

INSTINCTIVE ARCHER[®]

M A G A Z I N E

The Lore of the Bow—The Flight of the Arrow...

Meet 1997 World Champion
Walter Lucki

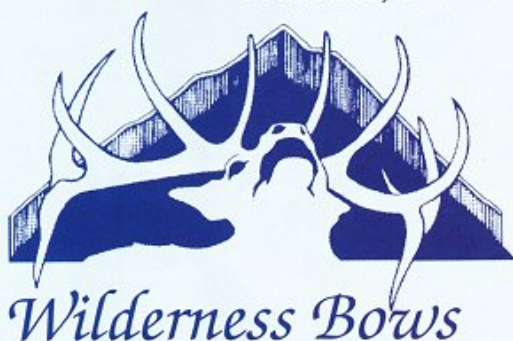
Victor Smith's
The MAGIC BOW

Win a Custom
WILDERNESS LONGBOW!



Win A Custom **WILDERNESS LONGBOW!**

And help spread the word about Instinctive Archer® Magazine.
Enter our Second Annual Win-A-Bow Contest by sending in **TWO NEW SUBSCRIPTIONS**, and we'll put your name in a drawing for a beautiful, one-of-a-kind *Wilderness Longbow*



Contest Rules:

1. Gather two new subscriptions to Instinctive Archer® Magazine from your friends, relatives, club members, etc. (Subscriptions must be first-time subscriptions, not renewals.)
2. Mail both subscriptions (including names, mailing addresses, personal checks, and/or VISA/MasterCard numbers) to us in one envelope, accompanied by a card with your name, address, and phone number. Contest deadline is June 10, 1998.
3. *ENTER AS OFTEN AS YOU LIKE!*

**Drawing will be held at the
1998 North American
Longbow Safari
in McCall, Idaho.**



—Subscriptions Make Great Gifts!—

INSTINCTIVE ARCHER®

Winter, 1997

TABLE OF CONTENTS

6	A Brecon Beacon Rove	John Durnford
9	Herter's Archery	Gary Altstaetter
12	The Visual Aspect of Instinctive Archery	Scott Toll
18	<i>HOW TO:</i> Easy Armguards	Bob Krout
20	Longbowmen of La Florida	Sterling Holbrook
24	Leonardo Da Vinci (Notes on bow design, etc)	Hilary Greenland
28	Be Alright on the Knight (Diary of a Mad Bowman)	Pete Day
31	Journal of a Hunting Season	Reg Darling
36	The 1997 Traditional Bowhunters' Expo	Gary Altstaetter
39	<i>VIDEO REVIEW:</i> How to Shoot Instinctively Better Than Ever	Phillip Foss
40	World Longbow Champion Walter Lucki	Michael Rockmaker
45	Quest for the Giant Gator of Ocala	Jerry Hill
52	The Lexicon of Traditional Archery	Phillip Foss
59	Thermal Comfort and Task Efficiency	Bob Adler
62	<i>INTERVIEW:</i> Ted Fry of Raptor Archery	Staff
66	The Magic Bow	Victor Smith
71	Double Take—The 1997 Eastern Traditional Rendezvous	Thomas Duvernay

REGULAR FEATURES

4	FROM THE EDITOR	
5	LETTERS TO THE EDITOR	
38	PRODUCT SPOTLIGHT	
76	CLASSIFIED ADS	
78	SIDE TRAILS	Bob Martin

We offer all traditional archery organizations 100 FREE words to advertise their events, benefits, fund-raisers, etc, in each issue of Instinctive Archer™ Magazine.

INSTINCTIVE ARCHER® MAGAZINE

Editor
Rik Hinton

Assistant Editor/Chief Illustrator
Robert V. Martin

British Editor
Hugh D. Soar

ADVERTISING & SUBSCRIPTIONS:
P.O. Box 45299, Boise, ID 83711-5299
(208) 465-9893

U.S. SUBSCRIPTIONS:
One Year: \$12.00
Two Year: \$23.00

CANADIAN SUBSCRIPTIONS:
One year: \$22.00 U.S.

FOREIGN SUBSCRIPTIONS:
One year: \$30.00 U.S.

CONTRIBUTIONS:

WE WELCOME YOUR MANUSCRIPTS, POETRY, ARTWORK, PHOTOS, AND SUGGESTIONS, however, you must send them with a stamped, self-addressed envelope (we assume no responsibility for unsolicited material). Send your contributions to *Instinctive Archer® Magazine* Editorial Office, P.O. Box 45299, Boise, ID 83711-5299.

Instinctive Archer® Magazine is published quarterly and provides a forum for many different views and opinions from around the globe, however, the information, articles, opinions, and advertising on these pages do not necessarily reflect the opinions of *Instinctive Archer® Magazine*. We reserve the right to refuse any advertisement. POSTMASTER: Send address changes to *Instinctive Archer® Magazine*, P.O. Box 45299, Boise, ID 83711-5299. Copyright 1997 by *Instinctive Archer® Magazine*. All rights reserved.

Instinctive Archer® is a registered trademark.

Printed in the U.S.A.

From the old oak desk of the Editor



Rik Hinton, Editor

I remember a statement my father made many years ago as we waited for breakfast in a mountain restaurant in North Idaho. He said that it is always a simple matter to tell who the archers are in any room, such as this restaurant, because within a few minutes of entering a room, the archers will undoubtedly mime the drawing of a bow during their conversation (I think it is an inherited, genetic behavior over which archers have no control, but we'll let the social scientists and

Darwinists argue about that one). In any case, I know that I personally came by this trait honestly—I got it from my dad.

His observation has served me well over the years, as I have met archers this way in the most unlikely places. Lately, it seems that I meet archers everywhere I go, and with increasing frequency, more of these archers are shooting traditional equipment. It's a strong indication of the continued vitality of traditional archery.

As a case in point, last week I was shopping for silk thread to reinforce the self-nocked arrows that I plan to make. I went to a large fabric shop—an activity that always makes me self-conscious, lest someone figure out that I am a (gasp) "closet seamstress." Normally, I try to get in and out of fabric stores with as few people as possible noticing that I was there. This time however, I had to provide a lengthy explanation to the sales lady about why I needed silk thread and why wooden arrow nocks needed to be reinforced. I noticed that a large, manly-looking man was standing nearby watching me try to explain wooden arrow nocks to the sales lady. "Well," I thought to myself, "*at least he doesn't think I'm some sissy-boy shopping for material to make a dress or something.*" When the clerk finally told me that she had never heard of silk thread before and doubted that anyone carried it anymore, the large, manly-looking guy came over and told me that what he liked to use was untwisted Dacron bowstring material.

You could have pushed me over with a feather! The last place that I expected to meet another archer, and a traditional one at that, was at a fabric shop. Needless to say, we talked archery and wooden arrows and hunting for several minutes, and yes, I am sure that we drew our imaginary bows three or four times right there in a ladies fabric shop as we each shared our elk hunting experiences from the previous weekend. It was great!

So the next time you find yourself in a room full of unfamiliar people when you would much rather be out shooting your bow (wedding receptions, boring parties, or even in a ladies fabric shop), try drawing that imaginary bow a few times and watch how quickly the other archers gravitate to your side of the room and introduce themselves. Try to refrain from coming to full draw in church though—it tends to draw raised eyebrows from the pulpit.

HAPPY HOLIDAYS!



Letters to the Editor:

Dear Rik,

Received my Fall issue of *Instinctive Archer*® and again I'm amazed at what a good job you are doing. How you find so many good contributors and coordinate all this material is truly a job well done!

I used to watch Red Chavez shoot here in Southern California and it was always a delight and Scott Toll did a great job of capturing Red's essence and now there is another bow on my "must have list."

I'm currently working on a fitness program of my own that is coming along just fine and I was glad to see *Weight Lifting and Archery* by Price Ebert. It was well done and accurate. Designing my program has been with the help of Dr. Bob Arnot's book and now with Price's help I'm looking forward to using some of my bigger bows once again.

Gary Sentman's last two articles on target panic have been very timely for me personally. I've had a very mild (almost imperceptible) case of target panic for sometime now and it has reduced my score about 30% over the years. What it has done is lowered my expectancy level. I don't expect to do so well and I don't, but I know that the natural ability is there to do as well as years ago. I really long for the return of my confidence in each shot and I am determined that my natural confidence will return. I'm well read on the subject of target panic, but I've not found it explained as well in traditional archery terms before. I thank Gary, and his advice too, will fit nicely into my archery fitness program.

Pete Day, A Middle Age(d) Archer, *Never Leave a Tern Unstoned*. What can you say but that the English are really neat. There is so much that I can relate to with Pete that I feel like I know him. I'm dying to find out if he ever launched a grey goose feathered shaft through the greenwood of Sherwood Forest. I supposed only an American would ask that question and only an American archer would have four copies of *Robin Hood* on his bookshelf. (All by different authors.)

There must not be anything in this world quite so complete as a modern Englishman wandering the open areas near the village of Thornbury in England, longbow in hand with quiver on back and about to launch a great feathered shaft. "God Save the Queen" I'm sure Pete exclaims... as that shaft buries itself in yonder young fryer! Good huntin' Pete Day, and launch one for me.

In My Grandfather's Day by Hank Curtis. Again, one could not ask for a better piece. To sit in his favorite

reading chair, settling in for a great evening of reading, this article is as good as it gets!

I have not read further than that or this letter would be even longer. It should be, you provide a great magazine. Each contributor is an asset to our world of traditional archery!

For those who get as far as my article, I need to correct a couple of errors made by the printer. The title should read "*The National Bowhunter Education Foundation's International Bowhunter Education Program*," (not Foundation). The title of California's state archery association is "*California Bowman Hunters* (not Archery) *State Archery Association*" and last of all, Walt Powell had a long career at JPL/NASA (Jet Propulsion Laboratories/NASA). This last one may have been my error. Most instructors worldwide will recognize the error and understand, however those in my own state will not pass up the opportunity to harass me unmercifully, as is their right. . .

Hope your hunting season has gone well.

Curtis Hermann

Curtis, thanks for the encouraging letter. It's great to know that people enjoy reading the contributions of our writers as much as we do. On a quiet evening, there aren't many things as enjoyable as a comfortable reading chair and a good read.

On the subject of Pete Day (check out his article in this issue, it will bring a smile to anyone who has served as an archery instructor), I have little doubt that he has, at some time in his life, been drawn to launch a shaft or two in Sherwood Forest. That would be a hard place for any archer to stay away from, and Pete Day has the archery bug as strong as anyone (last year he traveled all the way to Montana for the North American Longbow Safari). How about it Pete—ever traveled to Sherwood forest?

Rik

Sir,

Hi, I just received the latest issue of *Instinctive Archer*. Again another job well done. I get very few magazines and I look forward to reading my IA. I didn't make it down to the British Longbow shoot this year. My travel plans had taken me to Detroit and Wallaceburg Ontario to shoot a form of the Popinjay. Of course with recurve and wooden arrows. But that's another story.

I was wondering if it would be possible to get an address for Mr. Holger Riesch. I'd like to get more information on Alemmanic archery. I'm a member of the Society of Archer-Antiquaries. Plus have friends in Europe. I myself was born in Belgium. I'd like to find out who made the heads he displays. I have a collection of repro-medieval heads and I'm always looking for new ones. Thanks for your time.

The Belgian Bier Hunter
(Claude J. Barsotti)
Malden, MA

Claude, If you send the letter to us, we will be glad to forward it to Mr. Riesch for you.

A BRECON BEACON ROVE

By

John Durnford

Here in England, a rove means a group of two or more archers roaming across open country and shooting at random marks. The archer whose arrow hits the mark, or is nearest to it, chooses the next mark.

A much more descriptive and picturesque term for roving is stump shooting. This term is widely used by our American colonials - so sorry, I mean colleagues (as we don't celebrate the 4th of July in England, I tend to forget).

For the uninitiated, a roving mark can be any object, at any distance. Marks can vary considerably, and comprise objects such as rabbit holes, earth clods, tree stumps, tips of tree branches, and another's lofted arrow. It really sharpens one's instinctive skill with the bow. This sharpening is greatly enhanced by imagining the marks as animate objects. For example, imagining a thistle head to be your bank manager's nose (or if you are a bank manager archer, a client's nose), and a rounded bush to be the buttocks of the person who stole your lawnmower. Above all, it's marvelous fun. Because of that, I suspect the practice is as old as the bow itself. It was certainly practiced by English archers in the 14th and 15th centuries when they took their bows to war. It was one reason why many were so good with that weapon.

Now to the Brecon Beacons. They are a small area of mountains, located in Wales which, like England, is a part of the United Kingdom (UK). "Mountains" is a misnomer since their maximum height doesn't quite reach 3,000 ft.

However, in the UK the description "mountains" is frequently applied to wild and hostile country which is generally set above the 2,000-foot contour. It is country across which it would be imprudent to travel without a compass in the quiver pocket. The Brecon Beacons are such an area. They are constantly used in the selection and training of UK special forces personnel, some of whose seasoned troopers have lost their lives in that area due to exposure.

Special forces are not new to the Brecon Beacons. As far back as the 12th century, Welsh special forces roamed the area armed with elm longbows and an awesome skill with the weapon. The English of those days were (and still are, according to some) an occupying force in Wales. It is recorded that the Welsh archers frequently shot the English patrols to pieces. The English garrisoned Wales from magnificent castles, many of whose structures are still quite intact. One such castle is Abergavenny Castle which is situated a few miles south of the Brecon Beacons. It is also recorded that in 1182, Welsh archers in the act of chasing English soldiers back into this castle, shot several arrows into its oak main door (it seems the English soldiers "only just made it"). The arrows penetrated the door to a depth of 3". To achieve this astonishing penetration in seasoned oak, modern researchers conclude the Welsh were using longbows of some 100 pounds draw weight and arrowheads perhaps of a design and temper which were unknown to the English at that time. Fortunately,

the English had the good sense to see the significant military advantage of having Welsh archers on their side and enlisted many as mercenaries.

During that period, Richard de Clare, Earl of Pembroke, took a band of Welsh mercenaries to Ireland where they promptly shot the Irish to pieces too. Richard himself was an archer and was nicknamed Strongbow as apparently he could draw the strongest bow in the kingdom. Subjugating the Irish was no mean feat since the organized part of the Irish population were descendants of the Vikings, and obviously a formidable enemy in consequence. It was they who founded the great Irish towns of Cork, Dublin, Limerick and Waterford. The upshot of Richard's foray into Ireland was that he became King of Leinster, an immense area of southern Ireland. His reign started the troubles between England and Ireland which are still with us today, except that bullets have replaced bodkins.

But enough of all that. Suffice to say that what better place than the Brecon Beacons to spend a day roving. The pleasure of roving through countryside rich in the history of archery quite augments one's enjoyment of the day, taken that one has a sense of archery history, and I've yet to meet the archer who hasn't.

On this occasion there were three archers in the roving party - Pat Ballinger, Pete Day, and me. Some of you may have met Pat and Pete at the 1996 American Longbow Safari in Ovando, Montana. The three of us met at Pete's lair where he presented me with a beautifully made set of flu-flus, and an American Indian hunting arrow tipped with 2 wondrously fashioned flint arrowheads. What a grand start to a grand day! I would mention that Indian lore has always been of great interest to many of us in the UK, especially the population's archer

corps. One still sees Indian toy bows and arrows in toy shops, and youngsters playing "Cowboys and Indians" about our countryside.

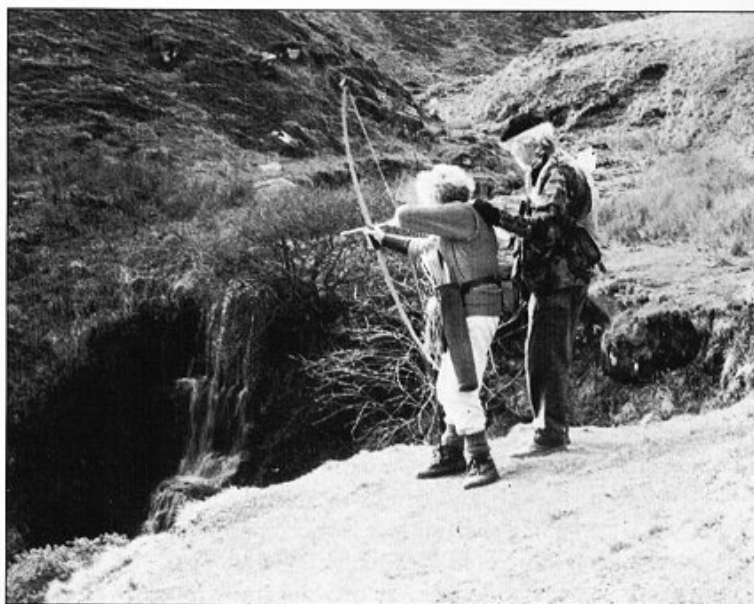
Arriving at the rove's start point, we had a "cuppa" and a delicious light bite whilst tackling up. Nothing quite like donning walking boots and stringing bows, particularly when helped by intermittently sipping at a hot cup of coffee and murdering a pork pie. And, of course, faithfully following the English custom of insulting each other about each other's gear (for insulting, read kidding). We then started trekking into the mountains, heading for a place called Camp Ballinger. The sun came out, and, for a mid-April day, it was extremely warm. Since snow can often mantle the area in April, we couldn't believe our luck!

