, sex, or other animals of his type. There are game calls on the market for just about every species of game. The best way to learn to use one is to buy a record of the actual animal sound, listening first to the record, then trying to imitate the sound with the call. Like learning to play a musical instrument, it takes a bit of time and practice, but the results can be more than worth the effort.

A sound which creates a situation of interest in the mind of the hunted animal also will bring him in. Rubbing and knocking together of antlers during the rutting season can be a magnet to a pugnacious deer or elk who thinks the sound comes from a couple of his fellows butting heads. The growing sport of calling up predatory animals such as bobcat, coyote and fox is based upon making the sound of a seriously injured and frightened small animal which the predator could capture easily as a free meal. Here you make no attempt to sound like the animal you are after, instead you try to sound like the animal he wants to eat. Just the

Continued on page 43



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MAIL POUCH

Continued from page 0

a representative of the Australian Bowhunter's Association, it is unfortunate that Stephens did not make himself known to us. We would have given him every assistance, welcomed the opportunity of meeting him and given him introductions to any bowhunters in the area or along the route he intended taking.

Recently two American bowhunters on a working holiday used their initiative to make contact with the ABA by looking up the telephone directory "Pink Pages" under Clubs — sub-heading, Archery. They phoned me upon arrival in Sydney.

Dick McClain of Texas arrived first, followed by Joe Sloss. Our local bowhunting group soon had them indoctrinated to Australian conditions and they hunted nearly every weekend out of Sydney with reasonable success and boundless enthusiasm.

Sydney, with a population of over 2,000,000, is fast becoming an international bowhunting center. For example, a recent Saturday morning's events as they happened: Joe Sloss and his father left for Darwin for three weeks of bowhunt after buffalo and crocodile, hoping to make contact with the ABA rep, Geoff Arnold, who may have been on safari in Arnhem Land; a visiting New Zealander as well as a fellow convert to bowhunting were meeting a few local bowhunters and completing arrangements to visit the Macquarie Field Bowhunters' course on the Sunday; two reps from the Cessnock Bowhunters, a hundred miles north, arrived to present the inaugural ABA inter-club trophy, which our club won recently.

On the same morning, Noel Selig phoned for a last minute briefing before leaving by jet for a three-week bowhunting trip to New Zealand as the guest of the New Zealand Bowhunters' Society. He was to prepare details for the five-man safari to deer hunt there in February.

We maintain the ABA is the best informed and best equipped group of bowhunters anywhere, who can shoot as well. Personal contact, hooks, magazines, correspondence and regular tape recording sessions with bowhunters all over the world have put us in this position. So it is with deep regret that we missed meeting a great pioneer hunter in Hal Stephens — but we want to meet others!

G. F. Scott,
Beverly Hills, NSW,
Australia

(Now he tells us!)

CONSERVATION GROUP

The Wisconsin Bowhunters Association has won recognition as the state's outstanding conservation organization of 1966. The group's president, Emil Heubner of Milwaukee was presented with the symbol of the

Continued on page 59

HUNT WITH KITTREDGE

Continued from page 41

squeaking sound of a defenseless field mouse caught in the crotch of a sage bush can call up a hungry hawk or bobcat.

Often the sound of an animal natural to the area can act as a calming agent to game the hunter has accidentally alarmed. During a stalk, a deerhunter might unexpectedly pop a small branch just as he is getting close to his quarry. The soft bleat on a rubber band deer call, or the use of the close range Burnham call, can sound like a small deer to the herd ahead and reassure them that there is no danger.

There are noises a careful bowhunter should guard against making. The wearing of hard surfaced clothing invites a loud scratching noise when the hunter moves through brush, a noise game immediately associates with humans. Wear soft woollens with a nap which deadens a scratching branch and makes it sound more like brush against animal hair. Several washings of the popular bowhunting camouflage suits will soften the material and greatly help keep the hunter's movements quiet.

A twig bumping your bowstring can cause an alarming sound which carries quite a way during a still morning. The sound of the arrow being drawn is a real attention getter just at the wrong time! Every hunting bow should have a soft arrow plate and rest. A piece of buckskin, or simply a piece of mole-skin corn plaster, will deaden against the side of the bow, while a regular vertical feather rest will do the job on the rest.

Some years back I read Francis Sell's great hunting book, Advanced Hunting. A statement was made in the discussion on sounds to the effect that one of the most frightening to wild game was "no sound." There always is some sound in the woods during any normal safe period of the day. The only animals that move without making sounds are those hunting, such as a predatory lion or man, or those who are frightened and quietly sneaking out of the area. When a deer feels something is about, yet there is no sound to identify it, he immediately becomes alarmed.

Sound can be associated with an activity and the animal pays little attention. Fishermen working along a stream or hikers on a trail can be talking to each other and making all sorts of noise, yet run onto deer that pay little attention to them. I've seen one instance and heard of others where in deer are intentionally walked right up to just by appearing to pay no attention to them and talking in a normal manner, or making some other sound normal to the situation. A nice buck used to frequent the side of a fenced yard where a fellow would mow the lawn twice a week. A local hunter heard of this buck and tried several unsuccessful times to stalk the deer. Finally he tried pushing the lawn mower in front of him as he moved up on the deer. Result: venison in the locker. The minute the bowhunter did something that fit the pattern the deer was used to, the buck paid no attention.

One time I was working my way along a deer trail into a lush feed area during the late afternoon and was not paying too much attention to what I was doing. Suddenly I became aware of a number of deer browsing the brush straight ahead, but a bit too far to get a shot. The brush was thick and I couldn't move ahead without making noise. I was right out in the open where my movement above the brush line would be spotted the minute I got close. Remembering Sell's advice about no noise being frightening and noise which is common to the area not causing alarm, I decided I'd become simply another deer and see how this idea worked.

Getting down on hands and knees so my human outline didn't show, I slowly moved along the deer trail towards the browsing herd. Every so often I'd pull at a bush as though nibbling on it. I allowed my wool shirt to brush the branches a bit. Like a feeding deer, I'd move a little way, then stop and browse. Gradually I gained on the deer. They would look down my way every so often, but paid little attention and certainly were not alarmed at all. In time I approached within good range and got my shot. Noise can be a bowhunter's friend — or his enemy. IT all depends on how it is used! •



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CROSSBOW FOR COMBAT

This Man's On A Crusade
To Prove That This
Ancient Arm Is Needed
Today In The Vietnam War!

By Jack Lewis

ALTHOUGH Pentagon sources steadfastly deny it, there is every evidence that military thinking has lapsed back to the era of the Crusades in search of a weapon that kills silently but with deadly efficiency. That arm is the crossbow and it is being used on an experimental evaluation basis, at least, today in Vietnam.

Dave Benedict, a former Marine who carried a rifle through several campaigns in the South Pacific two and a half decades ago, is one of those vitally interested in this program. It started last April, when he received a handwritten letter from a lieutenant colonel stationed at Long Thanh, who stated: "I have commanded a rifle battalion here in Vietnam for some months and in this period we have developed a vital requirement for a silent kill weapon. Such a weapon is needed to unobtrusively dispatch Viet Cong scouts, couriers and sentries so as not to reveal our position to larger forces with which we might be trying to make contact."