Now a brief description of the roving area. It is set in quite dramatic scenery, at an altitude of about 2000 ft. The area is within a natural bowl. The sides of the bowl comprise very steep mountain type terrain, sweeping up to terminate in cliffs along the bowl's northern edges. Various mountain streams thread their way through the bowl, normally flowing at the bottom of small ravines which, from a distance, look like huge scars running down the mountainsides. The streams actually come from springs on the tableland above the bowl. It follows that they enter the bowl in the form of waterfalls and you can climb up

the side of these if you wish to gain the skyline. The bowl is almost treeless. However, the ground is generally soft and supports an amazing variety of greens which are made up from grasses, reeds, mosses, heathers, blueberry leaves, etc. The greens are interlaced with grey rocks of all sizes and white sheep of all sizes. The sheep graze the mountain grass and belong to farmers in the lower valleys who periodically round them up on horseback (we could call the farmers "sheepboys" I suppose). Patches of red earth are numerous and are usually where streams have created "wash outs" after heavy rain, or sheep scrapes which are hollows scraped out by sheep in which they huddle during severe weather. At first sight, the bowl's floor appears kind of featureless. Yet it harbours many secret havens for man and beast.

Pete celebrated our arrival in this most pristine of places by shooting at a rusty 40-gallon drum. Unfortunately, the arrow shattered on the drum's surface and as we couldn't find the pile, I secretly hoped it had flown on to bury itself in the person who had left the drum there. We had some great roving shots at some superb marks as we trekked on up into the "silent bowl" as I call it. Apart from croak of raven, mew of buzzard, and bleat of sheep, it is a very silent place. Eventually we neared Camp Ballinger. The camp takes a bit of finding as it is well hidden being located at the bottom of a twisting ravine.

I scouted ahead in an effort to locate the camp. Eventually I almost fell into it, and looking back to call out the news, was surprisingly rewarded with the loveliest of pictures - Pat and Pete coming down the mountain-side together, the colours of their roving gear, longbows, quivers, and arrow fletches being sharply accentuated by the clear air and a startling mountain backdrop. Naturally,



Shooting sacrificial arrows into the waterfall's mossy maw.



My favorite mark of the day. From left to right: Me, Pete, and Pat.

the camera was buried deep in my backpack, but a photo print could never match the memory of that scene.

As the camp is well hidden, it accordingly provides good shelter in bad weather. There is a stunted tree which allows one to build a shelter with a ground sheet if stopping over in heavy rain or snow. There is also a small waterfall with a deep pool below it for bathing and washing. The stream is flanked by soft grass with plenty of mossy stumps to sit on and plenty of rocks to use as tables. Indeed, it is a very lovely place and hence it is named after a very lovely lady.

After roving about the camp area for a while, we came to one of roving's great social occasions—lunch, or the half-way mark as we call it. In this case, it meant lolling on the camp's mossy stumps in warm sunshine, munching simple fare which had been lovingly prepared by Pat, hunger providing the best seasoning of all, and chatting away to the urgent voice of camp kettle duetted with the relaxed voice of cascading water. Aye!—all very good medicine.

Meal finished, we tackled up again (loosening quiver belts a notch) and started back. More superb roving marks followed, arrows being quivered mid-afternoon to give them and our drawing arms a break. We retired to a heathery mound well above the bowl's floor, and rested. We quietly sipped from soft drink cans and quietly took in the majestic scenery below us. Then Pat

pointed out two ravens walking about on the mountainside opposite. Pete was unable to spot them and became quite (teasingly) rude about Pat's eyesight. I couldn't see them either, but said I could in order to protect Pat against further oral arrows. The great deal of ensuing pointing, getting up and down, bottom scratching, peering, squinting, and general argument made the blood stir again. So the party picked up bows and continued on along the tufty trail. Pat has since been given an American Indian type name—Two Ravens.

We then roved back to the start, and via a very long waterfall which is in an area to the southwest of the bowl. Here, we shot some sacrificial arrows into the waterfall's mossy maw, partly for posterity and partly as a salute to the day. Here also, we found what was to be my favourite mark of the day. It is very difficult to choose a favourite mark from the marvelous assortment the bowl offers. The marks included distant holes in the soft earth covering the lower mountainside, reed clumps scattered about the various springheads, grassy hummocks stuck up here and there (hoping they were not hiding rocks), dead sheep, and so on. They were shot at in a variety of ways, uphill, downhill, along the side of steep slopes, across water, into water, rarely on the level, and often we shot with the dropping shaft since it is such open country. I digress - back to my favourite mark by the waterfall. It was the roots of a small fallen tree lying well below us in another ravine, and was at about 70

paces. All three of us made a kill with our first arrows, which despite the noise of the waterfall, sent back a faint but definite "chik" as pile bit pebbled earth.

And what of our favourite shots? Well, every shot was favourite, including each other's. Nothing quite like watching the flight of a roving shaft. Not least, it seems to speak of the freedom which we all hold so dear. The party shot well, I think, especially given difficulties such as one leg getting longer than the other due to walking many bowshots along the contours of steep slopes, and the wind fitfully spiralling down off the mountain tops, plus having to allow for terrain where the word "level" doesn't mean a lot. Despite all of this, and I know they will be embarrassed at the mention, Pat and Pete made some grand shots, and Pete made some astounding shots with the dropping shaft. How the hell does he do it? Oh, it was all such a delight to watch.

We arrived back at the car shortly after leaving the waterfall, where we again partook of Patricia's delightful fare, and didn't it go down well! Thanks a million girl! Pete and I then had a final mini-rove in the adjacent pine forest, and it happened - last mark of the day and I lost an arrow. It was one of the fluffus which Pete had given me that morning. I was distraught. I'm convinced many past archers are always with us when roving, and, as all archers are wags, I'm equally convinced they arrange these events on purpose. As it was, we found the arrow, but I could imagine famous past archers like England's King Henry VIII, Maurice Thompson, Dr. Saxton Pope, Howard Hill, and perhaps even Strongbow himself, laughing their tassels off.

Homeward bound then, stopping on the way at an English country inn for a quiet drink, and an excited chat about our glorious day in the mountains ... and starting to plan our next rove as aching leg and arm muscles began to relax in the soothing warmth of the inn's log fire. In one way and another, what a lot us sophisticated 20th century mortals still owe to simple wood!



Herter's Archery

by Gary Altstaetter

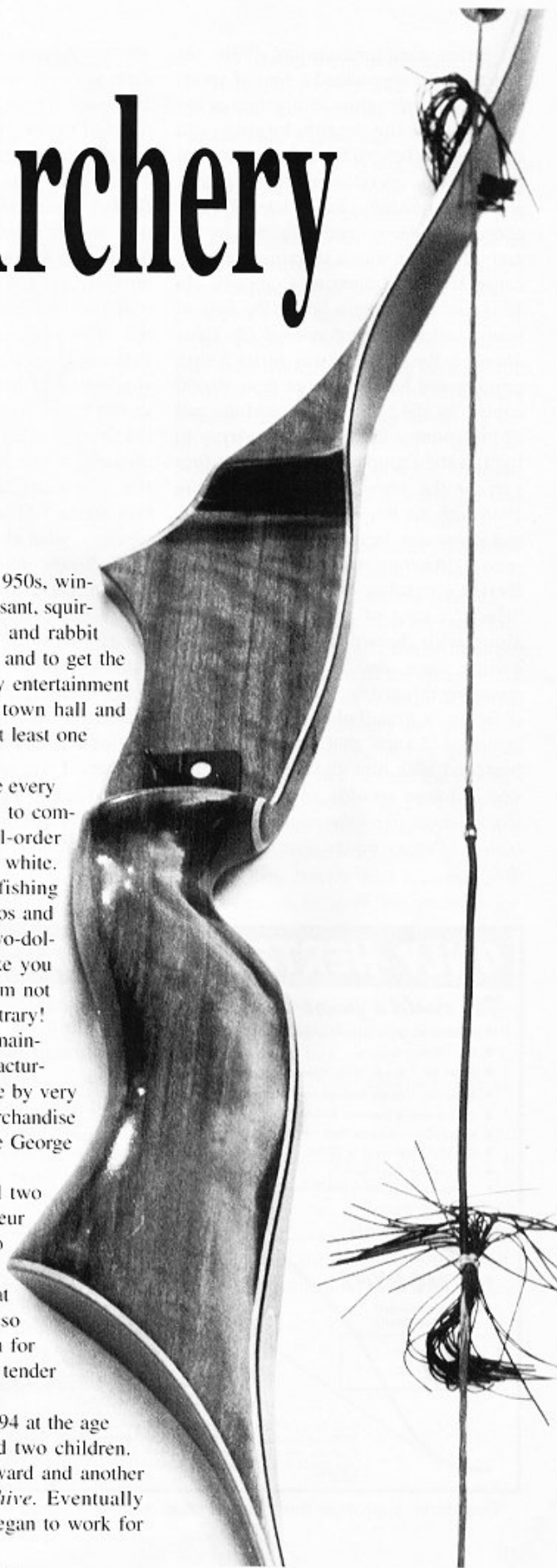
When I was going through my teenage years in the late 1950s, winters in northwestern Ohio were real bummers. Fall pheasant, squirrel, and duck hunting were becoming a dim memory, and rabbit hunting was just about over. We did not have an "idiot box" yet, and to get the family car for a joy ride was a near impossibility. About the only entertainment available was a square dance every other Saturday night at the town hall and Sunday ice skating on the local gravel pit. There was, however, at least one bright spot—the arrival of the new Herter's catalog.

I remember riding my bicycle down to the local post office every day after school to try to get the catalog before dad had a chance to commandeer it for himself. The catalog (unlike today's slick mail-order teasers) was very plain Jane. Most items were pictured in black and white. Color photos were reserved for the important items like bows, fishing plugs, and gunstock woods. What the catalog lacked in slick photos and celebrity endorsements, it made up for in words. It could take a two-dollar item and make you think it was worth ten dollars. Then make you think you had a bargain at five dollars. Don't get me wrong. I am not saying that Herter's sold low quality at high prices. Quite the contrary! Herter's had very high quality at a very reasonable price. They maintained this balance of high quality and reasonable prices by manufacturing a lot of the items they sold. What they did not make, was made by very reputable companies. I am amazed at the amount of Herter's merchandise that turns up at gun shows, and it has been twenty-one years since George sold the company.

To tell the story of Herter's Archery you must really tell two stories. First, there is the story of George Leonard, an entrepreneur who took an idea, his love for hunting and fishing, and turned it into a company that was one of the major mail order houses in the USA.

The second story is that of Bob Barrie. George met Bob at the Minnesota State Archery Championships in 1961. He was so impressed with Bob that he asked him to form an archery division for Herter's. He became President of Herter's Archery Division at the tender age of 20 and held that position for the next seventeen years.

George's father Edward O. Herter moved to Waseca in 1894 at the age of eighteen. In 1901 he married Margaret McLinn, and they had two children. George Leonard was born May 24, 1911. In the early 1900s, Edward and another man from Waseca started a dry goods business called the *Beehive*. Eventually Edward became the sole proprietor of the business, and George began to work for



his father sometime around 1930. At that time, George added a line of sporting goods to the store. Sometime in the mid-thirties he began buying and reselling feathers to fly fishermen. This business was operated out of his garage and not the *Beehive*. In the late 1930s he added duck decoys and calls, and by the early 1940s it was a thriving business called Herter's Importing Company. In 1941 George wrote a book (the first of many) called the *Professional Fly Tying Manual*. By 1946, it was in its fourth printing and had sold more than 40,000 copies. In 1942, George heeded the call of his country and joined the Army to fight in the European theater. After four years in the Army he returned home in 1946 with his Belgian-born wife, Berthe and a new son, Jacques.

Anyone who has ever seen a Herter's catalog will remember the "Herter's coat of arms" on the cover along with the words "*tenacious for quality since 1893.*" In the course of preparing this article, I asked Bob Barrie if George's grandfather had started the business. I knew that date would have preceded both him and his father. Bob said, "*I have no idea. A good guess is that George liked the numbers. It was typical of many things George said and did.*"

Along with running his business, George wrote somewhere around 20 books. These books covered a wide range of topics. There were books on fly tying, reloading, archery, and fishing. Then there was "*How to live with a Bitch.*" The catalog ad states, "*This book tells you in honest, frank terms how to live with a woman and avoid killing her, throwing her out of the house, or getting a divorce.*" Two of my favorites were the "*Professional Guides Manual*"—volumes I and II. I remember trying his suggestion of holding a minnow in my mouth before putting it on the hook when ice fishing. This would make the warm minnow wiggle more when immersed in the cold water, and would guarantee a fish strike. (I was very gullible as a teenager, what else can I say!) His "*Bull Cook Recipe Book volumes I and II*" is still in use in our house and over the years has provided some wonderful meals. Many of these books were dedicated to Christian Herter. If my memory serves me right, he was Secretary of State, and our Ambassador to the United Nations. I always thought they were brothers. I was wrong again. George did this to make people think they were related. Later he did name one of his four sons Christian.

The Herter's company survived three major fires (in 1942, 1955, and 1966), and grew beyond Waseca to have six retail stores. In their peak, they were sending out one million catalogs a year, and processing close to four thousand orders a day. In 1976, Herter's was sold to a Chicago investment company called N. Marshall Seeburg & Sons. In 1982 they filed what was thought to be the biggest bankruptcy in the history of Minnesota.

Bob Barrie was introduced to archery in 1955. Three years later, at the age of 17 he shot his first deer and won his first archery tournament. Those two events hooked him on archery, and by age 19 he was making his own laminated bows and arrows. In 1961, at the age of 20, he went to work for Herter's. He helped design and make most of the archery production equipment that they had in the plant. Bob patented a take-down bow that was introduced in the 1970 catalog. The simplicity of the locking mechanism makes me wonder why someone is not using it today. The limbs are slipped in place and held under spring tension until the bow is strung. You would think that the bow would rattle, but it shoots rather quietly. Another

of Bob's patents was for a compound. He believes that it was the only compound to get around the Allen patent. He placed the cams in the middle of the handle, and used a figure-8 timing cable to insure that both cams were synchronized. There are still some compounds on the market today that copied this timing mechanism.

While at Herter's, he had some really tough duty. After designing equipment, it was his responsibility to go to far-off places to hunt and test the equipment. He took a number of trophies, but the one that stands out most in his mind was the number two Pope and Young barren ground caribou that he shot in 1975. His most

ONLY HERTER'S COULD DO IT!

The world's finest wood and glass composite bow for only **\$24⁵⁰** PLUS POSTAGE

- Farbenbond Micro-Tapered German Formula Fiberglass Power Backing.
- Full Working Recurve.
- Select No. 1 Grade White Maple Core.
- Select No. 1 Grade Birdseye Maple Handle Risers.
- Choice Grade Northern Buckskin Covered Hand Grip.
- Mohair Covered Arrow Rest For Quiet Draw and Release.
- Pull Weights From 35 to 70 lbs.
- Right or Left Hand Models.
- Complete With Dacron Bow String and Brush Buttons.

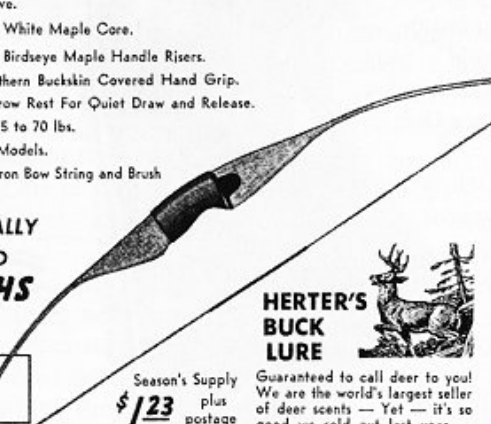
MAKE YOUR OWN HUNTING ARROWS FOR ONLY \$4⁰⁰ per doz.

UNCONDITIONALLY GUARANTEED 14 MONTHS
[World's Longest Bow Guarantee!]

Other Models at \$22.50 & \$32.50

Season's Supply \$/23 plus postage
Shpg. Wt. 8 oz.

Send Postcard TODAY for FREE Giant Catalog No. 203 Describing 1000's of Hunting Items, Bows, Quivers, Arrows, Sights, Camouflage Clothing, Bow Kits, Points, Gloves, Tools, Targets, Cements, Fletchings. ALL UNCONDITIONALLY GUARANTEED & LESS THAN WHOLESALE.



HERTER'S BUCK LURE

Guaranteed to call deer to you! We are the world's largest seller of deer lures — Yet — it's so good we sold out last year — ORDER EARLY!

Complete Kit includes 12 matched, finished, Port Orford Cedar Shafts 11/32", tapered ends — Shafts accurately marked for nock index — 12 Tenite nocks — 12 Broadheads — 24 Tom turkey quill fletchings 5" — 12 dyed barred cock feathers — Fletching and Nock Cement.

LESS THAN WHOLESALE!
UNCONDITIONALLY GUARANTEED!

HERTER'S WASECA, MINN.

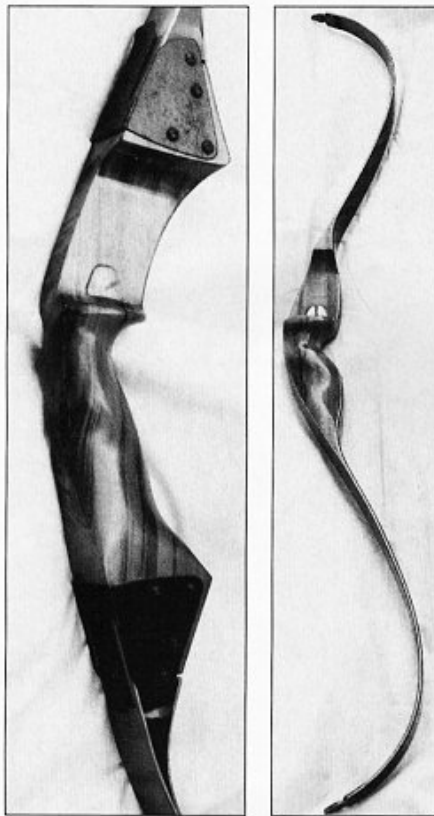
This Herter's advertisement appeared in *Archery* magazine in 1958.

memorable hunts were when he and his son both took trophies on the same hunt. Besides designing archery equipment, Bob helped in the design and manufacture of hunting and fishing equipment, shot gun shells, and taxidermy supplies.

Now, let's talk about the Herter's Archery division. Herter's started making solid fiberglass bows at the plant in the early 1950s. Somewhere around 1958 they contracted with a local company to make laminated bows under their direction. They made three models: the **Olympian Tournament**, the **Olympian Mark II** and the **Olympian Mark V**. These bows all had solid maple handles. Starting in 1959, they introduced the **Model 17-Degree CV Turkish**, that had a multilayered handle of walnut and maple. In 1961, when Bob Barrie went to work for them, they built an addition onto the plant. By 1963, they were making most of the archery products that they sold. The archery division had around 60 employees and was making about twelve thousand bows a year by the mid-1960s. That number increase to almost sixteen thousand bows by the early 1970s. With somewhere around a hundred and twenty five-thousand bows produced, it should be rather easy to build a nice collection of Herter's bows.

One thing that Herter's always tried to do was set their products apart from all others. One way the archery division did this was by using a German fiberglass called "Farbenglas." The catalog claims that this glass would out perform any glass on the market. I always believed this to be an advertising ploy. But as I think back over the Herter's that I have had in hand, I can not remember ever seeing a Herter's bow with checked glass.

Herter's had the longest and shortest production bows made. The **Sitka** and **Utopian** models were both available in 75 inches. Jim Ploen-of 21st Century Longbows not only won the 1968 Ben Pearson Indoor Open with a 75-inch Utopian, but set a number of records with this bow. Jim told me that he shot that bow better than any bow he ever owned, and he used only a small finish nail pounded into the window for a rest. The shortest bow they made was 46 inches. The **Sitka** and **Perfection**



Left: 1971 Model 62 Magnum takedown showing close-up of limb attachment.

Right: 1970 46" Turkish.

Turkish were both available in this length. These 46-inch bows are probably the most collectable of all the Herter's bows.

The serial number on a Herter's bow will give you a lot of information. The first letter and number indicates the model and length of the bow. The next two numbers are the month in which it was made. The next two numbers are the year of manufacture. The last few numbers tell in what sequence the bow was made in the month of manufacture. Example—S620868125. This is a 62-inch Sambar that was made in August of 1968 and was the 125th bow made that month.

Herter's was one of the few archery companies that had a longbow in their product line. They first appeared in the catalog in 1974 and they remained in the catalog until 1977. I have seen a lot of Herter's bows over the last six years, but I have only seen one of their longbows.

Herter's four predominate models from 1967 to 1975 were the **Sambar**, the **Sitka**, the **Premier Magnum**, and the **Turkish**. Unlike other manufactures that did a major restyling every couple of years, the bows look very similar from year to year. In others words, "if it ain't broke, don't fix it." The color of the glass remained tan on the back and black on the belly. The only big difference that I can see from the catalogs is in the risers. The early riser material was Brazilian Rosewood, and by the mid-1970s a much lighter color imported wood was being used. By the mid-1970s they were offering the **Magnum Take-down** and the **Utopian Take-down** in either a wood or aluminum handles.

The Herter's Archery Division stopped production sometime in 1977, when the Seeburg Company closed the Mitchell, S.D. facility. All the manufacturing there ended, and the equipment was sold. They moved the order filling and shipping back to Waseca. Because of the move, the archery and gun divisions were moved to another location. This move brought to an end the production of Herter's bows. In 1978 they did assemble some compound bows from parts that had been stockpiled.

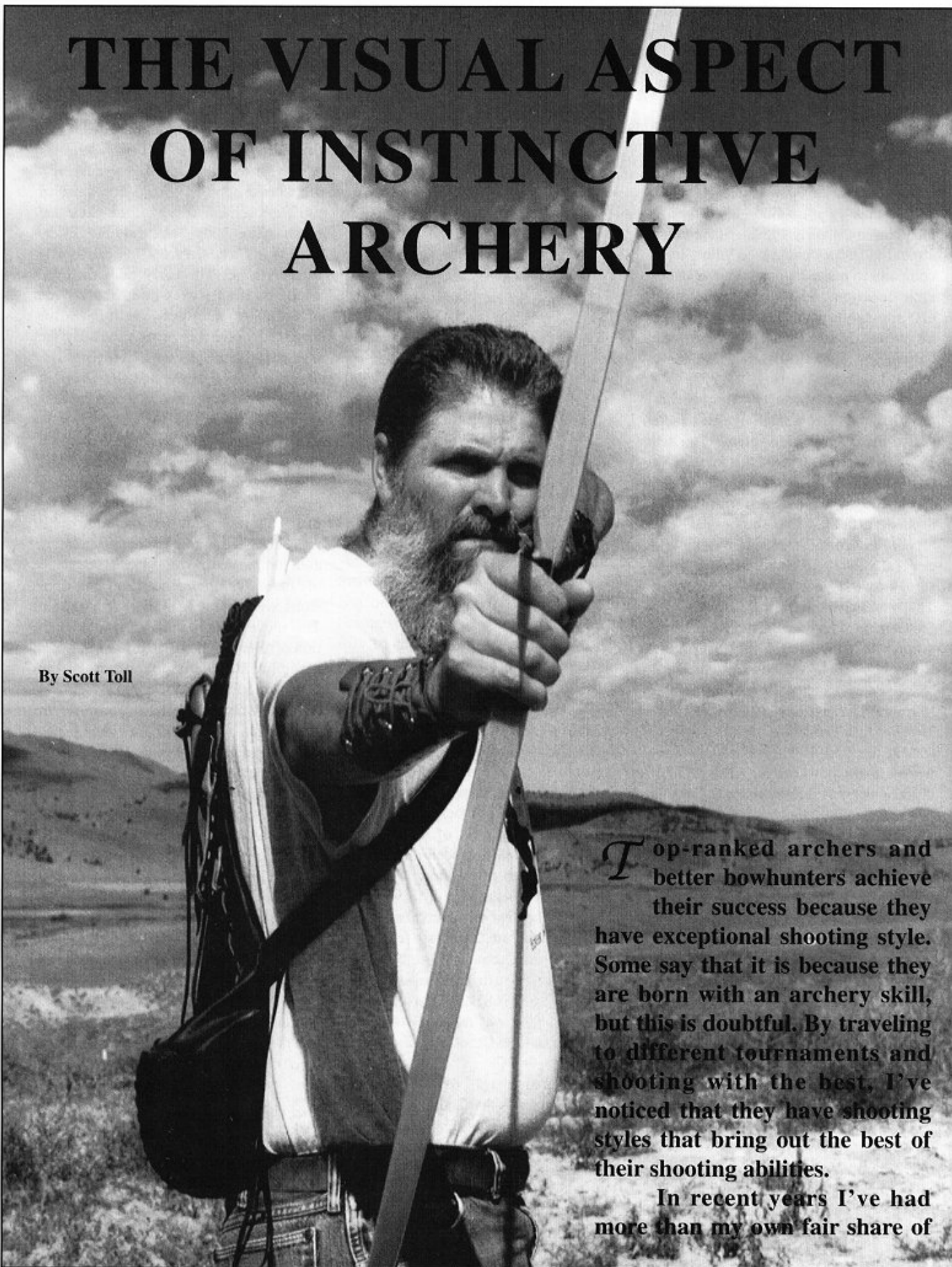
Bob Barrie had a number of chances to go to work for other major archery companies, but he chose to take his knowledge and strike out on his own. In January of 1979, he started Barrie Archery Company and began the manufacture of Rocky Mountain Broadheads. That company has grown to be one of the country's largest maker of broadheads.

George Leonard Herter died several years ago, but his wife Berthe is still living somewhere in the Minneapolis area. I never asked Bob how George reacted to the demise Herter's, but I am sure he regretted selling the company until the day that he died.



THE VISUAL ASPECT OF INSTINCTIVE ARCHERY

By Scott Toll



Top-ranked archers and better bowhunters achieve their success because they have exceptional shooting style. Some say that it is because they are born with an archery skill, but this is doubtful. By traveling to different tournaments and shooting with the best, I've noticed that they have shooting styles that bring out the best of their shooting abilities.

In recent years I've had more than my own fair share of

success at 3-D tournaments and bowhunting. Part of this is because I use well-matched wood arrows and a bow that compliments my shooting form, but there is more to shooting accurately than just using good equipment. Sometimes we need to look in different places.

This winter I visited with my eye doctor to learn more about my vision. I didn't know much about how our eyes really worked, nor did I understand which visual skills were most important to the instinctive archer.

Sheryl, my optometrist, is a well known sports vision specialist who routinely provides vision training for professional ball players all over the country. I didn't know exactly what her therapy involved, but was determined to find out.

We had a very interesting discussion about how our vision really works and the more common visual skills used by athletes. I soon discovered that there was plenty of information about vision and sports.

Several days later, Sheryl loaded me down with specific articles about sports vision, including a 65-page bibliography list on Vision and Sports compiled by the American Optometric Association.

I have improved my shooting accuracy significantly since studying about sports vision. I trust my vision more now than ever and only concentrate on specific visual skills, when needed, for each part of my shooting style.

You can improve your own shooting accuracy with a better understanding of the visual aspects involved. I will explain how our vision works and which visual skills we use by relating it to my shooting style. I hope that it will help your shooting as much as it did mine.

You receive visual information when light passes from the cornea, through the pupil, lens, and vitreous humor of the eyeball to the retina, which forms the back side of your eyeball. Your retina is composed of 100 million sensory receptors which register patterns of light, creating the images you see with your brain. It's how you control the movements of your eyes, where you receive information on your retina, and how you use this information, that determines which visual skills you are using.

You use both "direct" and "indirect" vision to guide your arrow to the target. You are using direct vision when receiving visual information from the center of your retina. It is your natural inclination to use direct vision because that is where visual acuity (ability to resolve detail) is at its sharpest. You read with your direct vision, and as an archer, use it to focus on the spot in the middle of the target.

You use indirect vision when receiving visual information from the rest of your retina, other than its center. When aiming, the arrow is located below and to the side of your direct line of vision, which is already fixed on the target (see photo on page 14). This makes it necessary for you to use indirect vision to see and aim the arrow.

Your indirect vision is a learned skill; the more you use it, the better it gets. This does not mean that you must shoot thousands of arrows each day to improve it. There are many other ways to develop it. You can expand the use of your retina when driving a car by identifying objects to the

side as you look directly ahead. You can do the same thing when you are watching TV. If you use your imagination, you can practice almost anywhere.

Sometimes, indirect vision is the source of your not-so-obvious shooting problems. You might blame your shooting problems on a lack of concentration or shooting form, but sometimes it is neither.

Studies indicate that stress or anxiety can cause "peripheral narrowing," a condition where people block out their indirect vision.

Scientists proved that athletes, in contact sports, were more prone to injury when they led stressful living styles, and it was related to peripheral narrowing. Their inability to see 300-pound linebackers coming in from their side was the true cause of their pain. After reading this study and comparing it with archery, my guess is that "fear" probably had more to do with it.

When you look at the target and aim your arrow, always keep both eyes open and focused directly on a spot to hit. This is how you gain depth perception (ability to judge distance). Both of your eyes will converge on one spot causing your brain to register both images as one, to perceive distance. This "binocular fusion," however, should not be confused with the way you are actually aiming the arrow. When you focus on a distant target to form one image, anything that is closer to your eyes becomes doubled in your indirect vision. To simplify the task of aiming, your brain simply shuts off one of these close-range images. The image you continue to use is controlled by your dominant eye.

You naturally aim with your dominant eye and it should be the one you aim your arrow with. If you are right-eye dominant, then you should be shooting a right-handed bow.

A simple way to determine which one of your eyes is dominant is to aim a finger at something on the wall with both eyes open. You must stay focused on the object, with your head facing directly at it so that both eyes see it clearly. By alternately closing one eye and then the other, you will quickly discover which eye is dominant.

If you use your less-dominant eye to aim with, your brain's ability to suppress one image diminishes. You will then have a tendency to use both images at the same time, for a shotgun-style approach to aiming.

You can improve your dominant vision and help your aim at the same time with one simple exercise. This exercise will cure the problem of having your nose block out most of the aiming picture.

To begin with, position yourself in a shooting stance, and look directly at the target. Next, lightly close your non-dominant eye, but still look directly at the target with the dominant eye. By moving your head around into different positions, with your neck only, find a position that places the target in the very center of your vision. Now hold your head steady, open the non-dominant eye, and focus on the target with both eyes. When you regain clarity and depth perception again, you will have proper head position for aiming. It should never move from this position from the beginning of the draw until the arrow strikes the target.



This photo illustrates what we actually see when aiming an arrow.

Another problem that many archers have is seeing two images of their arrow and trying to consciously block one out. This is not a problem, if we use the correct image to aim with. When your head is canted slightly, the upper image is always the correct one. After you aim the correct image for awhile, the unwanted image will disappear anyway.

Another visual skill that is too often associated with mystical images and deep breathing, is visualization. To the instinctive archer, however, just imagining the flight of an arrow is a simple form of it. You use it when aiming your arrow along an imagined flight path, or placing the point of the arrow on an imaginary spot.

Visual memories are the building blocks of visualization, and to sharpen them, you must learn to see more of the arrow's flight. You will improve your visual memories the most with balance and smooth shooting form, but I'll explain more about this later.

As an instinctive archer, you must use a wider variety of visual skills. Your different visual skills will affect reflexes, concentration, eye-hand and

eye-body coordination, and ultimately, as a result of all of this, your shooting performance.

To develop an effective shooting style, you must first understand its three major components. Aiming is the first component I will talk about, the second is shooting form, with its six steps in sequence, and the third is concentration. Each one is controlled by your vision.

Aiming is the first component of your shooting style. It involves an understanding of the visual aspects of the arrow, and its relationship with the target.

Just mention the word "aim" to a group of traditional shooters, and you'll often be greeted with blank stares and looks of disbelief. As an instinctive archer, you have been led to believe that aiming is wrong, and that it will only hurt your shooting. This is a misconception because you absolutely have to aim your arrow to shoot accurately. The next time another archer asks, "How do you aim without sights?" You should tell him that the answer is complicated and that there are many ways to do it.

Only a few aiming methods have survived the test of time: Pure

Instinctive, Split Vision, Gap Shooting, and Point of Aim. Unfortunately, they are often confused with each other because so many archers fail to understand their differences.

Top-ranked traditional archers who normally compete at 3-D tournaments use the Pure Instinctive aiming method. Keith Bain, 11-time IBO World Champion, uses it. I had the pleasure of shooting with Keith, during one round of the IBO World Championships in 1995. He was one of the most enjoyable archers I have ever competed with. He described his method of aiming to me in a single sentence, "*I focus on the smallest spot that I can see, then hold my arrow on that spot until I know that it's right.*" If you've ever seen Keith shoot, you'll not question the effectiveness of this aiming method.

The pure instinctive method is easy to use, accurate, and lends itself well to most hunting situations where game is moving, or partially concealed behind cover. You focus directly on a spot to hit, visualize the flight of the arrow, and then align the length of your arrow along this imagined path. At close ranges, you can see both the target and

arrow very clearly, trajectory is minimal, and very little imagination is needed to visualize the path of the arrow. It does lack consistency at longer distances, however, due to having only one reference point (the target) for aiming. Another aiming method, such as Split-Vision, can work better for long-range shooting because it has a few more references to use for aiming.

Split-Vision was successfully used by Howard Hill for all of his shooting; in fact, it was the only aiming method he used. Much like the front sight on a rifle, Hill used the tip of his arrow as a reference to aim with. He picked two spots on the target; the first one to hit, and the second, as a reference point, to hold the tip of his arrow on. His second spot was either real or imaginary. He looked directly at the first spot, and kept his concentration there for the entire shot. Then, with his indirect vision, he would move the tip of his arrow onto the second spot.

Most archers fail to use this aiming method effectively because they either have inconsistent shooting form, or an inability to keep their concentration on the first spot for the entire shot.