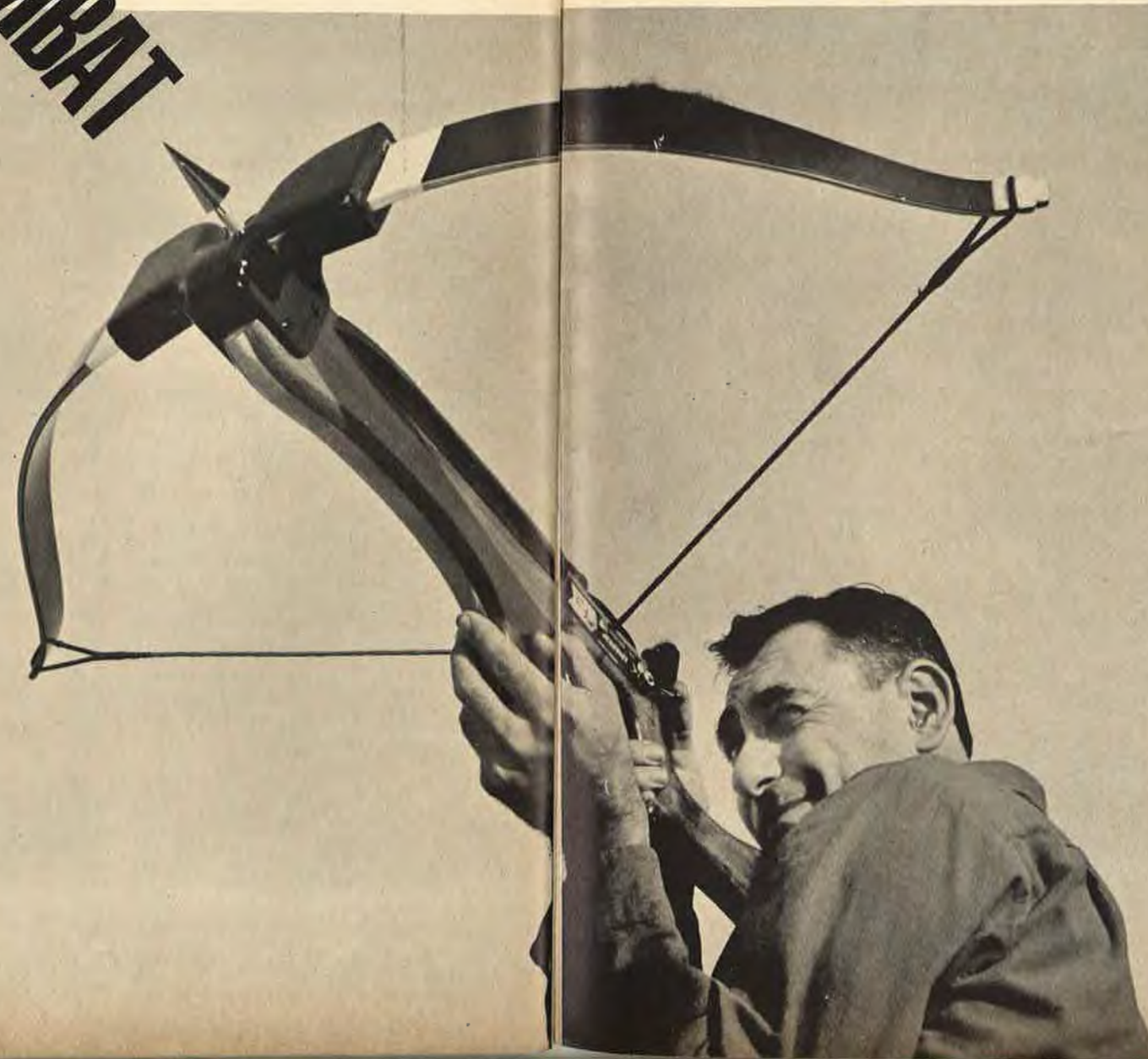
Feeling that the bow and arrow might be the answer, the Army officer had written to the Bear Archery Company for advice and information. It was Bob Kelly, vice president for marketing of the Bear firm, who replied to the inquiry, suggesting that the crossbow might be better suited to military needs and referring the officer to Benedict.

"I am not in Army procurement but merely a battalion commander," the officer wrote, "endeavoring to solve an operational problem with which we are faced daily. I personally think there is a valid military application for the crossbow in this shadow war, hence I am interested in securing a number of crossbows to test out against the Viet Cong."

This came as a surprise, since the California crossbow maker, nearly two years before had contacted the Department of Defense, advancing the idea that the ancient weapon might have a definite place in the Vietnam war. He had received a reply from Paul Cyr, an assistant to Secretary of Defense Robert McNamara. In his letter, Cyr had said: "The potential of the crossbow as a military weapon is quite well known to the Army. More than a year and a half ago,



Above: The bolts developed for experimental combat use in the Vietnamese jungles were tri-bladed broadheads of familiar design. (Right) On the latest 150-pound crossbow developed for Vietnamese use, Benedict has installed this heavy-duty bowsight.



the Army's Limited Warfare Laboratory procured and tested several types of crossbows and concluded that the crossbow did not offer sufficient potential for limited warfare use to establish an Army requirement for it as a military weapon."

It is unnecessary, perhaps, to point out that this gentleman is sitting in an eight-sided slab of concrete, while the officer who asked about the crossbow and its potential was in a combat situation.

Even at that time, Benedict had been experimenting with a crossbow for military use, but as yet had not completed the prototype. So, as an interim measure, he arranged to forward one of his standard models to the Vietnamese-based Army unit. In a letter to the Army officer, he explained that "any bow device is by nature a relatively short range weapon, but with a few minutes instruction, the average soldier should be able to put six arrows in a six-inch circle at forty yards, and with a little practice, accuracy at a hundred yards and beyond is not too difficult.

"The crossbow has an advantage over firearms, we find, since we have been able to shoot arrows up to ten feet under water with sufficient force to kill sharks. With our heavier bows, we can penetrate sandbags and the like, which stop bullets cold."

Benedict forwarded a crossbow with a seventy-pound draw weight via air express, promising to expedite production and testing of a military model, pointing out at the same time that the bow he was sending could be considered one with a medium draw weight.

The first bow that was sent to the officer was the firm's standard *Black Knight* model, which is fashioned in draw weights ranging from twenty to seventy pounds, with additional weight available at \$1 per pound. In addition, the bows are interchangeable, making it possible to vary the weights simply by changing the fiberglass lamination.

On this particular style, the action is fashioned



Above: The bolts at top are efficient, but Army personnel felt that the shaft at bottom was more in keeping with the needs of a combat arm. (Left) Nocks on the bolts developed for experimentation are of tough alloy material.



much like that of a free rifle with a black walnut stock, although the wood, style and stock length can be varied with custom orders. The stock has a metal insert for maximum strength and stability and the trigger has been precision engineered for a smooth release much as target riflemen want in their guns. The rear sight is adjustable for windage and elevation and the bolts

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are fashioned either of fiberglass or aluminum. The model which was sent to the military officer had arrows equipped with hunting broadheads, since the Army group seemed to be after the most dangerous game of all!

Incidentally, through experimentation and experience, Benedict has come up with some weights which he recommends for various types of shooting and shooters. For women shooters, he suggests a draw weight of the fiberglass recurve bow of only forty pounds, while a fifty-pound bow is adequate for target shooting, he feels. For hunting, he recommends a bow of eighty pounds or more.

With the standard model on the way to Vietnam, Benedict and his engineers set about developing a prototype strictly for military use.

"This," he says, "would mean that it should be reasonably priced, or about half the \$160 we get for our standard model. It should be smaller overall for easy carrying in a jungle terrain, should weigh less and should have most of the parts made of fiberglass, aluminum or stainless steel to combat the severe conditions."

Apparently the standard model was used primarily for practice in the rear areas, while the infantry unit commander and his men awaited the promised combat model. Less than a month later, it was enroute with word that an illuminated front sight could be installed for night work. Benedict also reported that he was working on a repeating model.

"I personally tried your crossbow last night on a sandbag wall," the Army officer wrote to Benedict last May. "I have turned it over to one of my company commanders for test and evaluation. Tomorrow we fly north to participate in Operation Birmingham and we hope to try your bow then. The terrain in this operational area will be jungle and rubber plantation land. Beginning in mid-month, we shall try it on another operation in some difficult mangrove swamp-lands."

Even before this prototype had been put to the test, the Army officer had a number of suggestions. He felt that the weight — again seventy pounds — would not "provide sufficient punch" and that the heads on the bolts could be sharper, although he admitted that the individual crossbowman certainly could take care of this.

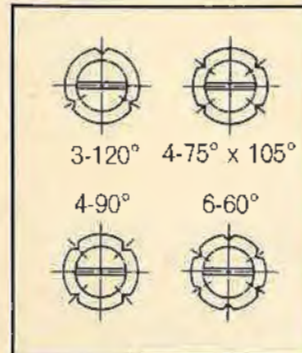
"It may be better, if feasible, to replace the feather fletch with fine gauge aluminum or plastic, which would be better adapted to rugged use. These fletches must be imbedded in the shaft or at least more firmly attached. I doubt whether the present feathers glued to the shaft will last too long while being carried through dense jungle vegetation under continuous hot and humid conditions. These 'feathers' should be

Continued on page 58

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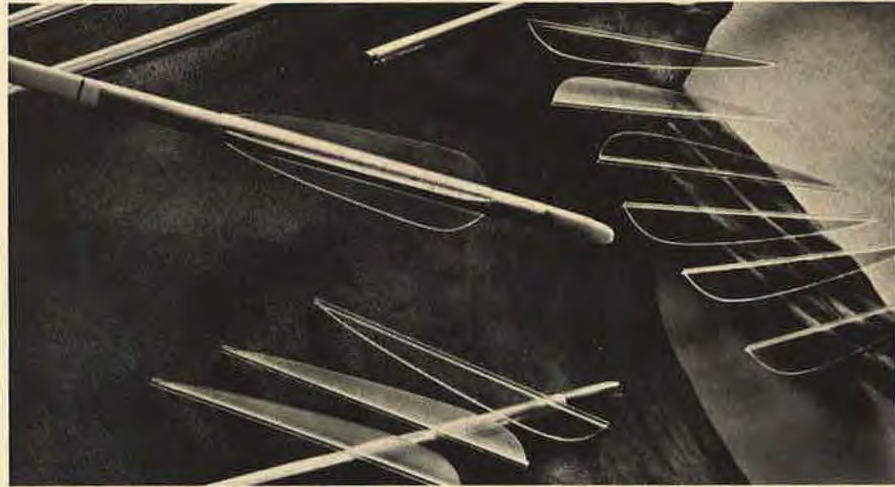
Colt Firearms president Paul A. Benke was made an honorary deputy marshal of Dodge City, Kansas, by Dodge Marshal Kenneth House during a visit to the 130-year-old firearms company.

Benke joins a large group of honorary deputy marshals. He gave House a Colt Huntsman Hi-Power bow with some hunting arrows and accessories. No one gave Jim Arness anything.