This aiming method works best for me when I look directly at a second spot before I ever raise my bow, then move my direct vision to the first spot and visualize a picture of where both spots should be. Once I've pictured this in my mind, I never concentrate on the second spot again. Instead, I keep my concentration and direct vision on the first spot, as Hill instructed.

Gap Shooting is very different than Split-Vision because no secondary spot is imagined. You use a gap, or space, between the tip of the arrow and the target, instead. You will still focus directly on the target and see the tip of the arrow with your indirect vision, but now have to also estimate the space between. This has its problems because the archer must look for two references and calculate the distance of the space while holding the bow at full draw. With no usable second spot as a reference, you do not have any left or right reference point and must use a pure instinctive aim for this purpose. You will have to shift your concentration between the gap, and a pure instinctive

aim, to achieve arrow alignment. Many sight-pin shooters use a gap method of aiming between two pins when neither pin fits the distance they are shooting. The alignment of their pins will give them their left-right reference. It is this sight-pin mentality that causes confusion between the Gap and Split-Vision aiming methods.

The Point of Aim method is very accurate, and works especially well on far-away targets (60+ yards). Even though you do not have a sight on your bow, you still need one (called a marker), somewhere near the target.

In earlier days of competition, before the invention of sights, tournament archers were allowed to place a marker in the ground before shooting. Archers would look directly at the marker, draw the arrow back to anchor, hold the tip of the arrow on the marker while at full draw, then shift their focus (direct vision) back to the target as they released the arrow.

Shooting form is the second major component of your shooting style. It involves controlling the energy of your bow and then directing this energy toward the target.

You should use six steps in your shooting form sequence: First, positioning the body for the shot (Stance); Second, positioning the arms and shoulders to pull the bow (Predraw); Third, establishing final tension and muscle memory (Final Draw); Fourth, touching the hand to the face (Anchor); Fifth, matching the direction of the arrow with the target (Aim); Sixth, following the arrow to the target (Release/Follow-Through).

Stance is the first step in your shooting form sequence (See page 16). It establishes the way you hold your body. To get the most from your vision, you must use a steady, well-balanced stance that will stay in place until the arrow strikes the target.

Most people know that the inner ear ties into the body's balance system, but few are aware that 20 percent of our visual nerves do also. Tests indicate that turning our head or simply losing our balance will cause conflict in our brain. Since our brain's highest priority is to regain balance, our visual input can be momentarily shut down.

When you lose balance or swing your head and arms around wildly, you will lose sight of part of the arrow's flight. This puts empty spots in your visual memory and eventually erodes your confidence in aiming. You must always work hard to control body movement and maintain your balance until the arrow strikes the target.

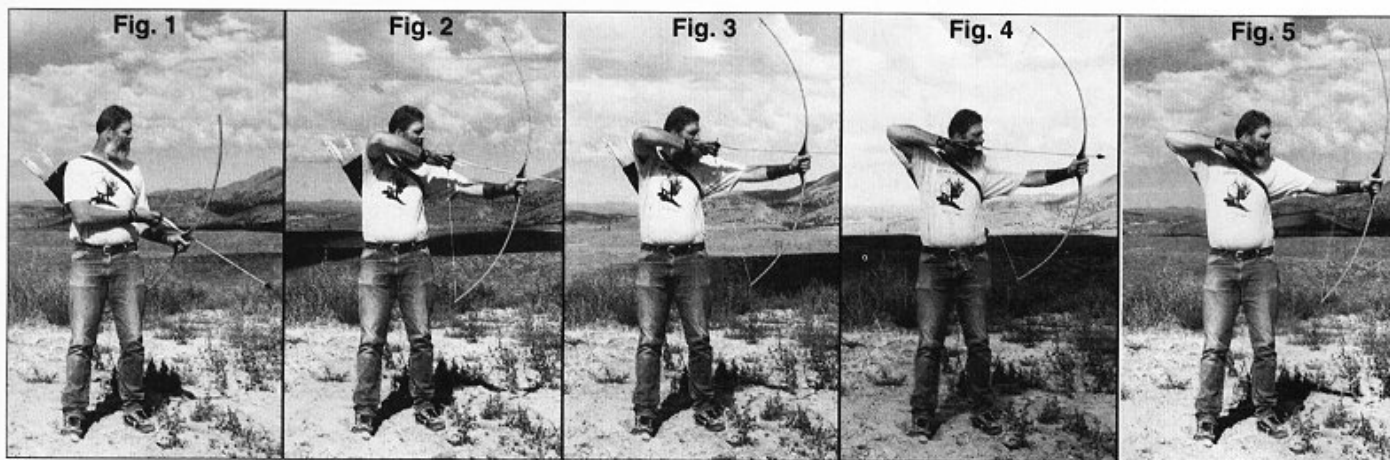
I use a stance called "The Statue of Liberty," for all of my standing position shots. I gave it this name because it is so steady after the shot. I originally wanted to call it "Don't scare the elk away after you've shot it;" but that seemed a little impetuous and too hard to repeat.

The quickest way to get into your stance is to position your body weight over the ball of your front foot, through the hip-leg socket. By bending your front knee slightly, and moving your hip-leg socket forward (over the center of your foot), you will gain the most lifting strength with your bow-arm shoulder. This part of the stance gives you the elevation in your shot, and the power in your release.

Place your back foot slightly ahead of your front, to keep from tipping forward. This is called an "open stance" (See Figure 1). Your footing will vary with the terrain of course, but your feet should start at about shoulder width. On steep ground (facing up or down hill), it helps to move your feet closer to each other. The only time you might spread your feet further apart is when you are in an awkward position, can't kneel, and have no other alternative. By bending either knee, you can position your weight so that at least one-third of it is on your back foot. You need weight on both feet for balance and stability.

You should keep your chest up and expanded, as if you were going to bench-press a barbell. Also, turn your chest and hips slightly toward the target. Scrunch your stomach muscles to lift your hips slightly in the front, as if you were raising your belt buckle toward your sternum. This will straighten the lower curve of your back out, as if you were leaning it flat against a wall.

The last thing to do is to hang your head forward (toward your toes) and turn it to look directly at the target. Your neck should be relaxed, and your head slightly canted.



Scott Toll's shooting method, from the beginning "open" stance to follow through after releasing the arrow.

From this starting position you can relax as needed, or bounce a little on both feet, to get your best balance and stability. The predraw is the second step in your shooting form sequence (See Figure 2). It is when you position your arms and shoulder joints for the final draw. The bow is partially drawn but you have not started aiming the arrow in-line with the target yet.

You have the ability to move your shoulder joints up and down, or back and forth, with your shoulder blades. This is because a part of them forms a part of our shoulder joint. The muscles in your back control the movement of your shoulder blades, so you must learn to use your back muscles properly. It is the position of your shoulder blades that ultimately determine the strength and location of your shoulder joints.

Your hands move at the same time during the predraw; however, the hand which pulls the string will start the final draw first. This is so that the pulling-side muscles in the back can pull the bow arm shoulder blade into place at the end of the predraw. The final draw must overlap the predraw slightly to ensure a continuous, rhythmic, motion.

You should never move so quickly that you lose a feeling of steadily increasing tension because a steady rhythm of draw is what gives you shooting accuracy.

The most important thing to consider with the predraw is to keep your shoulder joints at the same elevation, as when your arms were resting at your sides. You do not want to raise or "hunch" your shoulders, nor do you want to force your arms down.

When you hold your arms in exaggerated positions, the ball of the arm moves out and away from the shoulder joint socket. The shoulder muscles, attached to the arm, keep this ball in its socket, besides controlling the direction of our arms. If you pull on the bow when your arm is out of its socket (especially the bow arm socket), you can injure ligaments, tendons, and cartilage, before the ball slides back into place. Not only will you injure your shoulder joint, but it will also hurt your shooting accuracy as well.

The best way to move your arms into their positions is to think about the position of your elbows. By relaxing the muscles that lift your shoulder blades, you can concentrate more on the movements of your arms.

We must all work out our own style of predraw by trial and error. Physical build, bow design, and bow poundage will affect the way we draw our bows. As an example of how to go about this, I'll describe my own predraw, when I'm shooting a straight-limbed longbow.

Starting with relaxed shoulders, I hold my pulling-arm so that it is bent 90 degrees at the elbow and resting on my stomach (see figure 1). When it hangs down along my side, this places my bowstring at the front of my hip. When I raise my string hand, it elevates in a vertical line, to about four or six inches in front of my anchor. My elbow swings out and up to about the level of my ear without changing the angle of its bend.

As I am raising my string hand, my bow arm will begin to straighten and raise at the same time, but a little later than my string hand. This lets me control

my bow-side shoulder blade with my string hand.

I use more of a push-pull motion to straighten my bow arm, and it becomes fully extended at about six inches from the last upward travel, at the bow hand. I keep my bow arm bent slightly at the elbow, with the elbow turned downward, about 45 degrees from level. This greatly reduces the strain in my shoulder and saves my bow arm elbow at the same time.

As I reach the end of my predraw, I start to "float" my front shoulder with my string hand (Figure 3). I use the term "float" to describe a motion that keeps the arrow aimed at the target, but is not steady yet. I concentrate on relaxing my back muscles that control the bow arm shoulder blade so that it can be pulled into its rearmost position. The bow will feel much lighter as I do this, so I call it, "reducing the poundage." By the time I've started to float my shoulder, I'm already in the beginning stages of my final draw.

The final draw is the third step of your shooting form sequence (See Figures 3 and 4). Its purpose is to establish final tension and muscle memory for executing the shot. You must separate the final draw from the predraw because of the visual aspects that go along with the final draw. The final draw is completed with four to six inches of straight, in-line, pulling effort. You must aim the arrow during the final draw to establish a feeling for direction. By aiming, you are coordinating muscle memory with visual memory, which is the basis of hand-eye coordination.

The anchor is the fourth step in your shooting form sequence (See Figure 4). The anchor provides you with a steady place to aim your arrow from. It should be kept as simple as possible so that it more or less becomes automatic.

I can remember trying every combination of finger placement imaginable for several years, in an attempt to heal the blisters on my string fingers. I simply could not get a clean release unless I kept my elbow in a high position. Finally, I did find my problem, but it was not my finger placement on the string. When I learned how to relax my bow-arm shoulder properly, my drawing elbow came down, and then the blisters on my third finger went away. The lesson I learned is that finger placement on the bow-string is not always the answer to a clean release.

Generally speaking, most archers place their middle finger near the corner of their mouth, with their thumb tucked down near their little finger. This provides clearance for the hand to clear the face as it comes straight back to anchor. If you anchor much higher, you must change your thumb position to clear your face. Too high of an anchor can distort your vision by pulling the skin next to your eye as you release.

Light contact with the fingers and thumb, in most cases, is all that is needed for a steady release. The most important thing to remember about hand position is that once you start pulling on the string, don't change the position of your fingers or wrist. This changes the tension in your draw.

Aiming is the fifth step of your shooting form sequence. This is when you fine-tune the direction of your arrow before holding it steady. When your aim is true and your arrow is steady, you can start to concentrate on releasing.

The release is the last step of your shooting form sequence (See Figure 5). This is the part where we let go of our arrow, but involves only a fleeting moment of unconscious thinking. It will never help your accuracy by thinking about how to let go of the string with your fingers. You must always think beyond the release.

Release and follow-through serve the same purpose and you can improve your release by thinking about

your follow-through. When you release the bowstring from your fingers, your bow-arm and its shoulder blade follow the forward momentum of the bow as it launches the arrow. You need only control this momentum to its end by not allowing either shoulder blade to rotate or drop out of its position. You must always strive to maintain the same amount of string tension as you move into your follow through.

Some archers tell you to "push" the bow toward the target with the bow-arm shoulder to release the arrow. While pushing might help a beginner get into the bales sooner, it can also teach him or her some very bad habits about releasing. Your release works best when you learn how to control the way you "relax" your back muscles, instead.

Concentration is the third and last major component of your shooting style. It encompasses every move you make to place the arrow in the middle of the target.

As you execute the sequence of steps in your shooting form, you never really concentrate on them. You take care of these thoughts the same way you negotiate a series of trails in a lodgepole thicket. As you get through one you quit thinking about it and start thinking about the next one. It's usually when you forget to notice one that you get confused and lost. The steps you take to organize your shooting form are often referred to as a mental checklist, and a list works well for perfecting shooting form; however, concentrating on it will hurt your accuracy once you start drawing the bow. You have other more important things to concentrate on.

When you shoot for accuracy, you must concentrate on aiming. Everything you've seen, up to the moment of your release, and anything you can imagine seeing next, is what gives you an accurate release.

You can only think about shooting form and still shoot accurately when you are comfortable with the target and

its surroundings, like during practice sessions. Repeating your shots becomes sort of automatic and you start to shoot with a predetermined rhythm. This is because you have already figured out where to aim and you start concentrating more on releasing. When you approach a strange target, your concentration must be split between aiming and releasing. You must control or hold back your intense concentration for releasing; otherwise, you release your arrow before you have ever finished aiming. I hear the comment all the time *"I knew I was going to miss before I ever released the arrow."*

To shoot my best, I must trigger my intense concentration for releasing with a last feeling for form. As mentioned earlier, I only practice one tiny piece of my shooting form for each arrow I shoot. I also use this same technique in competition or hunting. Only when my arrow is aimed and steady, and I "feel" ready, do I "allow" myself to concentrate intensely with my vision.

The best way to practice for concentration is to never "force" yourself into thinking about how you are doing something. Learn to trust your instinctive feel. It is your unconscious thinking that ultimately controls your reflexes and the direction of your arrow.

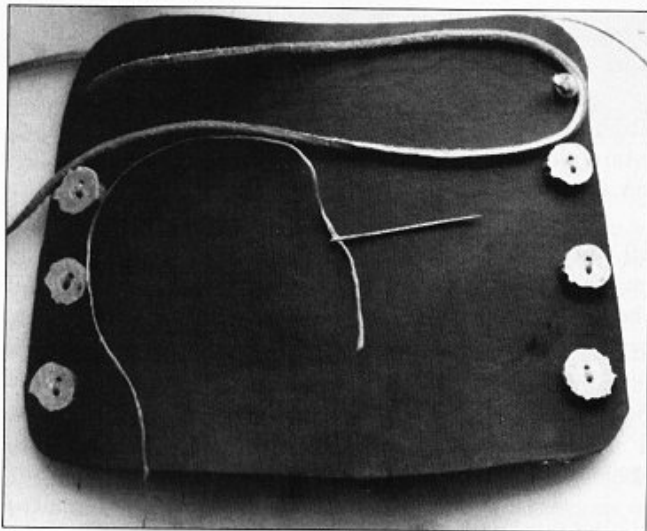
Shooting style and its major components distinguish one archer from the next. We all shoot a little differently than the next guy but certain methods remain constant. This is obvious when you watch top-ranked archers shoot so accurately. You can see it in the way they study the target and aim their arrows. When you understand what they are looking for and how they make things happen, you'll soon be shooting as well as they do.

You should always use a shooting style that enhances the visual aspects of your own shooting form. Seeing your arrow more clearly and watching it go to where you want it to, with "the corner of your eye", is the most exciting part of instinctive archery. Whenever you shoot an arrow for practice, competition, or to harvest meat for the table, you should always do your best to draw, aim, and release with your vision.



Easy Armguards

by BOB KROUT



Congratulations! You took the plunge and made your very own "custom" back quiver. (Summer 1997 issue) Great job! And a great looking quiver! Isn't it a great feeling to have completed a job like that yourself? But now that it is finished what are you going to do with all of those small pieces of leather that you have remaining? How about making your own armguard to match your new quiver! Armguards are easy and fun to make and they are one more item you can point to as being "selfmade."

I use two types of armguard. The first is a more or less standard type held in place by three loops of stretchcord. The second is a traditional lace-up cuff style. What do we need to get started? Like the quiver all we need is the material, a few simple tools, and a design.

MATERIALS

If you intend to make both types of armguard you will need two pieces of leather. You should have plenty left from your quiver project, if not, a quick trip to your local "Tandy" leather shop, shoe repair shop, or whatever should supply your needs. You will need two pieces of leather about 10 inches by 10 inches. I like a 7-8 oz. thickness but anything from 6 oz. to 9-10 oz. should work. You will need about two feet of 1/8 inch stretchcord, available at most craft shops or from many traditional archery dealers. You will need a 36-inch piece of 1/8 inch leather lace for the cuff-style guard. Laces are available where you get your leather or as boot laces from your local grocery store. You will also need 9 antler buttons. I like the 1/2 to 3/4 inch size. I bought mine from Chuck Homitz of "Sundown Products." They are very

nicely done and very reasonable in price. Chuck's ad appears in the classifieds in this magazine.

"TOOLS"

You will need some means of punching holes. I like the generic type rotary head leather punch. Next is a ruler for measuring leather, laying out hole locations, and to use as a straight edge when cutting leather. For the actual cutting I prefer the sheepfoot blade on my old, reliable "Case" pocketknife. For preparing the antler buttons you need an electric drill and a 3/32-inch drill bit, also a 6-inch pair of visegrips to hold the button while it is being drilled. For attaching the buttons you will need a fairly stout needle with a large eye. I have found a standard set of heavy duty needles to be one of the indispensable things I own. They are available at most grocery store sewing sections for less than two dollars. A genuine bargain! Finally, I always have my little pair of 4-inch needle-nose pliers handy. They are great for poking out holes, grasping small items, and a number of other tasks.

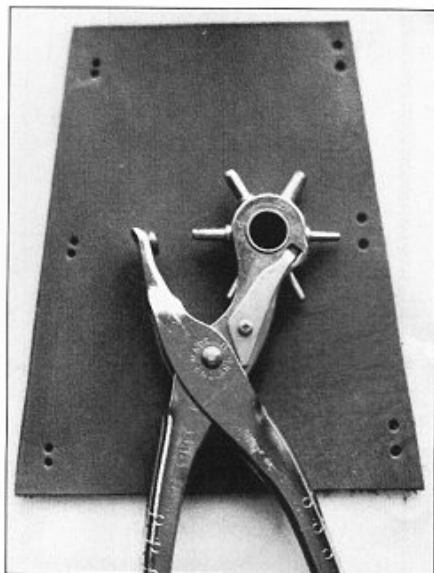
"DESIGN AND MANUFACTURE.."

First you must prepare your antler buttons. Grasp each button with your visegrip pliers and rest it on a piece of wood. I keep an 8-inch section of 2 by 4 for just this purpose. Now drill two 3/32-inch holes in the center of each button located about 3/16ths of an inch apart. Be careful during this procedure that you do not grasp the buttons so tightly that you chip or break them.

To make the standard style armguard, take your first piece of leather and layout a "keystone" shape 4 1/2 inches wide at the wrist end and about 6 inches wide at the top end. Length should be 6-7 inches. Whatever is comfortable for you. As always when dealing with tapered pieces it is helpful to mark in your first line and, using it as a base line, mark a centerline at 90 degrees. The line at the other end is then marked from the centerline insuring a nice even piece, one that is not "lopsided."



Almost all you need! A knife for cutting the leather, 4-inch needle-nose pliers, a set of heavy needles, and a small tape.



Use a rotary leather punch to make the holes as shown.

Now cut out the piece and lay it finished side up. Locate three sets of two holes at the right side of the leather. The top and bottom sets of holes should be about 3/4 inch in from each end. The third set of holes should be equidistant between the other two sets. Use the smallest diameter punch tube on your rotary punch for these holes. Go to the left side of the leather and punch three sets of two 1/8 inch holes even with the holes on the right. These are the holes for your stretchcord, the ones on the right are for your antler buttons. Take a heavy-duty needle with a large eye and a length of artificial sinew, heavy carpet thread or heavy fly tying thread and sew on the antler buttons on the right. Obviously three buttons. Now take the stretch cord and thread through the first set of holes on the left. This will be a trial and error thing so be patient. Fit the piece on your arm and locate where to tie the stretch cord for a good fit. You want it tight enough so that it will not move around but not so tight that it cuts off circulation. Trim off after you have found the right length and proceed to the next two sets of holes. That's it! You can go back and scallop the edges, round the corners or leave it alone! You can decorate or not as you wish. Personally I find a great deal of beauty in function and lean towards a plain look. But that is me. Do what pleases you!

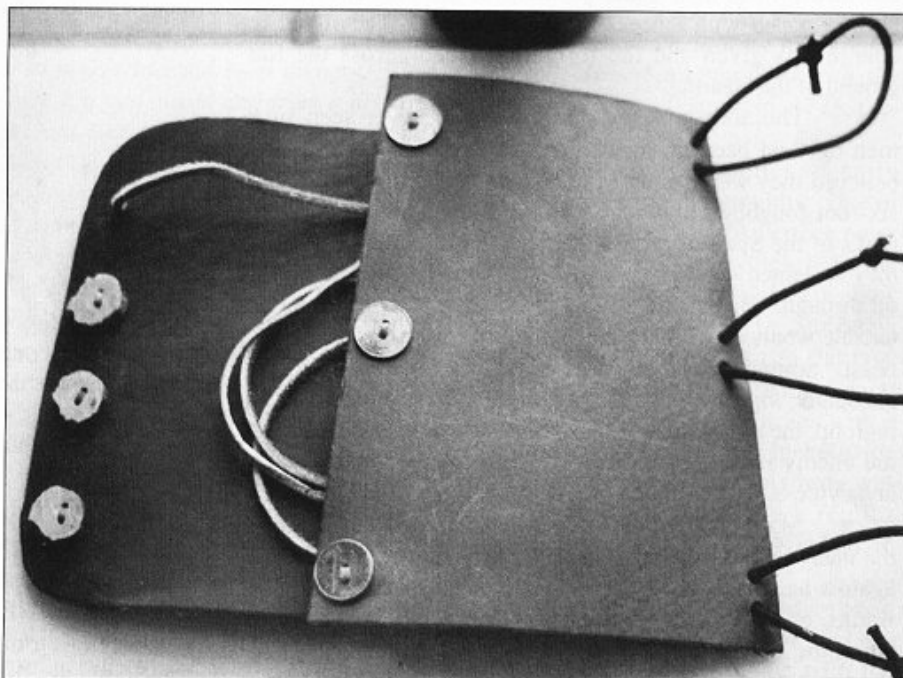
To make the traditional lace-up cuff-style armguard is just as easy.

Layout a piece of leather about 8 inches wide at the wrist end widening to 9 inches at the top end. The length should be about 6 1/2 to 7 inches. I like to round the corners on these and also to contour a slight arc top and bottom. You can play around with this if you like or leave it straight. Cut the piece and lay it finished side up. Locate two 1/8-inch holes at the wrist end 1/2 inch in from each side and 1 inch up from the end. Now locate three sets of two holes each up both the left and right sides of the piece 1/2 inch in from the edge. Punch these holes with the smallest punch tube on your leather punch. These three sets of holes should be spaced evenly up the guard ending about 1 inch down from the top end. Take your remaining 6 antler buttons and sew them in place. I used artificial sinew for mine. Once the buttons are in place prepare the 1/8 inch lace by tying a simple overhand knot in one end and drawing through one of the 1/8-inch holes leaving the knot on the outside. Draw the lace through the second 1/8-inch hole. I usually leave the lace in these holes, loosening or tighten-

ing as necessary. To don the armguard slip it over your hand and into position. Pull the lace tight through the 1/8-inch hole and loop around the antler buttons weaving back and forth to the top. Tuck the free end of the lace under the weave to secure it. If the lace is excessively long, trim it to length. There you have it! Two custom armguards sure to please even the most ardent traditionalist! You should be able to finish either or both in less than an hour but they will give years of faithful service.

And somewhere down the road you may be on the 3-D range when someone asks, "Where did you get that neat looking armguard?"

"Oh that," you will say, "I made it myself!"



The finished armguards—ready for many years of service.

Down Wind Bows

CUSTOM HANDCRAFTED OSAGE SELFBOWS
TRADITIONAL AND AMERICAN NATIVE STYLES
Sinew Rawhide & Snakeskin Backed

316-235-1492

Call or write for free information packet.

Jack Davis
Bowyer
402 West McKinley
Frontenac, Kansas 66763

DEPT IS

LONGBOWMEN OF LA FLORIDA

by Sterling Holbrook

It must have been an impressive and fearful sight to the group of longbowmen who stood with their backs against the river. Across the open ground opposing these archers some of the most experienced and able soldiers Europe had to offer prepared for battle. Infantry and cross-bowmen formed their battle positions as the heavily armored cavalry paced with lances and swords ready. The signal to charge was given and the formation raced across the flat ground of the clearing.

The archers across the glade had never seen such men but had been aware of their advance for days. Many believed they were "gods," but now as the archers drew their six-foot longbows and sent a cloud of cane arrows into the ranks of the Spanish King's men the "gods" turned mortal as they screamed in agony. Arrows struck mail armor and drove on through. Horses, as well as men, fell screaming from the terrible wounds as flight after flight of arrows struck man and beast. Some of the finest armor in Europe had failed in the encounter with the longbow. As the Spaniards pulled back to regroup, the opposing archers sent the last of their arrows into the enemy ranks and faded away into the palmetto thickets and cypress swamps along the river.

Many modern-day archers have read or are aware of the many battles in which the English longbow saved the day against heavily armed and armored, mounted soldiers. The Battles of Crecy and Agincourt will always be remembered when the power of the longbow is discussed. Yet in little-known battles, such as the one in 1528 described above,



Black and white depiction of a watercolor by John White.
(British Museum, circa 1584 to 1590)

archers turned the tide against Spanish armor and drove the invaders, at least temporarily, away from their homes allowing their families to escape. These battles were fought not in Europe, but in what would become the United States as Spain sent armies on missions of exploration and conquest against the Southeastern tribes. In the 1500s La Florida stretched

Plains Indian Style
QUIVERS

Quiet, Easy Arrow Access
 Great Looking, Made of
 Top-Quality Leather



\$89.95
 (Includes Shipping)

(916) 529-3384
 Larry Gay, 22455 Bend Ferry Rd.
 Red Bluff, CA 96080

from Virginia on the north, through Texas on the west.

Much is written today in archery about the English influence. I think it is important to appreciate those who came before us, and what would become the United States was certainly a land of premier archers when the first Europeans arrived. Most of our perceptions of Native American archery equipment come from what was used by horse mounted plains people during the nineteenth century. While many examples of West Coast and Plains style archery tackle are available for study, this certainly did not represent the type equipment used in the Eastern United States. In the East and South East, war and hunting revolved around the bow, and powerful, accurate bows five to seven feet long and constructed of black locust, mulberry, hickory, sassafras, and white oak were most often used.

The Apalachi tribe of northwest Florida was particularly well documented as being fine archers, having very powerful bows. Their favored bow wood may possibly have been the Florida Yew or *Torreya* which grows only along the banks of the Apalachicola River in Northwest Florida. This tree is today an endangered plant due to a blight and its very limited range. The Apalachi, who had been weakened by European diseases, were almost exterminated by the English in the early 1700's so much of their history has been lost. One account from Florida by an early Spanish explorer does mention yew as a bow wood.

"Their bows are made of Yew, but blacker than ours, ---it is not greatly inferior to ours." (Haklüt, 1847-89, vol. 3, p.613)

American historians and anthropologists writing about Native American weapons in the late 19th century believed the above passage was describing black locust, but at the time that they were studying aboriginal weapons, the existence of Florida yew was not commonly known.

The Spanish accounts of the first expeditions into the Southern United States is a description of constant battles. An early chronicler, Cabeza De Vaca, was one of three survivors of the Narvez expedition which landed in Florida in 1528. He described one encounter in which they had just been routed by archers.

"Good armor did no good against arrows in this skirmish. There were men who swore they had seen two red oaks, each the thickness of a man's calf, pierced from side to side by arrows this day; which is no wonder when you consider the power and skill the Indians can deliver them with."

"All of the Indians we had so far seen in Florida had been archers. They loom big and naked and from a distance looked like giants. They were handsomely proportioned, lean, and strong. Their bows were as thick as an arm, six or seven feet long, accurate at two hundred paces."

This description is from a man who lived for years with the Indians of the Texas coast before escaping back to Mexico. He was also a trained soldier who was familiar with the English style longbow.

In the Carolinas during the early 1600s John Smith described aboriginal bows and bowstrings.

"The bows are of some young plant, eyther of the locust-tree or of weech (witch hazel), which they bring to form of ours by the scraping of a deare's

R.R.A.
 Rogue River Archery, Inc.

Makers of the World-Famous
FIRE-KILLED, OLD-GROWTH
PORT ORFORD CEDAR SHAFTS

Tapered and Hand-Spined

Made Right Here by
Cecil and Paula Driskell
 4244 Leonard Rd.
 Grants Pass, OR 97527
 Phone: 1-888-8ARROWS
 Fax: 541-474-4441

hide twisted." (Smith, John, Tyler ed., 1907 P.105).

Garcilaso in writing about the DeSoto incursion into the Southeast during the 1540s states:

"The bows are of the same height as he who carries them, and the Indians of La Florida are generally of tall stature, their bows are more than two varas (66 to 72 inches) in length and thick in proportion... They are so hard to bend that no Spaniard, however he might try, was able to pull the cord back so that his hand touched his face, but the Indians through their long experience and skill drew back the cord with the greatest of ease." (Garcilaso, 1723, p.6-7)

Very few examples of early Eastern bows exist in museums. One of the most important early American bows is the "Sudbury Bow" which is in the Peabody Museum at Harvard. This bow was taken after a raid in Sudbury, Massachusetts in 1660. It is a flat bow 67 1/8 inches overall. Its widest point above the handle is 1 7/8 inches with a narrow handle section 15/16 inches wide by 1 3/16 inches deep. This bow was constructed of hickory and a replica made by the late Saxton Pope pulled 46 pounds at 28 inches.

A more prevalent designed eastern bow is called a "D" bow and has its widest point in the middle with the bow bending with a perfect arc through

the handle. These bows were of rectangular cross section and generally about 1 1/2 inches wide at the widest and about 1 inch at the nocks. Their length was from 5 to 7 feet.

Much more has been recorded about early American arrows than bows. These accounts are quick to point out that Native American arrows were as finely made as any being used in Europe. Throughout the Southeast the favorite arrow wood was river cane. Other popular woods were witch hazel, dog wood, yupon, and black haw. Cane arrows were made both with and without foreshafts, and with or without heads. The Spanish feared a fire hardened cane shaft above all others.

These war arrows did not have a foreshaft, but were generally longer, 36 to 48 inches to give better balance to the unheaded shaft. The ends were then cut oblique and fire hardened. Feathers of the wild turkey and birds of prey, such as hawks, were fletched on with sinew and hide or fish skin glue. Some tribes such as the Cherokee used two or three whole feathers. The Yuchi only used two feathers of hawk or turkey tail feather and applied them with a helical twist. Other popular fletch with all tribes was three split feathers as we use

now. Often, small game or fish arrows which would be used in close range had no fletch at all. Regardless of chosen fletching, these cane shafts were lethal.

When this shaft, driven by a powerful bow, struck even the finest mail armor it would splinter and penetrate the armor causing horrible wounds. To the European soldier who knew nothing of hygiene, death was quick to follow. A shaft shot by a Florida Calusa, probably of cane, brought down Ponce De Leon causing death by infection in 1521. Herrera's narrative gives us our first look at arrows in what would be the United States when Ponce de Leon fought the Ais on the Florida east coast a few years earlier.

"...who with their arrows and armed shafts, the points of sharpened bone, and fish spines, wounded two Spaniards, and the Indians received little injury." (Herrera, Kelly, 1990, p.3).

In some parts of the country arrows were constructed of *Phragmites* Reed (*Phragmites communis*), but this material is much inferior to Southeastern cane (*Arundinaria gigantea* or *Arundinaria tecta*). This Southeastern cane is very widespread. I have found it growing on moist shady ridges high in

the Appalachian Mountains as well as along Florida streams. When dry it is very hard and stiff yet easy to straighten.

Besides hardened cane and the well known stone heads of chert and quartzite, the early chroniclers mention other projectile points.

"They (arrows) were all made of reeds: some had heads made of the points of deer antlers finished to extreme perfection with four corners like points of a diamond; others had fish bones for heads, marvelously fashioned for use as arrows. There were others with the heads of palm wood and other strong and durable timber that grows in that country. These arrow heads had two or three barbs as perfectly made in wood as if they had been of iron or steel." (Garcilaso, 1723, p.408-409.)

Deer antler tips seemed to be a very popular point throughout the southeast. Another unusual point mentioned from Louisiana to Virginia was the turkey spur. These seemed to be used by all of the Southeastern tribes. The fish bones mentioned were probably the scales of the gar as the famous naturalist William Bartram stated that the Creeks pointed their arrows with the scales of "the great brown spotted gar". Many heads were also made of sharpened fire-hardened bone. Blunt headed arrows of both cane and hardwood were the most popular for small game.

When the first Europeans arrived, the Southeast still had herds of American Wapiti or elk and Eastern Bison. The Eastern Bison was extinct by 1815, but when the Spaniards first arrived it was reported as far south as what is now Tallahassee, Florida. These animals were an important part of the southeastern tribes subsistence and their archery tackle was as efficient on these large animals as were the short sinew bows used on the plains.

The Eastern Native Americans had accoutrements just as we do today. Le Moyne writes of bark wrist guards, and others describe bracers made of badger, wolf, or grey fox skin. The Creek name for an arm guard was "kapalka." Their bone or antler tine tool for working or sharpening stone heads was generally worn with the bracer according to accounts from what would be the

Not Just Another 'Stickbow'...



Now, a bow that is designed to bring out the best in the archer.

"The Competitor"
made for champions!
Capable of shooting 200 FPS

Custom longbows built by Gary Sentman, holder of the world's record, since 1975, for the heaviest hand-held bow ever pulled, 176 lbs. at 28 1/4"



**SENTMAN
LONGBOWS**

8769 State Hwy 38 • Drain, OR 97435
Phone: (541) 584-2337

Send \$1 for brochure or \$19.95 for Gary's advanced video "Improve Your Shooting."