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A tent, all steel work welded and special hardware come with the kit, which can be finished with common hand tools and accommodates six to

eight people. The newly designed bed area allows bedding to remain in place when the trailer is closed for traveling and new exterior coverings come in vinyl or aluminum in many colors.

A circular offers information and photos from the Stratford Fabrication Company, Incorporated, (Dept. BA), 45 Seymour Street, Stratford, Connecticut 06497. Kit sells for \$327.



BOW STRING RELEASE

An archery bow string release which meets the requirements of the National Field Archery Association and the National Archers Association has been developed by G. C. Glen Klaurens, a former Albuquerque school teacher who was "tired of string burns."

The one-piece trigger is cast of aluminum, offers finger protection from bow string burn and comes in three sizes. It looks like an oversized wedding band with a half hook attached which is the bow-string release and, Klaurens says, it eliminates the lateral oscillation from finger action.

The trigger, *G-Gold*, is a patent pending product of Craft-Tech Corporation, (Dept. BA), 3640 High St. N.E., Albuquerque, New Mexico.



CLEARVIEW VIEW CLEAR

The *Clearview* inflatable air mattress of neoprene and vinyl is highly puncture resistant for bowfishing, rigid enough for surf-riding, a good float for skin divers and comfortable for water watchers.

The see-through window has a built-in anti-fog ventilation system. The mattress has eighteen cylinder-shaped openings reinforced by round inserts.

It sells for \$15 from the Kayak Corporation of America, Incorporated, (Dept. BA), 7 East 38th Street, New York, New York 10016.



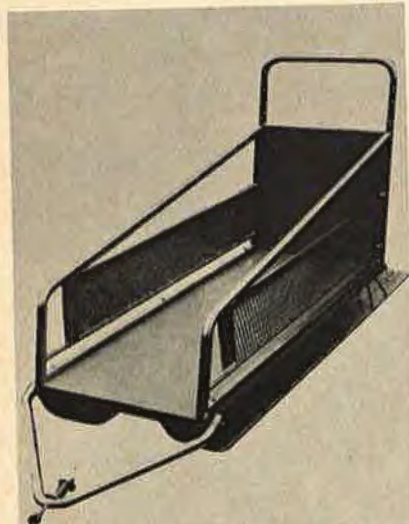
BEAR BETTER

There are two *Bear Tamerlanes* for 1967. The improved versions of the tournament archer's bow are now available with either traditional Brazilian rosewood or new laminated Michigan hardrock maple.

Tamerlane comes with built-in quick-connect for the new inertial stabilizer and may be ordered with a factory installed Premier bowsight.

Another innovation is a new longer length. Through the use of a recurve design, the bow can be enlarged to six feet without making it unwieldy for archers of average height. Comes in three handle sizes with either regular or pistol grip and draw weights of 25 to 50 pounds.

From \$125 to \$140 with bowsight installed from Bear Archery Company, (Dept. BA), Grayling, Michigan.



SNOWMOBILE SLED

A new steel snowmobile sled, primarily designed to be pulled behind snowmobiles, but great for hauling camping supplies, game, ice-fishing gear and the like, has been introduced.

The seven-foot sled has rigid tubular steel construction and weighs eighty pounds. Features include safety-mesh side rail enclosures, a shock-absorbing tow bar and fourteen gauge formed steel skis.

Holding up to three adult passengers, the sled is from Viking Industries, Incorporated, (Dept. BA), Zumbrota, Minnesota, for \$79.

ROLL YOUR OWN

Even a ninety-seven-pound weakling can shove 1800 pounds of boat around when Airollers are placed beneath the hull, thus making rocks, mud or soft sand no problem.

Available in four sizes to handle boats from 700 to 3000 pounds, Airollers are canvas-covered air cylinders that inflate to low pressure to cradle the boat as it rolls.

Airollers are priced from \$9.95 in outboard size. For further information write The Airoller Company, (Dept. BA), Guilford, Connecticut 06437.

OVER ROVER

The Gilmore Engineering and Manufacturing Company is introducing the *Rover*, a new fiberglass arrow for competitive shooting, hunting, target and fishing.

The fiberglass arrows are non-warping, will not take a set or crack and are made from one hundred percent epoxy-impregnated glass cloth.

Further information from the Gilmore Engineering and Manufacturing Company, (Dept. BA), 12-14 Fifth Street, Spencer, Iowa.



INSTANT RESORT

This 1967 Volkswagen *Campmobile* switches from bedroom to kitchen to living room and has an optional pop top which raises the roof for tall guests or fresh air. The interior walls and ceiling are fully insulated and paneled with birch plywood. The seven built-in cabinets

and closets include one for clothing and another for household linens. The dinette seats four adults and turns into a double bed. Children sleep on the front seat and overhead hammock. Water is stored in a pump-equipped tank built into the portable icbox. *Campmobiles* are sold by any of the 950 authorized dealers in the U.S.



DON'T LACK A PAK

The *Bak Pak* can be slept in, exercised on, shot from and does pillow duty after it is rolled up and flapped in. Made of vinyl-laminated Caprolan, it is waterproof and dirt resistant for those who walk on their beds.

The pak consists of three layers and comes in two sizes and weights. Model BP-008 measures 24 by 48 by 1-1/2 inches, weighs 2-3/4 pounds and lists for about \$13 retail. The larger model, 009 is 24 by 72 by 1 1/2 inches, weighs 3-3/4 pounds and goes for \$18. Colors are forest green with a red-blue-green plaid top.

From Stecco Industries, Incorporated, (Dept. BA), Chicago, Illinois.



A CRACK YAK

The *Speedyak 300* is an inflatable boat for fishermen, duck hunters, skin divers, airplane owners and research workers of oil and mining companies. It zings along at twenty miles per hour with a 7-1/2 hp outboard motor.

The boat is equipped with a wooden transom and solid floor. All air chambers are hot vulcanized. The tail fins act as shock-absorbing bumpers and protect the motor against damage. It

has an inflatable keel which adds to the rigidity of the boat.

It comes with a canvas carrying bag, a high volume foot pump, a repair kit, a wooden floor in five sections, several carrying handles and straps, two rear rubber bumpers and special rubber keelstrips. It sells for \$250.

From the Kayak Corporation of America, Incorporated, (Dept. BA), 7 East 38th Street, New York, New York 10016.



NEW MINK COATING

Mermack Mink Oil has been reformulated and repackaged but retains its function as an instant leather conditioner and waterproofer.

Compounded from the natural animal oils, it is colorless when applied and is not supposed to stain. Sold by Mermack Distributors of Oregon, (Dept. BA), P.O. Box 5068, Salem, Oregon 97304, \$2 postpaid. •

TECH TALK

Continued from page 12

he is in error on one point. Using a three-fletch jig, he says that "since all three fletches are spaced evenly, any of them can be the cock feather."

Although this is true for fiberglass and aluminum arrows, I believe it is incorrect for cedar shafts. The spine of a cedar shaft is measured across the end grain of the shaft. Since the shaft is spined in this direction, that is the direction that must bend as the arrow moves around the bow. A variation of 120 degrees in either direction would give a shaft a different spine. Therefore, the cock feather should always be aligned with the grain on the end of the shaft.

To the best of my knowledge, this is correct, as I learned it from the pamphlet, *How To Make Arrows*, by Doug Kittredge.

Robert C. Glotzhober, Concordia Teachers College, Seward, Nebraska

(Our editors should have taken this into consideration, and you are certainly correct, although this is a point overlooked by many modern day arrow makers.)

LONG BOW

Where may I obtain plans and instructions for making an authentic English longbow? I always have believed this bow to be a truly beautiful instrument. I would appreciate any assistance.

Richard G. Phelps, Eureka, Illinois

(Frankly, we don't know of a single publication currently in print which offers this information. The best bet would be to attempt to obtain a copy of Dr. Pope's Hunting with Bow & Arrow at the library. It contains excellent instructions for making a true longbow.)

ARM DROP

I am writing about a specific fault or habit I have acquired over a period of six years' shooting, most of which has been with a fifty-pound hunting bow.

I have a bad habit of dropping my left hand — I am right handed — just as I release. No matter how hard I concentrate, I cannot keep from dropping my left arm at least part of the time.

About a year ago, I acquired a thirty-four-pound sixty-six-inch target bow and tried changing to the low anchor and a sight. This helped for a time, but soon I started dropping my arm and bow again.

Would you offer some suggestions as to how I can overcome this bad habit?