VALLEY
TRADITIONAL
ARCHERY SUPPLY

Home of the
Thunder Mountain Flatbow

Full-time Full-line traditional

3814 Blair Road
Whitewater, CO 81527
(970) 243-8144

 MC/Visa

Catalog \$2 (refunded with first order)

Carolinas. Quivers were made of predator skins or deer skin although some early sketches show cylindrical quivers made of cane.

The best bowstrings were reported to have been made of sinew, though many were made of twisted rawhide cut spirally from the tougher skin of a deer's neck. Records from the Cherokee country of the Southern Appalachian mention twisted bear gut. Though a better bowstring was also made from squirrel or groundhog skin as is still being done by today's Cherokee bowyers who carry on the traditions of their forefathers.

Modern archers are fortunate that the knowledge and craftsmanship that went into these earliest recorded American bows has not been lost, but is being passed on by a few bowyers of both Native American and European descent.

Just as many hunters today have forsaken the gun for the bow, some Southeast Native Americans also stuck with the bow for the same reasons of the spirit that we do. In *THE WITCHERY OF ARCHERY*, author J. Maurice Thompson describes a hunt with a Seminole of the Everglades named Tommy. He had left his people because they had begun to use the gun too much. The Seminole's arrows were much finer than Thompson's finest Highfield target arrows or his expensive hickory hunting arrows.

When Andrew Jackson overran the Upper Creek stronghold in Alabama at the battle of Horseshoe Bend in 1814 he found some warriors still favored the bow. This was almost seventy five years

after the use of firearms by the Creeks had become widespread.

James Adair, who lived with the Southeastern tribes, wrote an account of their culture in 1775. This was after most of the surviving tribes had been greatly influenced by European culture. Even at this point in time Adair recorded; " *They make perhaps the finest bows, and the smoothest barbed arrows, of all mankind.*" That's quite a compliment and I'm sure many Spanish, French and English explorers to their misfortune would have agreed.

The next time you are stalking the whitetail deer in Alabama, the black bear in North Carolina, or the Osceola turkey in Florida you will be following in the foot steps of some of the worlds finest archers.



REFERENCES CITED

Adair, James. 1974 - *Adair's History of the American Indians.* / Edited under the auspices of the National Society of the Colonial Dames of America, in Tennessee, by Samuel Cole Williams. New York

Barcia Caballido y Zuniga, Andres Gonzales de, 1951 *Barcia's Chronological History of the Continent of Florida.* / Translated by Anthony Kerrigan. University of Florida Press. Gainesville, FL.

Bartram, William. 1928 - *The Travels of William Bartram.* / Edited by Mark Van Doren. Dover. New York.

Cabeza de Vaca, Alvar Nunez. 1905 - *The Journey of Alvar Nunez Cabeza de Vaca and His Companions from Florida to the Pacific, 1528-1536.* Translated by Fanny Bandelier. Barnes. New York.

Garcilaso de la Vegas. 1951 - *The Florida of the Inca.* / Translated and edited by John Grier Varner and Jeanette Johnson Varner. University of Texas. Austin, Tx.

Hakluyt, Richard. 1810 - *Collection of the Early Voyages, Travels, and Discoveries of the English Nation.* / London

Herrin, Al. 1989 - *Cherokee Bows and Arrows.* / White Bear Publishing. Tahlequa. Ok.

Le Mayne, Jacques. 1875 - *Narrative of Le Moyne, an Artist Who Accompanied the French to Florida Under Laudonniere, 1564.* Translated from the Latin of De Bry. Boston

Mooney, James. 1982 - *Myths of the Cherokee and Sacred Formulas of the Cherokee.* / From the 19th and 7th annual reports B. A. E. Reproduced by Charles and Randy Elder Booksellers. Nashville, Tn.

Swanton, John R. 1979 - *The Indians of the Southeastern United States.* Smithsonian Institution Press. Washington, D.C.

Tyler, Lyon Gardiner. 1907 - *Narratives of Early Virginia 1606-1625.* / New York Page 8 Holbrook

Purely Primitive BOWS

Custom made primitive bows crafted from Osage
Orange, Pignut Hickory, Mulberry, Yew and Red Cedar.

Purely Primitive Bows P.O. Box 567 Lake City, FL 904-752-0284
<http://www.isgroup.net/userpage/primitive/index.html> gkirby@isgroup.net



LEONARDO DA VINCI (b. 1452. d.1519)

by
Hilary Greenland

Excerpts from his notebooks: Ballistics, bow designs and battle machines.

A chance encounter with a little book entitled "Selections from the Notebooks of Leonardo da Vinci," picked from a shelf in a dark corner of a secondhand bookstore ten years ago, linked my lifelong admiration of this genius with a more recent obsession with archery. The book fell open at a page where, in a few firm strokes of the pen, Leonardo had sketched an archer in dynamic action. Alongside this was his treatise on Movement and Force: this included a theoretical description of how to achieve best distance with a bow and arrow; having described in detail how three basic "forces" which propel an arrow (the actions of the archer, the movement of the bow and of the string) Leonardo advises how an archer could improve upon it:

"A man who wants to make a bow carry a very long way must be standing entirely on one foot, raising the other so far from the foot he stands on as to afford the required counterpoise to his body which is thrown onto the first foot. He must not hold his arm fully extended, and in order that he may be more able to bear the strain he must hold a piece of wood which, as used in cross-bows extends from the hand to the breast. When he wishes to shoot he should suddenly leap forward at the same instant extend his bow-arm and release the cord. If by dexterity he does everything at once (the arrow) will go a very long way. The reason given for this is as follows: as the leap forward is swift it lends one degree of fury to the arrow, and the extending of the arm because it is swifter lends a second; the push of the cord being also swifter gives a third. Therefore, if other arrows are driven by three degrees of

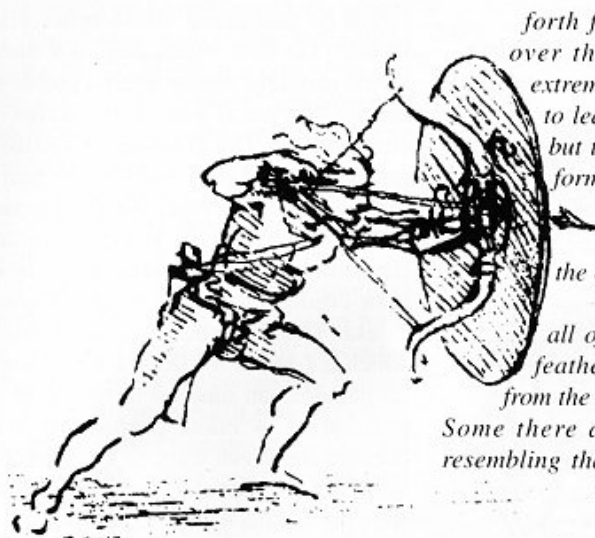
fury and this by dexterity is driven by six, it should travel double the distance. Remember to leave the bow relaxed so that it will spring forward and remain taut."

Having seen some of the best longbow flight shooters in action, most of this makes sense, although doubling the distance is extremely unlikely! When I published this in my local Field Club magazine, my attention was drawn to a flight-shooting picture of Howard Hill, who obviously managed to coordinate the necessary above actions in achieving a longbow flight record of over 391 yards with a 172 pound longbow in 1925. (See drawing below.)

It isn't known exactly when or where Leonardo obtained his knowledge of armaments, but during his frequent travels he must have had the opportunity to contact many military specialists. Through his father, a public official in Florence, he had access to the military men of that powerful city state. His extraordinary mind, constantly thirsting for knowledge, absorbed the classical texts of Pliny, Archimedes, and Vitruvius; from these refer-



Howard Hill's famous flight-shooting form.



forth from the cord and passes over the roller, the ring at the extremity of the arrow causes it to leap back after it has struck; but the iron continues and performs its function. The dart of the bow by which the arrow remains attached to the cord is an awl of a quarter of a braccio in length, all of iron finely tempered; the feathers at the tail come away from the arrow as it flies on its way. Some there are which make a prick resembling that of a needle full of poison"

Leonardo believed that war was "bestialissima pazzia" (bestial madness) while maintaining that weapons were necessary, for:

"When besieged by ambitious tyrants I find a means of offense in order to preserve the chief gift of nature, which

All his recorded tests involved crossbows, or bows fixed to an extended tiller with a mechanical release, this presumably overcame the variables associated with hand bows, i.e. the loose, differing drawlengths, etc.

ences he gained a background knowledge of the weapons and tactics of antiquity, including those of the successful Roman armies who had soldiers from all over the known world in their ranks and consequently whose weapons included wooden and composite bows of many forms. While we have to allow for some inaccuracies arising from these references, there is no doubt that Leonardo was familiar with armaments of all types, contemporary and historical, including many types of bow:

"Irish and English bows. But the Irish in place of one corner of the bow have a piece of sharpened iron of the length of a cubit. The English and the Irish are almost the same length, that is four braccia each. Syrian bow, made of horns of buffalo. German bow, made of two pieces of steel and how they are set."*

(Braccia: one arm's length, around 24 inches.

Cubit: forearm length, 18-22 inches),
*probably a too-literal translation error, and refers to the limb tip.

Rapidly executed pen and ink sketches of various armaments (drawn around 1486) include several of the bows mentioned. Elsewhere in his notebooks, Leonardo intriguingly hints at the many ingenious crossbow designs he had encountered in his studies:

"The dart of the cross-bow works in this manner: namely, when the arrow issues

is liberty."

He lived in turbulent times; the great families of Italy vied with each other and the rest of Europe for the niches of the New World, and constantly sought to extend their power and influence; Leonardo's home region, Tuscany was constantly threatened with invasion. Leonardo needed a patron, and he had to convince his potential employer that he possessed unique engineering skills in addition to artistic distinction in those times, the separation of art from science would have been incomprehensible. He wrote to Ludovico Sforza, duke of Milan, an astonishing letter in which he stated that he was already familiar with the technological aspects of war, and promised improvements:

"... I can make cannon, mortars, a light ordnance, of fine and useful forms, quite different from those in common use. ... causing great terror to the enemy from

their smoke and great loss and confusion. . . I would contrive catapults, mangonels, 'trabocchi' (trebuchet) and other machines of marvelous efficiency not in common use."

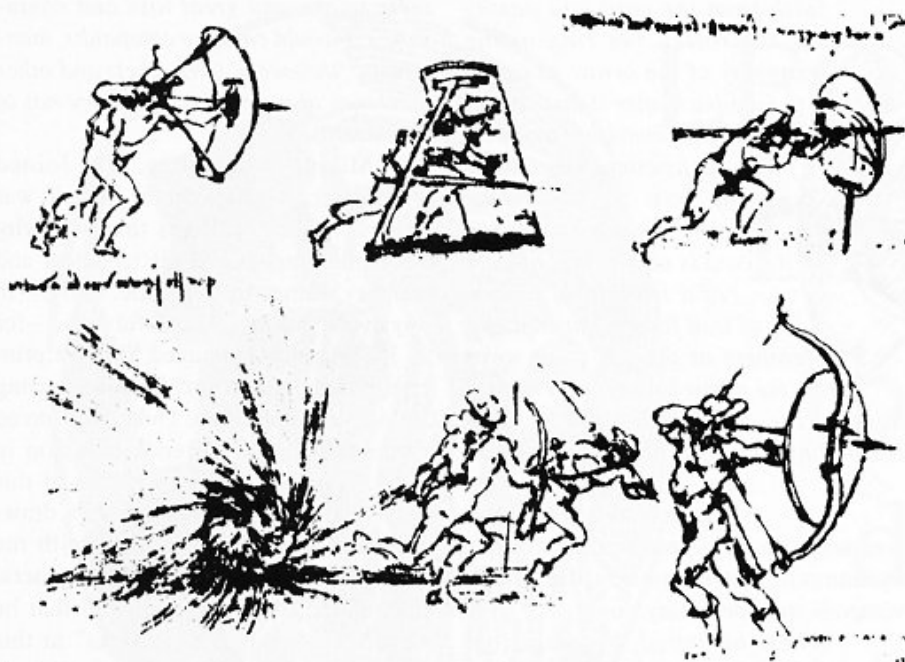
Milan, at that time, was joined with Ferrara, Naples and the Pope in war against Venice; perhaps this was why Leonardo emphasized his technical and military, rather than artistic, skills—in any event, it was a successful tactic—for in 1482 he was appointed Sforza's principal engineer and architect, remaining in his service until the Duke was forced to leave Milan by French invasion in 1499. It is during the early part of this service that most of Leonardo's drawings and writings connected with the bow, ballistics and artillery in general are related; it is also believed that he began to keep his "notebooks" at this time. We are fortunate that these have survived as a record (if somewhat chaotic) of this man's work.

The notebooks show how, in order to improve weaponry, Leonardo returned to first principles. His method was to test and observe, and he frequently underscored the importance of empirical knowledge. "Test it first and state the rule afterward" is written above a crossbow drawing

illustrating one of Leonardo's ballistic theories.

We take the understanding of many basic physical laws and their associated formulae for granted nowadays; over 500 years ago the accepted wisdom of Leonardo's day stated that a projectile initially described a straight line, then a tight curve, and fell vertically to the ground in a straight line: Leonardo was the first man to draw the parabolic curve of ballistic trajectory. Perhaps lacking in funds (and space) and with great ingenuity, he simulated the behavior of missiles fired at different trajectories by inserting pipes in a watersack and thus observed the differing curves of the spouts of water as they arched under various pressures.

Leonardo was well in advance of his time in recognizing the importance of air resistance on trajectory and missile speed:



Leonardo's drawings of the infantry, including exploding bomb. 1485-8. (Paris, Ecole Des Beaux-Arts.)

"The air becomes denser before bodies that penetrate it swiftly, acquiring so more or less density as the speed is of lesser fury."

He subsequently designed streamlined missiles for improved flight, including a finned, bullet-shaped explosive dart very similar to artillery shells of today, to be shot from a giant ballista (possibly akin to the machine described later in this article); yet in the 1630s Galileo discounted air resistance, and it was not until Newton some 200 years after Leonardo that mathematical formulae for these actions were produced.

Leonardo's recording of ballistic experiments was meticulous: one series of tests relating to the power of bows used gravity as the constant; after shooting specially weighed and graduated arrows vertically from a crossbow, he calculated the range of the arrow from its penetration into special test-bed soil. He deduced:

"The length of the arrow's descent will be proportional to the weight used in the spanning of the crossbow."

All his recorded tests involved crossbows, or bows fixed to an extended tiller with a mechanical release, this presumably overcame the variables associated with hand bows, i.e. the loose, differing drawlengths etc. Sforza's

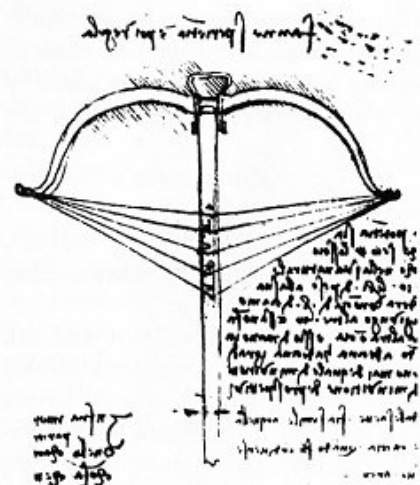
favourite companion, and head of his crossbowmen, Crivelli, was certainly a close acquaintance of Leonardo's, and possibly assisted him with his experiments.

It is not surprising that Leonardo turned his inventive genius on the archer in battle: for centuries, Italy had considered its bowmen an elite section of the infantry, unlike many other European countries (apart from England). Despite technical advances in the use of cannon and handgun (including Leonardo's own contributions) the bow still had a vital place in European warfare. Infantry were expected to stand firm in the face of cavalry charges, and improving their defense obviously concerned Leonardo, for his sketches show various forms of protection, including shields for archers and spearmen; however his ideas should not be taken too literally - many of his drawings illustrate more the train of thought of a restless mind, developing existing ideas to extremes, rather than literal proposals for further development. One of his pen and ink sketches includes a graphic depiction of an exploding cannonball (designed by himself, of course) wreaking havoc amongst lightly clad infantry—and at least one of the soldiers running here wields a bow. Alongside this he depicts several ways in which archers

could be protected while remaining mobile. The bow which itself is a shield would certainly present several problems for the bowyer, if not for the archer in charge of it! The crossbow fixed to a propped shield may well have been a money-saving device, for the pavisier (shield-bearer) of the typical two-man crossbow team is redundant if the bowman could move and prop his own, shield. The bow shot through a shield which is fixed to its belly acknowledges no paradox—an unusual oversight in so perceptive a man; perhaps it was because the bows were of considerable draw weight, or maybe because his tests were carried out using crossbows.

Mounted crossbowmen were an important feature of Italian warfare, but the lack of protection on horseback while reloading heavy draw-weight bows made them particularly vulnerable; Leonardo's discourse on tactics for crossbow squadrons describes their deployment for best and safest effect: (I can find no published drawing, but Hugh Soar suggests an answer: see page 27).

"Order of mounted cross-bowmen on the open field: 'm n' are cross-bowmen who as they turn left draw back loading, 'r t' are those who go forward with cross-bows loaded, and these four files are for one route; 'a b' are four files of cross-bowmen who turn with bows unloaded in order to load them anew; 'c d' are those who come upon the enemy with their bows loaded; and this arrangement of eight lines is employed in open field. I have it so that those who



Ballistic tests: Codex madrid.
Above this sketch he wrote his maxim:
"Test it first and state the rule afterward."
in his usual mirror-writing

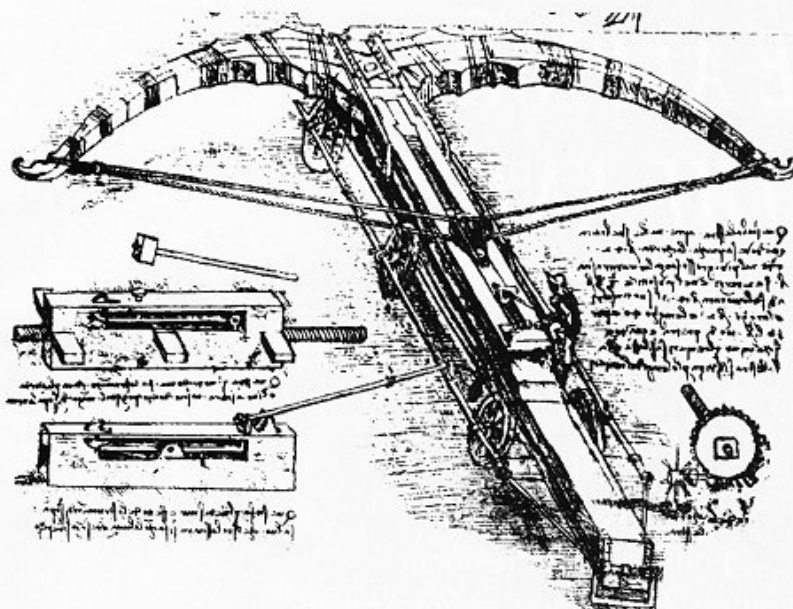
have unloaded come through the centre, so that if sometimes they have been routed by the enemy the cross-bowmen who are loaded, holding themselves on the flanks, may cause greater fear to these same enemies."

Infantry of a much later era wielding slow-loading muskets used similar tactics to improve their rate of fire.

Another (albeit far less mobile) solution, is his astonishing design for a treadmill which automatically draws the bow; treadmills were commonly utilized as sources of power in Leonardo's day, and his development proposes that the bowman below those treading the wheel loads and shoots through a boarded battlement. The bow is drawn by the cord rotating around a hub separated from the central axle, in front of the bowman a board is fitted for him to halt the rotation while he discharges the weapon. Leonardo calculated the dynamics thus:

"Make the stem which gathers the rope charging the crossbow 1/3 thick, so that a turn gathers one ell of rope. So, since the above named stem is one third, its half will be one-sixth, and the lever is five ells, that is, 30-sixths; and one-sixth is the counter lever, so that you have here 30 against one. Therefore it appears clear that if you place over the head of the lever 20 men weighing 4,000 pounds, they will exert against the counter lever a force of 120,000 pounds, enough to charge four cross-bows."

In the 15th century, giant crossbows were utilized in siege and defense, and ways of improving their effectiveness and rate of discharge were constantly sought. The most famous of his military drawings is that of the giant ballista, which he drew and described in great detail; the bow is laminated in sections for ease of manufacture, and is spanned using a worm drive. The drawing includes alternatives for the trigger mechanism and designs for the winding gear, three pairs of angled wheels (for stability and to reduce ground wear), and a tailpiece which can be "spiked" into the ground in order to control recoil. While many consider this weapon to have been beyond the capabilities of the workshops of the time, Leonardo also worked on methods and machines to improve 15th century manufacturing



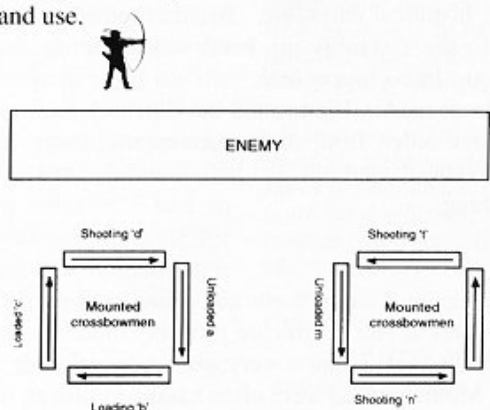
The giant ballista, over 70ft wide by 80 ft long. (Codice Atlantico, 1482-85)
trigger mechanisms shown involve either pulling a lever,
or hitting a release pin with a mallet

techniques, including mass-production of metal components.

This article is a mere summary of Leonardo's work relating to bows, for his notebooks contain many more observations concerning archery and related subjects; however, it is not just the literal references to bows which are informative; his tantalizing observations on the bows of classical times, of many nations, and of warfare in general, together with his workmanlike approach to recording and improving the knowledge and technology of his time, allow us to get a glimpse of archery history in its context—all this in a period where technological changes were starting to affect profoundly the bow's development and use.

References:

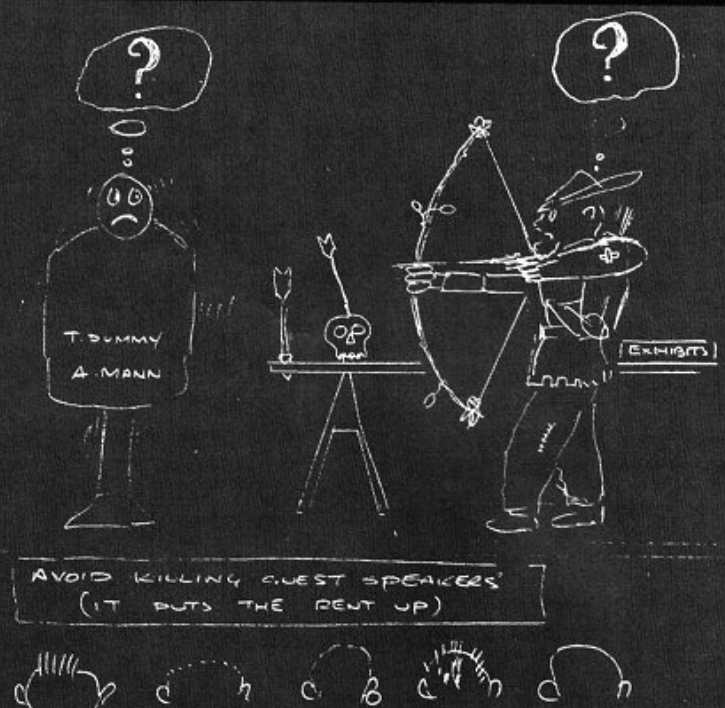
- Selections from the Notebooks of Leonardo da Vinci: Irma A Richter
- The Literary Works of Leonardo da Vinci*: Edited Jean Paul Richter
- The Notebooks of Leonardo da Vinci*: trans. E MacCurdy
- The Drawings of Leonardo da Vinci*: A E Popham
- Inventing, Leonardo*: A R Turner
- Leonardo the Inventor*: Heydenrich
- The inventions of Leonardo da Vinci*: Charles Gibb-Smith
- Medieval Warfare Source Book*: D Nicolle



HUGH's SUGGESTED ANSWER

BE ALRIGHT ON THE KNIGHT (Diary of a Mad [Bow] Man)

by
Pete Day
Founder and President,
Thornbury Field and Roving Archers,
United Kingdom



So, you want to become an archery instructor? Well, it can have its interesting moments to say the least—especially if, as I do, you take your subject beyond the archery range. Every so often, usually during winter months, I am asked to be guest speaker to give a “chat on archery” by various groups, though strangely, never an archery club.

I remember the first time this happened, a metal detector club asked me to give a talk for an hour following their annual meeting in our local community centre.

I thought that a mini history of the bow and arrow would do for starters, and felt confident as I walked into the room carrying a long branch of hazelwood, a powerful English longbow, war and other associated arrows, chain mail, hunting bow, flight bow, compound bow, all part of my 30-year collection.

My companion on this trip was a tailor’s dressmaking dummy torso which I use as a close-range target. Whilst sitting through the meeting, to fill the time I started writing notes on a flipchart, historical dates, etc. By the time I was finally introduced to the assembly my head was spinning, filled with numbers just like a lottery ball.

A decision was made. I jettisoned the flipchart, laid out my exhibits in age order, from stick to compound bow, interspersing the arrowheads and bits and bobs—and decided to ad lib the whole thing.

CRUDE

In my introduction I said: “I am not going to throw too many historical dates at you. . . you are probably more up on history than me. In fact, I had a very poor education. During the last war, Mum and Dad were often having to move from house to house in London—and they didn’t tell me where they moved to . . .” While I was telling them all this

rubbish, I was busy fashioning the branch, leaves and all, into a crude bow. I tied a length of string to the lower part, and tied another knot about two thirds of the way up. So I had a bow with an arrow-length piece still attached. I scratched my head, looked up into the air and with an “I know what I can do” expression, cut off the top piece, and sharpened the end into a point. Then, looking at the dummy (the target), and after warning the audience that there is no such thing as a toy bow, I held the shaft on the string with a pinched thumb and index finger (that brought the memories flooding back!), drew the bow and loosed from a distance of about ten feet.

Well, sink me! The arrow bounced off the “chest,” and in what to the onlookers must have looked like a well-rehearsed act, I caught the rebounding shaft in my right hand, turned round to face them, and bowed low.

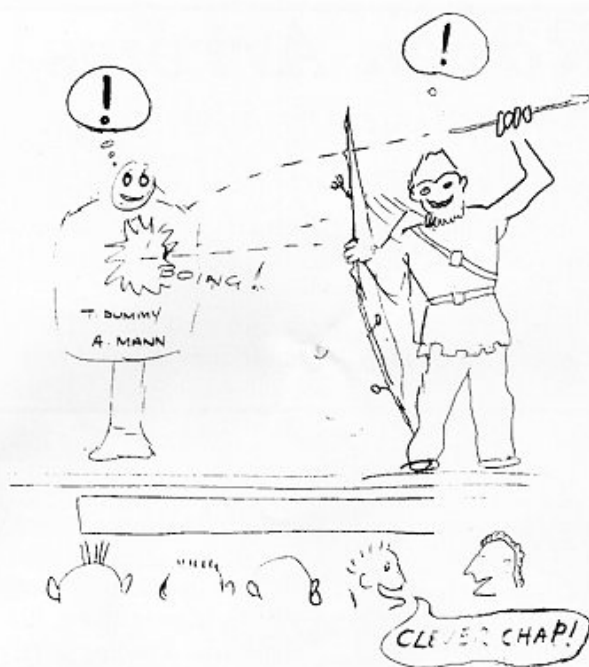
The whistles and cheers were well received - because I’m sure I couldn’t have done that again!

After that, the time just flew by. I stood behind my display and as I moved along the exhibits I gave a brief history and demonstration, including shooting an arrow with a bodkin point through a chain-mail shirt placed over the dummy. At the end, I let those interested have a “hands on” chat about the display. This proved successful, as most of the group were now having a discussion with each other, and they had to help me pack up because I had taken up too much time!

None of these people were archers, but the “in-born” interest was evident—archery has that magnetic appeal, hasn’t it?

KNIGHT

“Arfer Mann,” my pet name for the tailor’s dummy, has in his colourful life, been dressed up as a ghost for club (rac)coon



shoots, a knight for moving targets, and wearer of chain mail for penetration tests. He also featured in another talk show I gave for a gun club. The club secretary had got my name from police files. Anyway, this time Arfer and I were accompanied by Patricia Ballinger, who would help me set up, for I was getting into the swing of things now and wanted to put on a good show. While their meeting was in progress Pat and I sat in the bar and sipped nervously at lemonade beers. On being beckoned in, I observed that the audience was already waiting to be entertained; and there were some burly fellows there—with huge fists around pint tankards. We laid out the “props” in the same successful order as for the metal detectors.

Pat still shudders now at my remarks, for I am notorious for testing people's reactions with a quip. Faced by the mob, as a point of interest, I informed them that just that day I had “scanned the Bristol telephone directory and found in the entries the following archery-related surnames: 25 Bowyers (the bowmakers), 30 Fletchers (the arrowmakers), 21 Arrowsmiths (the arrowhead forgers), and 34 Jerks - who are all here tonight listening to this...”

You could have heard a pin drop. Beer glasses hung halfway to open mouths. Chairs scraped back-

wards. But, much to Pat's relief, somebody laughed, then more followed, and our lives had been saved.

SLAP

A more relaxed atmosphere followed, and during the talk, the question arose as to “why arrows needed feathers anyway.” I placed Arfer Mann, my target, against the stage, grabbed the twig bow and unfletched shaft I had made earlier during my preamble, and standing a dozen feet or so away, I shot the shaft, fully expecting it to slap the target sideways so I could smugly loose a fletched arrow to demonstrate the difference.

Wrong! The unfletched twig hit dead centre and sank in deep, absolutely straight on. Mmmm. You could have knocked me over with a feather if I had one. Back I stepped, same result. Oh dear, things were looking grim for the waiting fletched arrow, as I moved further away from the decreasing target with the same frustrating results.

Would you believe, I had to move the front row of people aside for more distance before that darned shaft would behave itself and slap sideways on the torso.

I remember thinking at the time that if the fletched arrow missed, or slapped the target, my already fragile reputation would be shot. Fortunately for me

the arrow hit straight and true from quite a long way back. A close thing. Never, never, work with children, animals, and unfletched shafts!

The hands-on formula worked once again, and, in fact, a dozen of the gun club folk booked lessons with me at my field archery club, and they proved great fun to be with. Ironically, with the prohibitive new small-bore-only gun laws now in Britain (1996), I feel archery will benefit with converts from the shoot-bang brigade.

When working professionally, our corporate set-up consisted of target archery (instinctive, of course!) to familiarize the neophytes with the basic technique, then when competent, a small game trail with cut-outs, and, if space permitted, a long-range clout target.

During one such event, I noticed my business partner was spending quite a long time with a very awkward-looking gentleman, who, he said, had to shoot left handed because of “an injury!”

When, after awhile the now reasonably proficient group were all in a line shooting at the clout mark, we were walking behind the line offering help and encouragement (... always keep the customer h-a-p-p-y!), I saw Mr. Awkward, although drawing up properly left handed, had his head scrunched up so much so that his eyes were almost vertical trying to look along the arrow. I sidled up to him and suggested he close his right eye. My partner overheard this, tugged at my sleeve and whispered to me in passing: “Pete, he's only got one eye...” Gulp.

[Author's note: You must forgive me for mentioning this incident - I would not wish to appear to be mocking the unfortunate chap. This was included as a reminder of the pitfalls awaiting the unwary instructor. It's ironic that after all my years in archery as a right-handed, right master-eye archer, I now shoot left handed, right master eye. This is all so confusing. It seems that I am now almost vertically eyed too - son of Mr. Awkward!]

Cupid

Every country seems to have its “antis,” so I make a point when talking to prospective pupils, to inform them that hunting with the bow is illegal in

most of Britain and that we shoot at pictures of game animals, not the real thing—the only thing that gets hurt is the archer's pride when they miss.

One day I had a telephone call from Brian Jarvis, the Manager of Thornbury Castle, the last Medieval castle to be built in Britain, and visited by King Henry VIII and Anne Boleyn in 1535, now a hotel, and within bowshot of my home. He explained that he had a honeymoon couple staying there who fancied something to keep them amused for a couple of hours on Sunday morning. You can imagine my remarks—and my suggestions. Anyway, they still wanted to try Cupid's other sport, so I arranged to meet them at my club. Even stranger, when I spoke to the bridegroom the night before, emphasizing the "hunting theme" of archery, I suggested 11 a.m. to give them a "lie-in." "NO," he said, "early as you like." Things have changed since my day.

They arrived at 9 a.m., not in perfect field archery attire, but in chunky designer jackets and smooth-soled shoes, but I forgave them because they were on honeymoon. I explained again about the animal targets, but seeing the pretty young lady's face contort like a skunk with a nice scent under its nose, I suggested that she shoot at a coloured round target face, whilst Hern the Hunter shot at a bear picture.



Raven Arrows

*Specializing in Genuine,
Natural Grey-Barred Feathers*

**Also, Grey Goose • Full-Length Die-Cut Feathers
"Precision-Matched" Fir Shafts: Tapered and Parallel**

Call or Write for Information and Price List

Raven Arrows, 993 Grays Creek Rd., Indian Valley, Idaho 83632

Phone: (208) 256-4341

That made her happy. Gradually, though, I introduced various nasty-type target faces, snake, rats ("I hate rats") until finally I could coax her to join hubby on the big-game picture.

Off to the field course, and the happy pair were shooting well. Nearing their time to leave, they had one last target, a Bambi-looking deer.

The sweet young thing urged her new husband: "Go on darling, empty your quiver—use all your arrows 'til you kill it!"

Ho hum ...

Sometimes though, when teaching absolute beginners, one's fibre is tested. Now I am easy going. Pete the Pacifier. Pourer of Oil. Kind, but Firm. However, during one group session, one fellow was sent to test me.

INSURANCE

At the very friendly group instruction, though I had demonstrated the proper technique, arrow placement on the bow, form, etc., this right-handed archer insisted on placing the arrow on the "wrong side" of the bow. I pointed out the "error" of his ways but was promptly told: "I always did it this way as a kid."