Richard Larsen, Mount Pleasant, Iowa

(The arm dropping problem is quite universal. The most successful method of overcoming it is to use a bow sling

Continued on page 55

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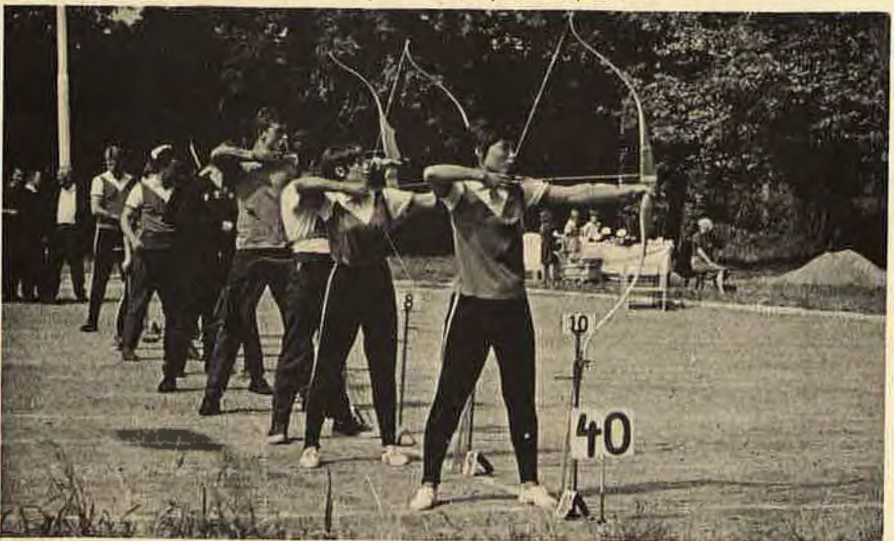
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CLUB CALL!



Above: The Mongolian team, which participated in competition against the Czechs poses with some of the members of the European team, which bested them. (Below) The Czechs are taking archery seriously and are intent upon bringing up junior shooters with an eye to Olympic competition.



MONGOLIAN SLINGERS

From the Spartak Tesla Votice of Czechoslovakia comes news of their club and some Mongolian archers who wiped them out in competition.

Describing the event: "And now about Mongolian archery itself as the Czechoslovak archer A. Simek who was in Mongol as a coach told me about. Physical training has been organized there since 1959 and people are especially interested in archery, wrestling and horse riding.

"As far as the modern archery is concerned they had not gotten an idea about it, considered it as a very noble sort of sport and so they were rather surprised to see an exhibition of this event and the archery equipment bows Pearson and Bear.

"What may a Mongolian contest look like? They shoot from the distance of seventy-five metres. Target is a sort of goal which, strictly speaking, consists of two wooden pegs with red ribbons tightened across. There is an area of three square metres in front of the goal marked with a line. This all is the aim for the archer.

"The fall of the arrow into this area or the flight through the goal is considered as a hit. The hits are announced by two or four referees who lift a flag. They all make a bow and sing on hitting the aim . . .

"Old Mongolian bows are clumsy, they must be drawn out to ninety centimetres and the strength of them is about twenty to twenty-five kilograms. The arrows are ninety to one hundred centimetres long, one weighs approximately one hundred to one hundred and twenty grams. The wooden arrows have eagles feathers and are only twenty centimetres long. The bows are made of bamboo, horn and sinews."

The Czechoslovak championship was held at Votice and was won for the fifth time by the club mentioned above. They say that their primary problem is lack of equipment and they are also hindered because their archers leave around the age of eighteen for other areas or work.

SITE HUNTING

The National Archery Association is hunting sites for the 1967 FITA Star Tournaments and the 1969 U.S. World Championships. The 1967 National Championships will be held at Greene, New York.

Information on the Junior Olympic Archery Development Program may be had from George Helwing, 69 East Galbraith Road, Cincinnati, Ohio 45216.

The NAA has announced that the board of governors has appointed as executive secretary, Clayton B. Shenk, 2833 Lincoln Highway, East Ronks, Pennsylvania 17572.

Buttons and decals, whose sale helps finance the U.S. Team Travel Fund (which sends the U.S. archery teams to international competition), may be obtained from George and Sylvia Levitt, 2613 S. Eleventh Avenue, Broadview, Illinois 60155.



ARKANSAS BOWHUNT

For the first time since 1939, the 43,000 acre Arkansas Refuge near Rockport, Texas was opened for hunting and over 2,000 bowhunters participated, with one of about every thirty-five bringing out a deer. Best deer for the opening weekend was a twelve-point buck.

The Buffalo Field Archery Club of Houston held a special pre-season deer target shoot with public participation. Buffalo archers volunteered their services in providing basic instruction to all who wished to avail themselves of experienced help.

To simplify things for novice shooters, scoring on deer and small game targets was one point per hit, regardless of whether the arrow hit the marked kill-zone or landed within the scoring zone. Shooting stakes were driven at unmarked distances and located to simulate as closely as possible the kind of shots which might be encountered on an actual hunt in heavily wooded country.

The reason bows were permitted on the Refuge was that it is the home of the whooping crane and it was feared that gun hunting might disturb them. Bowhunting was not expected to thin out the over-populated herds, but the principal effect would be to stir the deer and move them out into other areas open to hunting where they will be harvested by guns.

ARCHERY COUNCIL AWARD

The American Archery Council is recently awarded a Gold Plaque by the American Association for Health, Physical Education and Recreation for AAC's participation in the Outdoor Education Project, which is sponsored by the awarding group.

The American Archery Council, 100 East Ohio Street, Chicago, Illinois, is a recently formed group whose sole purpose is to coordinate all of the many archery activities which exist in the United States and abroad.

NO CUTUPS

Robert Breth, writing for the Keystone Federation of Bowhunters, recommends following the official scoring procedure for three to five people at an official shoot since "apparently some greedy-gut sandbaggers have developed the technique of running up to the target, pulling out their arrows and then yelling their score out to the official party scorer — adding a few points in the process.

"Archers are not any more crooked than any other people. It is just that some people are crooks and some crooks are archers," he concludes.

Rules: 1. All members of the group walk up to the target together. 2. One of them pulls out all the deadwood and retrieves arrows which missed the butt. 3. Another has all the score cards and gets himself ready to score and then calls out the name of the top card. (Which should be the highest scorer from the previous target.) 4. A third archer then pulls out the arrows of the name called, doing this one at a time and accumulating the score verbally. He then calls the total to the scorer.

LEESBURG TOURNEY

The Florida State Target Tournament hosted by the Wildwood Archers April 15-16 at Leesburg is located close to a state park for those who want to camp and within the city limits for those who want to party.

Registration is \$4.25 for adults, \$6.50 for couples and \$2 for those seventeen and under. All except amateurs must have at least two single American scores on their cards to be properly classified.

Awards in the open classes (AA, A, B, C) will be given as follows: Championship medals will be given to first three places to three top shooters in each division regardless of class. Champions will receive trophy and champion medal. Awards down in classes will be 1-3 one award, 4-6 two awards and 7 or more three awards. Archer must shoot in his class to receive trophy if alone.

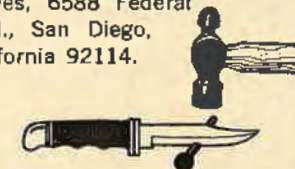
Information from Doris W. Nevin, Route 2, Box 35N15, Bartow, Florida.

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HUNTING SECRETS OF THE EXPERTS by Vlad Evanoff. The editor has collected the personal secrets of twenty of the nation's best known hunters, both with gun and bow, and presents them here in an interesting but informative fashion. It contains 251 pages and has an entire chapter on bowhunting by Howard Siglar. \$4.95.

MODERN BOWHUNTING by Hiram J. Grogan. Here is a book that is loaded with practical information; the kind you can use in the field. In the text, the author uses his own experiences to illustrate his various successes in hunting everything from crows to alligators, not to mention deer. Information on special equipment and advanced techniques for various game are spelled out. Contains 163 pages, center section of exciting hunting photos. \$4.75.

FIELD ARCHERY AND BOWHUNTING by Arnold O. Haugen and Harlan G. Metcalf. Both of the authors are experts not only in archery but are widely recognized as educators. As a result, they have taken the teachers' approach in writing this book, explaining step by step how to improve your technique on the range or in the field. This volume contains 213 pages and is amply illustrated to get across the more complex points. \$5.50.

LIVING OFF THE COUNTRY by Bradford Angier. This book has all of the information needed for staying alive in the woods, whether you be survival buff or simply the hunter who wants to be prepared against the possibility of being lost or running out of food. The information is practical and tried by the author and others. Contains 241 pages with humorous practical illustrations. \$5.00.

ALL ABOUT CAMPING by W. K. Merrill, U.S. Park Ranger. This book covers the field with facts and sage advice on every possibility from trailer camping through survival, touching on safety and first aid. It is certain to make your trip happier, safer, and more interesting. Has 262 pages, over 100 illustrations. \$3.95.

WILDERNESS COOKERY by Bradford Angier. Here's an amusingly written book that reads unlike any volume of recipes you've ever seen. It's based upon the author's personal experiences in living in the woods, attempting to improve upon cookery of the old frontiersmen. However, all of the recipes make extremely edible fixings. It fills 256 pages with many helpful illustrations. \$3.95.



ARCHERY HANDBOOK by Edmund J. Burke. In this 140-odd page volume, the author packs a surprising amount of information, illustrating correct techniques of shooting with photos to which you can match your own style. There also are chapters on selection of equipment and hunting techniques. \$2.50.

GOOD HUNTING by James L. Clark

The author, who collected game around the world for fifty years, discusses the best places and ways to hunt. There's practical information as well as nostalgia in these 242 pages. \$5.95.



THE COMPLETE BOOK OF ARCHERY by Robert Gannon: Coward-McCann, \$4.95, 256 pp.

In early chapters, as it should be, the author discusses the basic needs in the type of equipment needed by the beginner as well as that favored by the experienced archer. As the book progresses, the information becomes increasingly aimed toward the individual who is progressing in form, competence et al.

There are complete sections on field and target archery, tournaments, strings and stringing, and useful tips on how to avoid the more common shooting problems.



THE GRIZZLY BEAR by Bessie D. and Edgar Haynes. This book is a must for the archer who has dreamed of going after North America's largest game animal with the tools of his sport. It discusses the habits and background of the animal, drawing from diaries and accounts of sportsmen, naturalists and other hunters. A must for your shelf! \$5.

PROFESSIONAL AND AMATEUR ARCHERY TOURNAMENT AND HUNTING INSTRUCTIONS AND ENCYCLOPEDIA by George Leonard Herter and Russell Hofmeister; Herter's, Incorporated, Waseca, Minnesota; \$2.57; 288 pp., with 263 illustrations and photos.

THE BIG GAME ANIMALS OF NORTH AMERICA by Jack O'Conner. Published by Outdoor Life and E.P. Dutton & Company; \$10; 264 pages.

O'Conner discusses his hunting exploits with his usual relaxed style and good humor.

And nothing seems to have been left out; in these pages, the author takes us from the glaciers of the Yukon on a Dall sheep hunt to the jungles of Southern Mexico, where he hunted jaguar. In between, he discusses at length another twenty animals in the big game category and all of them native to this continent.

It's a top book, whether it's for your own hunting reference shelf or it's an educational project for the kids.

TECH TALK

Continued from page 51

so you don't have to hold the bow. Then try pushing your bow toward the target as you release. It is not so much actually moving the bow, as maintaining the tension in your bow arm. The most successful shooters develop a habit of having this push or tension actually trigger the release. Use of a bowsight should be a help. Just concentrate upon keeping the pin on the center of the target, even after the arrow is shot through maintaining the pressure pushed toward the target with the bow arm.)

FOR HONING

Should a hard or soft Arkansas oil stone be used for honing the stainless steel broadhead?

John Enhoffer,
Saddle Brook, New Jersey
(The hard Arkansas stone is best for honing.)

LEFT FLETCH?

I have a question concerning the fletching of arrows: first, I am a left-handed shooter. Should I shoot left or right helical-fletched shafts? I prefer the helical fletch, but I do not know if there is any advantage to either the left or right helix for me.

James Dossett,
Calvert City, Kentucky
(It makes no difference which wing feather you use, but be sure that all arrows are fletched with feathers from the same wing side.)

WHAT TO DO

I have broken the lower limb of my Ply-Flex bow and have been unable to find the address of the firm that made it. Can you give me the location so that I can return the bow for repair?

Walt Shortz,
Earp, California
(To the best of our knowledge, this bow no longer is being made. We would suggest that you return the bow to the dealer from whom you purchased and have him make proper arrangements for repair.)

BOWSTRINGERS

May the various bowstringers on the market be considered reliable, and will they really eliminate twisted bows? Will stringers work with straight longbows as well as the re-curved?

Alden Murphy,
New York, New York
(Yes, the bowstringer is here to stay. It does prevent twisted limbs, when used according to instructions, and it is reliable. Either the Browning or Saunders portable pocket stringer will work well, and they can be used on any bow design.) •



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Ben Pearson's Annual Tournament Is Expected To Draw More — And Better — Archers This Year!

BLOWOUT AT COBO

APRIL 1-2 will see more than 200,000 arrows being shot during what is termed the "world's largest indoor tournament of any kind." This will be the ninth outing for the Ben Pearson-sponsored International Indoor Archery Championship with over \$15,000 in prizes.

Last year, according to Jack Witt, who is handling tournament details, there were 1,102 archers — not to mention 6,000 spectators — who crowded into the \$55,000,000 Cobo Hall in downtown Detroit, for the bow and arrow spectacular.

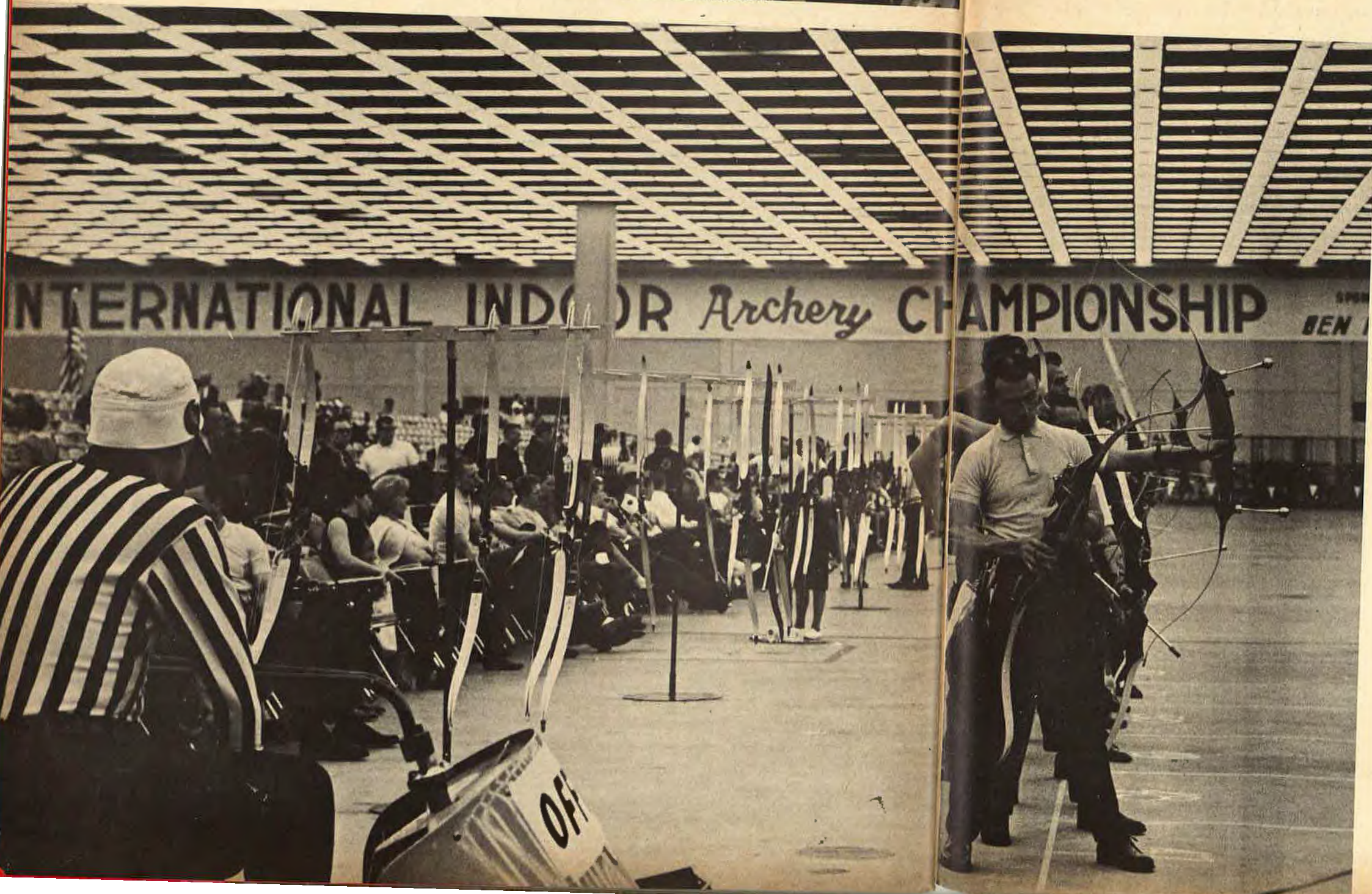
"To the archery world, this is the tournament that has set the precedent for all other competitive events in the sport," Witt declares. "For the first time, archery has become a spectator as well as a participant sport." Last year, there were entrants from almost every state, and early entries make it appear that there will be even more contenders for the money prizes during the 1967 event.

"The lighting for the event is perfect," Witt reports. "The archers will shoot the Professional Archery Round, which is at twenty yards at a sixteen-inch target."

The bullseye, though, is only three inches in diameter and there will be an even hundred targets lined up against both walls of the huge auditorium. Above and below the target for each archer will be his name in large letters, thus minimizing the possibility of a contender shooting the wrong target. There also will be changeable numbers below his name so that a running score can be kept after each end of shooting. Thus, spectators can see at a glance who is leading and how his favorite is faring.

The tournament, sanctioned by the Professional Archers Association, will have both an open and an amateur division. The latter competition has been growing during recent years and is expected to increase in interest, since archery has been admitted as an Olympic sport. Canada always has been well represented in the shoot and entrants from several other foreign countries have stated that they plan to participate. Among the entrants, according to Witt, will be last year's top money winners, Les Gervais and Gwen Learn, who will be defending their respective titles and seeking to take home the leading loot once more. — *Martin Haynes.* •

Multi-million dollar Cobo Hall in Detroit again will be the scene for the world's largest indoor shoot.



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X-BOW

Continued from page 46

black or dark green for combat use. Arrowheads should be more firmly and permanently attached to the shaft, and if possible, the bolt should be heavier to avoid leaf deflection and provide more hitting power."

The Vietnam-based officer felt that the sight arrangement was true enough, but suggested that peep sights similar to those used on U.S. military rifles be installed, since soldiers were more familiar with these.

"If the bow could be equipped with some sort of lightweight folding wire stock such as is used on the old .30 caliber carbine carried by parachute troops during World War II, it would be useful," the initial report read. "Since we always are interested in lightening our load, the lighter the weapon, the better." In initial tests, it was found that the Army's prone and squatting rifle firing positions were best for firing the crossbow.

Two weeks later, after the culmination of Operation Birmingham, the crossbow designer, who had been waiting impatiently in Canoga Park, California, heard again from the tired, weary Army officer, who said that "although we were unable to get a crack at a Viet Cong with your bow, I must say it got a rugged test of durability.

"When you examine the bow, bear in mind it was carried on a mere ten-day operation, but in daily monsoon rains and through some of the densest, most difficult jungle I have encountered over here. I am convinced the bow was not abused but instead suffered its hard knocks from the rough G. I. handling in very difficult terrain that all our equipment must withstand. Our field test serves to confirm observations set forth earlier. Those to be stressed the most are the need for a more powerful bow and heavier arrows with smaller heads to aid penetration."

When one pauses to remember that the Armed Forces may test the prototype of a rifle or other firearms for months — and in some cases, even years — before accepting it with prescribed modifications, it would appear that Benedict's combat crossbow got some special attention.

The officer, in making his report, noted other deficiencies: for example, the front sight broke off, apparently by snagging in thick jungle foliage; the rear sight elevating mechanism jammed after seven days' use, but was loosened with oil; the safety mechanism was stuck in the safe position. In the damp weather, the plastic tips on the bow arms came unglued and were lost and the forward pistol grip came loose from its mounting.

"The bowstring was broken and lost, too," the report continued. "This occurred from snagging on the foliage and not from shooting. If feasible a single rather than a multiple-strand bowstring would be a hit more snag-proof. Also, the dull black finish is not durable enough. A Parkerizing-type process would be better."

So for Benedict, it was back to the old drawing board. He corrected the deficiencies noted, making everything heavier and less subject to damage. Taking the officer's suggestion that the bow should be heavier for combat, he installed this time a 150-pound bow.

Today, somewhere in Vietnam, there is a soldier armed with a crossbow, who is attempting to prove that a weapon that was effective several centuries ago can be just as damaging today in this type of warfare.

MAIL POUCH

Continued from page 42

award, a trophy-size mountain goat statnette at the Governor's Award banquet. John Crossfield, chairman of the Wisconsin Conservation congress, made the presentation.

The bowhunters association was cited for obtaining license legislation giving bowhunters separate identity and thus upgrading the status of archery as a sport. The group's comprehensive long term education program also was a factor in the award. The Wisconsin Conservation Achievement program is sponsored by the State and National Wildlife Federation and the Sears-Roebuck Foundation.

Jim Taylor,
Wisconsin Conservation
Department,
Madison, Wisconsin

LONGER SEASON

I note in your *Club Call* page of the Nev./Dec. '66 issue a report concerning the four-month deer season provided in the state of Arkansas. I think this is very good, but would like to point out that Oregon can top that by over six months. In 1966, bowhunters here had the privilege of hunting deer and/or elk from June 25 to the following April 15.

I feel this exceptional hunting season and conditions reflects results of an excellent relationship between the Oregon Bow Hunters, a progressive State Game Commission, as well as an increasing affiliation by the bowhunters with other sportsmen's organizations.

Forry Hantley,
Game Committee,
Oregon Bow Hunters,
Eugene, Oregon

DARKENER

I have found a good way to darken hunting shafts, especially fiberglass hunting arrows. Apply a liquid shoe dye and let it dry, then rub the arrow down with a clean rag. It leaves a smooth finish and does not change the arrow's weight.

James M. McNulty,
Alexandria, Virginia

DOUGHERTY DEVOTEE

I read BOW & ARROW devotedly. One of the things I like best about it is Jim Dougherty's bow tests. There is one bow that I would like to see tested: the Howard Hill longbow. Everybody is always saying a recurve is better than a self-wood longbow. I've shot a longbow most of the time and have no complaints.

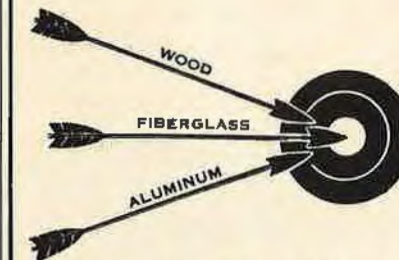
Bryan Pridgeon,
Houston, Texas

BIG MANN

Thanks for the fine article published in your May-June issue. Your *Profile of a Champ* concerned our

Continued on page 65

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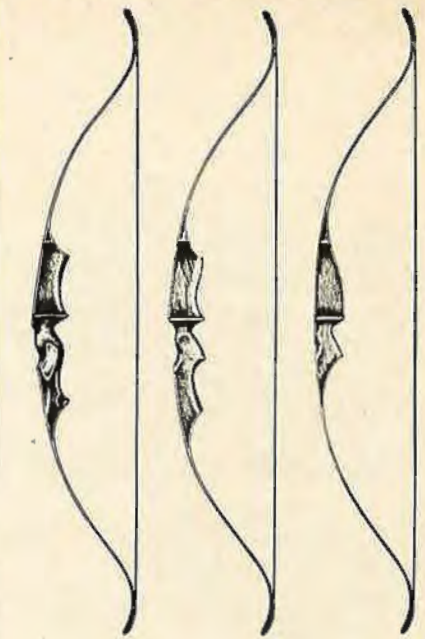
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A-frame on the camper-trailer broke off during trip over rough roads near the Panamanian border. Stephens binds it with splints in order to reach nearest civilization.



In The Central
American Wilds,
Our Heroes Hunt
Armadillo And
Anteaters —
And Are
Captured
By Indians!
By Al Podell
Conclusion

For eighteen months, for 35,000 land miles, plus 35,000 sea and air miles, for twice as long as we'd planned, we'd fought our way around the world. Now, in Central America, after a year and a half of trial and turmoil, things began to get better -- a little.

In Australia, Hal Stephens had bagged fourteen kangaroos, then in Tahiti, with some good bowfishing luck, had come the first successful hunting either of us had done in our entire trip around the world. North Africa had been a hot, barren hell, devoid of anything worth hunting save a few wary gazelles that easily outdistanced us in the Sahara; the Middle East was even hotter and more barren, and the only wildlife bagged was some kangaroo rats. In Afghanistan we got messed up with a cholera epidemic; in Nepal political pressure from the Red Chinese cancelled our hunt for the elusive snow leopard; then we blundered into East Pakistan, en route to hunt the Bengal tiger in the Sunderban swamps, the day the war with India erupted.

But by the time we were reunited in Panama we felt sure the bad luck was behind us and that there'd be nothing but blue skies and good hunting ahead on the final lap of our journey around the world.

There was an abundance of game every inch of the way from the Panama Canal to the Rio Grande, but the skies were anything but blue. We were so far off schedule that we arrived in Central America in the middle of the rainy season, during which it pours for three or more hours a day.

Panama was the first country on our way home, and a more accommodating one for hunters would be hard to find. The hunting season runs from January 1 to December 31 and all around the clock. You don't need a license, a permit, a guide, nor anything more than a weapon and a vague idea of which way the jungle lies. You can hunt anything at any time with almost any means and take as many of whatever you want as you want. Rifle hunters do need to register their arms on entering the country and go through some cumbersome red tape, which grows thicker and more complex in some

THE WORLD'S LONGEST BOWHUNT



Stephens (left) and Podell hunt on cactus-covered semi-arid plateau near Monterey, Mexico, during final stage of safari. Entire area was covered by a thorny growth.

Below: Like the natives of Central America, Stephens found that the machete is important item for food getting.



of the other Central American republics, but the archer can clear customs in less time than it takes to string a bow.

Our starting point for the last lap of the Trans-World Record Expedition was Panama City, a town noted for its heat, humidity and hundreds of tin roofs which sound in a rainstorm like a stereophonic percussion section slightly off key. To the south, just 25 miles below the city, lies Darien Province and some of the thickest, roughest, most game-filled jungles left in the world. The Darien is so impenetrable that it remains the only uncompleted spot on the Inter-American Highway, a gap of two hundred miles in the 12,000 that span two continents from Fairbanks to Tierra del Fuego. The jungle that has bested the roadbuilders is so thick that people have been known to walk ten yards into it and become lost. It's understandably the home of the world's biggest jaguars, ocelots and other dangerous game. But there were even more tempting targets closer to our route home.

West of Panama City, along the edge of the Panama Canal in its wider and less developed parts, there's splendid waterfowl hunting, plus a small colony of crocodiles around Gatun Lake.

We cleared our Toyota out of Customs and drove from Panama City through the Canal Zone along the bank. We drove past the two massive Miraflores Locks which raise ships fifty-four feet, then past the Pedro Miguel Lock which raises them another thirty-one feet until they are eighty-five feet above sea level as they head toward Lake Gatun, twenty miles farther on.

The next landmark along our route was jungle-surrounded Gold Hill, the highest promontory along the canal, 862 feet above sea level, and one of the roughest spots in Gaillard Cut, the real backbreaker in the building of the canal. We climbed Gold Hill and from it looked across to Contractors Hill, now chopped down to 370 feet to prevent a recurrence of the disastrous landslides that blocked the canal after it opened. All around, in every direction, was dense

jungle, for nature quickly effaced the scars caused by the construction of the canal. Few hunters would dream of the Panama Canal as a place for game, but except for the big American developments at Cristobal and Balboa, the military bases, and the six locks, themselves, the Canal Zone is still largely a region of lakes and jungle loaded with game.

Before leaving on our trip, we were having dinner with Dr. Harold Rudman from Gorgas Hospital. In the middle of the dinner, the first American-style cooking we'd had in a year, we heard wild noises and grunts coming from his backyard, but Rudman assured us that it was nothing to worry about.

"Just a wild boar tangling with a boa, most likely."

"We've got to watch it around here," he added, dishing out another helping of pot roast. "Those darn snakes always move in every time we let the grass grow more than three inches."

"But what about the wild boar?" Steve asked.

"That may look like a backyard, but it's actually the front of the jungle. We could shoot enough game off the back porch to keep us in meat the year around if we wanted to."

Gatun Lake, with Madden Lake, is the heart of the Panama Canal, providing both passageway for the ships and millions of gallons of water for filling the locks on either side. It stretches some twenty-four miles and is deep enough to accommodate the largest ships afloat, although the locks limit the size of ships to 1000 feet long and 110 feet wide. Gatun covers 164 square miles and is one of the largest artificial bodies of water in the world, formed during the construction of the Canal by a massive earth dam across the Chagres River.

During the construction of the canal, when Lake Gatun had been only a massive swamp, it had been a breeding ground for snakes, crocs and mosquitoes, the last carrying yellow fever and malaria. Most of the mosquitoes were eliminated but so, too, was much of the wildlife. Where once the Canal Zone teemed with big crocs, only a few stubborn colonies now hang out around Gatun. The smart ones have gone to Coronado Island, a vast wildlife sanctuary established by the government in the middle of the Lake.

But Steve was determined to get a croc, even if it meant scouring several hundred swampy miles of shoreline foot by foot. He'd come close to bagging a couple of big Australian crocs in Broome, Western Territory, but both times his arrow had gone too far back in the neck, and the croc had taken off and disappeared downstream.

We rented a small motorboat at Gamboa and set out into Gatun, Steve ready for action with a fifty pound Ben Pearson Mustang, and a set of solid fiberglass arrows tipped with four-blade heads. We prowled slowly along the shores, and searching for sunning crocs, more than once coming into a dead end of impenetrable swamp. The sun was scorchingly hot, as it was every day before the afternoon downpour. A living crown of birds hovered over the wildlife refuge on Coronado Island in mid-lake, but all around us the huge freighters and tankers and ore carriers bustled with the loads bound for Baltimore and Bangkok. It felt as if we were hunting in an aquatic Grand Central Station.

We spotted some mud-colored logs on the bank near some submerged mangrove trees. Closer inspection showed them to be crocs, but they already were lumbering into the water. Steve aimed for the biggest, but it was a tough head-on shot at a half-submerged target and the arrow glanced along the croc's back as if it was armor plate. Steve nocked another arrow and sent it towards its mark. We're still arguing whether it was luck or intent, but the arrow caught the croc in his most vulnerable spot. It went in through the eye at an almost level angle and into the brain. The reptile sank like a stone.

After depositing our crocodile with a taxidermist in Panama City, and receiving the last of the five permits we needed to leave the country, we headed north, toward Chiriqui Province, the third and perhaps the best of Panama's hunting regions. Chiriqui is the northernmost province in Panama, adjoining the border of Costa Rica. Chiriqui stretches from the Atlantic to the Pacific and from sea level to 11,000 feet. Along the jungle-covered coasts, bordering on the Pacific's Golfo de Chiriqui and the Atlantic's

Laguna de Chiriqui, and along its many big rivers, there are ducks, deer, wild hogs and jaguar as well as snipe, raccoon, muskrat, ferret, otter, weasel, opossum and several dozen species of edible jungle birds.

Inland and upland, several thousand feet above the thick jungles of vines and creepers, above the humid banana plantations and soggy acres of sugar cane, are open fields and deciduous trees. Our pot seldom lacked for rabbits, quail, partridge and pigeon, and occasionally a wild turkey. Here, at last, we were able to live off the land.

At about 4,000 feet the land begins to rise in a gentle slope toward the 11,000-foot peak of Volcan Baru. Among the crags and lava flows of the volcano, puma, ocelot and jaguar abound, many of them easy trophy-winners, for there are areas of the massive mountain that never have been hunted.

The coastal regions were tough to take in the rainy season, for it poured every day and the heat and humidity were well over ninety. Our camper seldom got a chance to dry out, and we were damp day after day. Steve broke out with a heat rash under his arms that made it difficult to hold a steady bow, and I started growing a fungus in another region which hadn't the least thing to do with holding a bow but still was pretty uncomfortable. We treated ourselves with remedies ranging from banana leaf oil to potassium per-

Left: Adventurers didn't get single hot bath in 46 days. Podell washes clothes beneath waterfall in wilds.



Podell displays an anteater he shot by mistake, thinking it was big game while it was hidden in undergrowth.

Arriving in New York after nearly 18 months, the travellers were interviewed by press. They visited 39 countries during their global trip.



manganate solution, together with some Tiger Balm Salve Steve had left over from Singapore.

Our bathtub was any river or stream, and our shower was the nearest waterfall. We had only one hot bath in thirty-six days, this in a boiling sulfur pool amid some steaming geysers in El Salvador. As for a cold martini, we managed to get one in the 2500 miles between Panama City and Mexico City. The rest of the way it was warm rum-and-coke for Steve and powdered milk and rainwater for me.

Here's a country that could have used St. Patrick's services a lot more than Ireland. We could hardly chop down a bunch of bananas without a snake coming along for the ride, nor could one answer a call of nature without one of them wriggling up to investigate. The same snakes could easily turn a hunt into a nerve-wracking nightmare. Every other tree seemed to be the home of a boa constrictor; every clump of brush was the lair of a deadly bushmaster; behind every fallen tree lurked a venomous fer de lance. At first we used the native method of dealing with them: a quick swipe with a machete. Nobody in Panama walks anywhere outside the city limits without a machete, and that includes children. The machete method was undeniably efficient, for one swish from the razor-sharp blade would decapitate anything except the biggest boas. The drawback was that it left us little room to maneuver, forcing us to get within a foot or so of the snake, a little too close for comfort in a situation

where one miss would almost certainly fetch us an awful of venom.

Our bows were of little use against snakes, for one hasn't time to draw and shoot with a bushmaster licking his boot.

Blow guns hadn't been part of our original equipment, but John Detwiler at Survival Research Company had read about our expedition in Bow and Arrow and had a pair waiting for us when we reached Panama. The blowguns were six-foot, telescoping aluminum tubes, built to handle 60-grain aluminum darts fitted with self-streamlining rubber fins. They were adaptations of the ones used by the Yagua Indians along the Upper Amazon. The Yaguas throw a slow dart tipped with our rare and rely on the poison to kill the animal; ours threw a dart five times as fast and killed by impact and cutting.

After a little practice, we found we could cut clear through a beer can at fifty feet and through almost any small animal at eighty. The main drawback was the tendency of the metal barrel to become sweaty and sticky in the humid, tropical climate, requiring frequent applications of powdered white graphite to keep the darts riding free and fast. But for banging snakes, they were the best and safest thing we had.

The method we used was simplicity itself. I'd lead the way through the jungle with a machete and blowgun, while Steve followed with bow and arrows, ready for bigger game. If a snake was in our path, I usually

could get the business end of the blowgun within an inch or two of his head and blast away, six feet of aluminum tube still between us. On my best day, in the jungle near Remedios, I got seven snakes with seven darts.

But it was a pleasure to leave the snakes and sweaty jungle behind and head for the hills. We headed for Volcan Baru, or Volcan de Chiriqui as it is otherwise called, the southernmost volcano in Central America, and the first of some forty we would see. A rough gravel trail led off the Inter-American Highway to a shepherd's hut 9,000 feet above sea level and not far from the main crater. In the soft volcanic soil it was fairly easy to see animal tracks, and soon we were on the trail of what we judged to be a big puma. Warm droppings confirmed that the trail was fresh, and we picked up the pace. After two hours of climbing up and down crags and leaping crevasses and slipping and sliding on the granular lava, the altitude began to tell on us. Steve was having difficulty catching his breath, and I had severe pains in my chest near the heart. They grew sharper with every exertion.

Ideally, we should have adjusted gradually to the increasing altitude and decreasing oxygen supply, maybe spending a day at 5,000 feet and another at 9,000, just resting and relaxing for our bodies to adapt.

The pain over my heart grew worse, so we had to leave Volcan Baru and head for Costa Rica, planning to take it easy for a few days before hunting the high volcanoes again. In just one country in Central America we'd seen more wild game than in half the rest of the world, and we were sure more lay ahead.

Costa Rica is one of the most beautiful and friendly countries on the continent; "the Paradise to Which People Return," its inhabitants proudly call it. It is also a paradise for hunters, abounding in deer, wild pig, saine, tapir, puma, jaguar, tepeizcuintle, rabbit, fox, ocelot, opossum, weasel, wild turkey, duck, quail, snipe, guinea-hen, wild pigeons and purple doves, so our pot seldom lacked fresh meat.

The 150 miles of road between Panama's border and Costa Rica's capital is the worst stretch on the entire Inter-American Highway, unpaved, unbanked, corrugated, rocky, pot-holed and brutal. After two days of unbelievable pounding, the A-frame on our trailer sheared off completely. We were eighty miles from San Jose, on the 11,500 foot summit of Cerro del Muerto, the Peak of Death. We were stuck for two days as we chopped down a couple of springy young trees to improvise a splint for the broken frame, but we could have kept our camp there two months without suffering a hunger pang. The heavily forested peak was alive with game, and we could pick off a lunch in minutes only twenty yards from the road.

With the trailer precariously braced with logs, rope and wire, we limped toward San Jose at 5 miles an hour, stopping every few minutes to check the lashings lest the camper go bounding down the mountain. Two more days we wasted in San Jose having the breaks welded. By then we were so far behind schedule that we had to abandon our plans for hunting big game in Costa Rica. We had a definite date to meet the press in Laredo, Texas on our return to the States after nineteen months on the road, and the editors at Bobbs-Merrill were hollering for the manuscript on our trip, which they'll be publishing as a book this summer, so we had little time to waste.

We managed to get in a couple of days of bow-fishing in Nicaragua, but we couldn't spare the time to go after anything big. The same was true in El Salvador and also in Honduras, a wild country of ninety percent jungle which abounds in game.

By the time we reached Guatemala, the northernmost of the Central American republics, we'd gained a couple of days and the rainy season rains had tapered off to five days of downpour a week, so we decided to try one last hunt for something of trophy quality. I say "something" because the wildlife in Central America is so abundant and intermixed that you never know what you're going to get. You might go searching for a jaguar and end up with an ocelot, or look for bear and find a puma.

The region we chose was in the south of Guatemala, about one-third of the way from the Honduras border toward Guatemala City.

After breaking camp in the morning we hid our car

and camper in the dense jungle and we set off with bows, blowgun and machete. A skinning knife, cup, snakebite kit, parabolic sun-ray lighter, and a bottle of insect repellent filled out our kit, and Steve brought his pistol for emergencies.

We'd hardly left the car when the tall grass in front of us burst into life. I nocked and shot almost by reflex and was rewarded with a good, solid clang as the arrow hit its mark. Before I had time to dwell on it my quarry was fifty yards distant, rampaging through the underbrush.

"Nice shot," Steve said. "What do you want to do with the arrow now? Use it for a fishhook? Did you really think you could bring down an armadillo at that angle?"

I confessed that I'd been a little over-excited and promised Steve that I'd never shoot at anything again unless it was either mountable or edible. A mistake, I'd eat it, whatever it was.

A few minutes later, as I approached a clearing in the jungle, a shaggy brown something came lumbering toward us. I vaguely remembered my promise to Steve as I squinted at the monster that looked like a cross between a wild dog and a tapir. All I could tell was that (a) it wasn't another armadillo and (b) it was coming uncomfortably close, so I slipped a dart in the blowgun and blew away. I was so tense that my breath exploded and the dart went sailing over its head. As did the second. He was almost on top of me when I got him with the third dart inside the ear.

Steve came rushing over from the far side of the clearing and looked down on my prize.

"I sure hope you're hungry, Albert," he said.

"Why?"

"Because if you're not you're going to have a damn hard time eating that poor anteater you've just killed."

I started to protest and was reminding Steve that I'd helped him eat the iguana he'd shot the day before, and that it looked a lot more unappetizing than my anteater (even though it tasted great), when we both stopped short. We weren't alone. There were movements all around us in the jungle, and they weren't armadillos or anteaters. They were Indians, all armed with machetes, all serious, all moving in on us.

The nearest headhunters were 2,000 miles to the south, and the only robber bands we'd heard about were far to the north and east along the Puerto Barrios road, yet the Indians definitely meant business. They drew up in a circle around us, eight of them, and made it obvious that we were to turn over our weapons and follow them and try no tricks. I was so scared I didn't even realize then that they'd saved me from my anteater lunch.

They marched us back to the main highway and several miles south along it to a small village near which we'd camped the night before. There they presented us to the jefe who grinned as if he'd just rounded up the Guatemalan equivalent of Jesse James and the Dalton boys.

When we protested and pulled out our American passports, the jefe first looked suspicious, then upset. Then he burst into laughter.

"No Castro," he roared. "No Cuva, no banditos. Solo Northamericanos. No Castro."

There are some five million people in Guatemala, and of them only about four hundred have beards, and of those, 397 are communist guerrillas, supplied and inspired by Castro, who terrorize the countryside and are trying to start a revolution. The only other person in Guatemala who dared wear a beard was a young American doctor in Chimaltenango. We hadn't understood why, from the moment we entered Guatemala, we'd been met by icy stares and frightened expressions, in complete contrast to the way we'd been greeted throughout the rest of Central America.

To avoid further trouble, we made haste for Guatemala City where we presented our credentials to the head of the government's department of tourism. He wrote for us a beautiful letter of introduction, especially for the benefit of any other posse we might meet in the woods, that despite our shaggy black beards and bows and arrows, we really weren't bad chaps after all - just a couple of crazy Americans finishing up the world's longest, wildest, whackiest, most unsuccessful hunting trip.

And so we have. ●

MAIL POUCH

Continued from page 59

son, Mickey Mann. We also wish to thank and commend Joe Higgins for an accurate and well written story.

As evidence of the widespread circulation of BOW & ARROW, I received many congratulations about Mickey while spending five weeks in California and attending all of the shoots with Matt Yurick. Upon returning home, the same congratulations were received while attending shoots around Ohio.

Mike Mann Sr.,
Lorain, Ohio

(Excellence deserves note!)



YOUNG SHOOTER

Enclosed is a snapshot of my son Eric. He is five years old and has been shooting since he was four. If I must say so, he is a darn good shot for his age. I am going to take him deer hunting this fall and he is real excited. He is using a fifteen-pound Stemmler fiberglass bow.

Robert H. Runge,
Essex Junction, Vermont

LOVE DEPARTMENT

I have just read the May-June 66 issue for what makes about the tenth time. I thought you and the readers might like to know that BOW & ARROW made the Post Exchange magazine racks in Vietnam this month. All copies were sold in four days. Keep up the good work and stories.

James Wright,
Da Nang,
Vietnam

SHARP TIP

I thought I would pass along this tip on using razor blades for broadheads. Instead of breaking them and using the pieces, I use a glass cutter to score the double-edge type of razor blade.

Then one can take a pair of needle-nose pliers to crack them along the lines on the blades. These pieces can be cut to fit any shape broadhead. It's a good idea, also, to carry an old toothbrush when hunting to clean dirt out of these razor sharp heads on those missed shots. It sure saves the fingers.

Paul A. Shank,
Massillon, Ohio

ROVING SHOTS

Uh got tuh thinkin' tother day (Hard work, that thinkin') and yuh know, McKinney Arer Shafts hev ben used by four generations uh archers! Son, Dad, Grandad an' Great Grandad! Uh product that has thet kind uh loyal customers must hev whut it takes tuh make a good arrer!

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A tool to turn the earth over with.

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books for bowmen



THE COMPLETE ARCHERY BOOK by Louis Hochman; Arco Sports Library; \$2.50; 143 pp. It's hardly ever that anything is complete in 140-odd pages, and the same is true of this offering.

However, there are several chapters devoted to self-help for the less experienced archer that might prove of value. There are, for example, chapters devoted to building a recurve bow, making matched arrows, making of bowstrings, care and repair of equipment that can save the neophyte his frugal funds.

Too, this volume made its initial appearance some eight or nine years ago, so one can assume that some of the information is obsolete. After all, most of the major gains in archery design and techniques have come about in the past two decades, many of them in the past five years.

However, one of the novel approaches carried through in the book concerns the pet techniques used by such greats and late greats of archery as Joe Fries, Howard Hill, Jo McCubbins and Bob Markworth. Some of these champs, of course, no longer have been able to maintain the increase in their own scores that are necessary these days to place at the top in the national contests.

Nonetheless, if you're having trouble with your shooting — or simply want to learn to shoot — the tips offered by some of these individuals should go a long way toward getting you on the target and into the gold. — **MH.**

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