By his attitude I could see this was going to be a "tete a tete," Bowfight at the Thornbury Corral, The Baddie (him) versus The Goodie (me). "Well," I said kindly but firmly, "here you will have to do it the way I am instructing, because if you don't, and we have an accident, our insurance will be void [that gets me out of a lot of trouble - good old Insurance!]. However, let me show you

what will happen if you shoot your way."

By this time everybody's interest was focused on me, Robin Hood, the Big I Am. Standing there, bow in hand, arrow placed on the "wrong side," my thoughts went back to the demo in the hall when I tried to make that unfletched shaft fly badly and couldn't. If you remember, that didn't behave itself either, like this chap.

I felt alone, a pathetic pig-headed instructor, now with bow at full draw, arrow feeling so alien on the other shelf of the ambidextrous bow, toes and fingers crossed for luck, and preparing to slope away, humiliated, a broken man—for I knew in my heart that the arrow, that miserable length of tubing, would drive straight and true to the centre of the target—no matter how badly I tried to loose it.

This tale should end with me writing this from an attic, too ashamed to even go outside: the "Arrogant Beginner" now official instructor to my club, adored by all his fans who all shoot off the "wrong" side of the bow.

Nope, there is definitely a Divine Spirit. That silver beaut flew way to the right of the practice butts, completely missing the whole structure and got lost in the scrub. Amen.



HANDMADE JOURNAL BOOKS

- PH-neutral archival paper
- Heavy end-sheets of Indian Bagasse paper for stiffness and durability
- Durable Kettlestitch binding
- Hand-sewn with waxed, linen thread
- Heavy "Artist's Canvas" covers
- Custom Sizes from 4" to 10" x 13"

Reg Darling, 706 East St., Warren, PA 16365
Phone: (814) 723-2540 or (814) 726-4312



JOURNAL OF A HUNTING SEASON

By Reg Darling

I live and hunt in the Allegheny National Forest region of Northwestern Pennsylvania. My primary hunting territory is in the valley of the North Fork of Six Mile Run, a small tributary of the Tionesta Creek, ten miles from my home in Warren. I've hunted there for more than twenty years.

Oren is my son. He was thirteen at the time of this journal. This was his second year of hunting and the year that he truly became a hunter.

Hart Shaffer is one of the hunting mentors of my youth. He lives a couple of miles from where I park to hike into the North Fork. His garage is a place where a loose circle of local hunters drop in to share stories, beer, information, and crude jokes.

My journal is a constant companion. I pause to write whenever the urge comes to me. When I write in the present tense, you may take it literally.

Saturday, October 5

Oren seems much more content to simply be in the woods than he was last year. If he can find an inner quietude that is continuous with the organic harmony around him, then he will have found what I have always most wanted to give him.

Ravens converse in the valley below. A dog barks in the far distance somewhere down Six Mile Road . . .

Friday, October 11

I saw no deer all day; then, in the last hour of daylight, a group of deer came down the ridge directly behind me at a brisk trot. They saw me, but I was motionless. They were alarmed, but reluctant to abandon their intended feast. The deer moved all around me snorting and stamping, settling down to feed, but quickly getting nervous again. This went on for twenty tense minutes until for a moment, there were no eyes on me. A doe paused broadside, twenty-five yards away,

Above Photo: The author and his son Oren enjoying a bit of stump-shooting practice during the Pennsylvania hunting season.

completely in the clear, but nervously alert. I drew and shot in one fluid motion. As I touched my anchor and released there was a loud snort—an unseen deer behind me. The deer I'd shot at dropped and turned as the arrow sailed over its back and into the weeds. The whole group put their tails up and ran.

As my excitement abated, I felt relieved that I'd missed cleanly, and foolish for taking the shot. The deer was at the absolute outer limit of my range and alert to my presence. Thinking about that shot now, as I write, I feel so intensely foolish that my mistake is redeemed as a lesson well learned.

Monday, October 21, 1996

The rain shifted suddenly from mist to downpour. I've taken refuge in an old abandoned oil lease shanty. For now, it's not such a bad place to be—I've killed deer from here, on rainy days, in the past. My mood and hopes lighten and darken with the sky.

The saturated colors of wet autumn woods are at once vibrant and soothing, glowing in shadowless light.

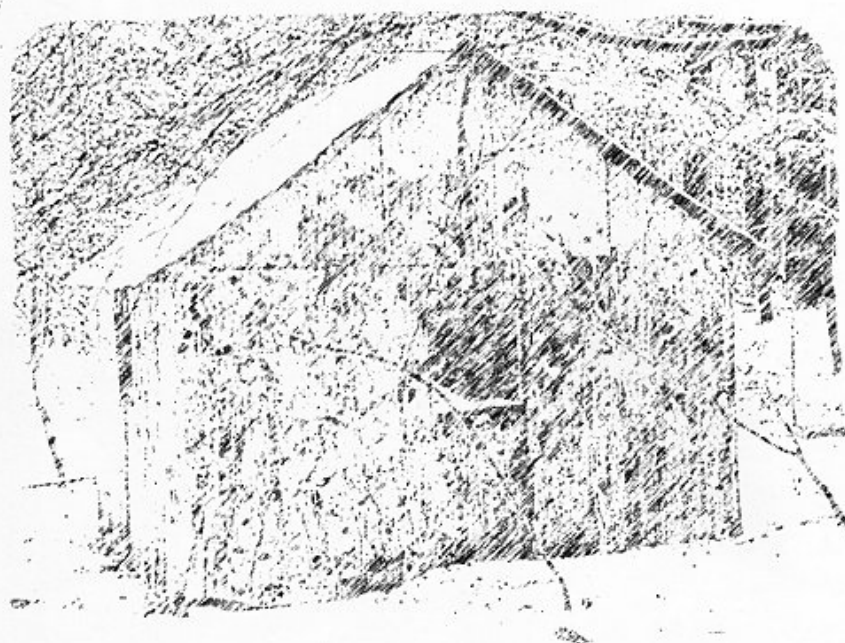
Later: The deer came in, near my tree stand at the base of the ridge between the creeks, but they were already alarmed. They ran down off the ridge with tails high, stopped fifty yards away and never came closer, despite good wind.

Monday, October 27

Pouring rain—I stayed in my tree as long as I could stand it. Feeling discouraged and inept—I've had too many days without seeing deer and I'm wallowing in self-pity.

Later: The rain gave way to blue sky with scattered, fastmoving clouds and cold wind. Still wet from the rain, I froze. In mid-afternoon I went to my stand near the apple trees and scrapes and stayed until dark.

As expected, a group of deer appeared just as the sun was slipping behind the hills. One of the does saw me, snorted, raised her tail, and stamped, but the others ignored her! The tempting scent of fresh windfall apples was irresistible. They meandered about feeding, often coming within range, but there were no clear shots until it was too dark.



One deer stopped broadside fifteen yards away, completely in the open, but I didn't think I'd be able to see my arrow fly.

Tuesday, October 29

I am learning to see cover in a different way. As the deer descend from the ridge, they always pause on the faint trace of an old logging road before proceeding on to the apple trees to feed. From that vantage point, I think they have a blind spot in which I can place my tree stand.

I've been still hunting today even though the newly fallen leaves, having dried out from yesterday's rain, make swalking noisy. I love being out here, slowly wandering like this. I love the way careful attentiveness to all that's around me interweaves with long, rambling, and quickly forgotten trains of thought. Again and again I surface up out of the depths of my thoughts.

A hawk cries; a raven calls . . .

Saturday, November 2

Two large flocks of trumpeter swans have flown over. Their silvery white against the pale luminous gray sky of falling snow is exquisite, so beautiful that recalling it just now (sipping coffee in the old shack at the artesian well) sends a shiver down my spine. Their voice, too, calls to the heart with a poignancy that touches all our yearning,

all our wandering. Afterward there was only the sound of falling snow and the creek. A wave of indescribable sadness and longing swept over me and passed. Suddenly, the sound of rustling leaves, a twig breaking, and a doe came running by—seventy yards out—followed by an ardently grunting buck. Freshly alert for awhile, I slowly drifted back into the hypnotic reverie of falling snow.

Later: It was a wonderful day of light and color, although the cold gradually weighed me down. On the way out to the car the red of apples on a leafless tree shrouded in clinging snow was a vision with the intimate intensity of a loving caress.

Now, back home and basking in familiar warmth, a comfortable chair, good music, good food, cheap vodka, a purring cat on my lap, the white of flying swans in a snowy sky echoes softly through me.

Monday, November 3

A beautiful, intense hunting day began under clear skies with a blanket of weekend snow still on the ground.

After an hour and a half at my stand, I heard snow crunching behind me. I turned slowly and saw two does coming my way at a trot. They slowed to a walk as they descended off the bench onto the creekside flat, thirty-five yards away, angling toward me on a

route I hadn't anticipated. When they passed within twenty yards I considered a shot, but there was just too much brush in the way.

Oren arrived very excited. He'd seen seven deer—none within bow range, but some as close as fifty yards. The possibility of "success" suddenly became vividly real for him.

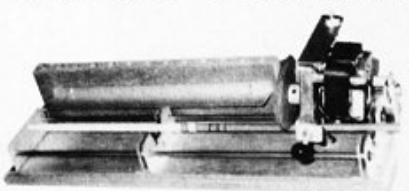
We took a foot-warming walk to an old shack nicknamed "The Cabinet" where we shared my small thermos of coffee and talked about future strategies and the excitements of the morning. Oren's observations of the deer were careful and perceptive. He has become a real hunting partner, not just a kid who tags along.

At midday, we walked to the car and drove to Hart's. After an hour of loose, rambling hunting talk, we returned to the woods—I to my tree stand, Oren to his spot between me and the creek.

Just as the setting sun touched the hilltop, I saw movement at the far end of the "blind spot" where the deer pause to look before continuing downhill. A lone deer came ambling slowly down to the apple tree, thirty yards from my tree stand. It meandered around, feeding just out of range while I sat motionless, watching and waiting. Finally, it paused in a narrow corridor in the brush twenty-five yards away, its abdomen and hindquarters shielded by a tree trunk.

The shot felt good, but the deer trotted a few steps, stopped, and looked intently around, obviously unhurt. Although the deer didn't look up, it did catch my movement in its peripheral vision as I slipped another arrow from my quiver. It angled a little closer, stiff-legged and stamping sharply, stopped broadside in an open spot, and tried to fake me out by reaching down as if to feed, then snapping its head up to see if I'd moved. On the third or fourth feint it noticed a nice, juicy apple two feet from its nose. The deer's gaze and attention strayed to the apple, my whole attention was already fixed on the deer's heart. I drew and released.

Arrow Creater



- Hinged motor spins the arrow from the top
- Adjustable non-marring rollers
- Arrow and brush holders
- Cresting pattern holder
- All hardwood base with clear wood finish
- On/off switch
- 6-foot cord
- 300 R.P.M.

Mail check or call for more information



\$150

add \$10 for shipping & handling (WA. res. add 8.2% sales tax)

24928 S.E. 416th St.
Enumclaw, WA 98022
(360) 825-5910

The flight of that arrow is etched with bright clarity in my memory. It flew clean and true. The deer turned 90 degrees with what looked like a surprising length of arrow sticking out of its chest, stumbled, then ran, vanishing into the corner of the meadow.

I whistled the "I've hit one—it's not coming your way" signal, lowered my bow and quiver, and started climbing down. As I reached the ground, Oren arrived and said, "This is so exciting!" I said, "Let's not celebrate until we find that deer. It would be better if we could wait an hour, but it will be dark soon." We stalked carefully to where the deer had stood when I'd shot. My arrow, with six inches broken off the front, lay on the ground a few yards away. I was con-

cerned that I might have hit the shoulder blade. No blood on the ground, but bright lung-blood on the arrow.

I sent Oren to the old trace road that angles up the ridge immediately above the meadow, where he'd have a good view of the area. I circled the lower edge of the meadow to the old logging road that bounds its far side, looking for blood and tracks to define the perimeters of our search before the light faded much more. When I found no sign that the deer had crossed the road, I signaled for Oren to come my way along the top edge of the meadow. A few seconds later he yelled "I found the deer!"

As I approached Oren, I saw a button buck lying as if it had died in mid-stride, eighty yards from where it was shot. Oren threw his arms around me and exclaimed, "We did it!" We talked about the beauty of the animal and the life its flesh would give to us before starting the work of field dressing and dragging.

The arrow had hit just behind the shoulder, with the broadhead oriented vertically on a rib, passed through both lungs, nicked the aorta, hit another rib, then stopped—with the point of the broadhead just poking through the hide. What I had seen was not a poorly penetrated arrow, but the back part of the arrow being broken off and ejected by the muscles of the running deer.

On the way home we stopped at Hart's garage, wrote a note saying, "Look in your refrigerator," and left the deer heart.

Thursday, November 7

The trajectory of that killing arrow has replayed itself many times in my thoughts and dreams. A shot like that is a moment of perfect clarity and focused concentration. When you've shot a longbow enough you can feel the simple, literal reality of the arrow being propelled (thrown) by the briefly stored energy of your muscles. There is nothing abstract, impersonal, or mechanical in it. You are there—utterly, wholly. So much so that its echoing resonance

RIBTEK®

TM



190 grn

MORE SIZES & WEIGHTS
SEND FOR BROCHURE

190W

6 PACK\$21
PER DOZ\$39

INCLUDES S & H

HUNTER DISTRIBUTING
1232 REDMAN BLVD.
ST. LOUIS, MO 63138



My son and hunting partner, Oren, enjoying a mid-day snack.

in memory has the vividness of real and present experience.

Drawing sustenance for my family from my relationship with the forest is far more than merely getting meat that hasn't been laced with pesticides, antibiotics, and hormones. . .

Saturday, November 9

There are few things more depressing than the sound of rain on the roof at four a.m. on a hunting day. I hate starting out in the rain. It can begin ten minutes into the woods and I don't mind. I can even savor the ascetic coziness I often find in coping with harsh weather, but starting out in it is miserable.

On the drive out and throughout the day the weather shifted constantly between drizzle, sleet, and snow. The snow was welcome for its beauty and was oddly comforting when it came.

We hiked in darkness to the stands we'd picked out last week. I climbed into my tree while Oren nestled into his lightning-felled treetop.

Three hours later, after a dozen shifts from rain, to sleet, to snow, and back again, I climbed down. We hiked to "The Cabinet" to take shelter from the wind and rain and to plan the rest of the day.

Moving on, we angled up the ridge, walking slowly and stopping frequently, scouting as much as hunting in territory we need to reacquire ourselves with as winter approaches. It was quiet walking, but we saw no deer as we moved from the valley bottom to the last bench below the top. Halfway up, I heard a familiar music and saw a flock of trumpeter swans, silvery against the leaden sky. I was glad for Oren to see and hear them, for us to share them. It seemed at least a blessing if not an omen. We could feel the immensity of their journey in their song.

We moved southward along the bench until we were directly above the site of our morning stands, then worked our way back downhill, taking longer pauses to look and listen. Cold and wet by midday, we both agreed that it would be nice to eat our lunches while drying off in the warmth of Hart's wood stove.

We arrived at Hart's under blue sky, but by the time we re-entered the woods an hour later, it was leaden again. The alterations between snow, sleet, and rain continued.

I climbed into my tree stand in steady rain. After I hauled my gear up and settled in, I closed my eyes and meditated by following my breathing for a few minutes. When I opened my eyes the rain had turned to large, fluffy snowflakes—wonderfully beautiful in the low-angled light of late afternoon diffused by a screen of clouds. I thought of swans in flight. A few minutes later the snow changed back to rain, which slowly tapered off to mist.

Shortly before the expected time, I saw flickers of brown movement just above the blind spot. The deer started down the ridge toward me. Suddenly they snorted and fled. A few seconds later I saw Oren walking my way. The wind had shifted, alerting approaching deer to his presence, so he'd decided to move to a place he had in mind on the other side of my spot. It was a perceptive choice on his part. For me, that outweighed the deer he'd just spooked. In truth, I thought our chances were blown for the evening, but I stayed in my stand because I didn't want to give him the impression that he'd made a mistake.

Not fifteen minutes later, a deer walked out of the meadow Oren had just crossed! It ignored the apples and moved slowly my way, its nose to the ground. I wondered if it would go on to Oren if I let it pass, then realized I hadn't looked to see exactly where he was, although I knew he was in plain sight (dumb!). Ten yards and coming straight toward me. . . I focused my attention just behind the deer's shoulder blades and just a little to one side, touched my anchor, and released. The deer let out a "woof," wheeled 180 degrees, and ran. The rear part of the arrow, broken off a few inches in front of the fletching, fell to

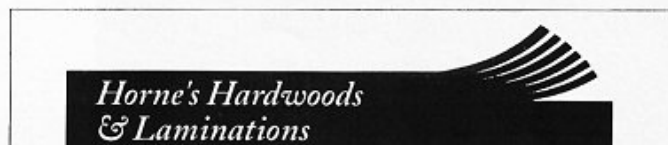


Ron Brown
Traditional Archery
Productions

**Longbows, Arrow & Leather Goods
for the Traditional Archer.**

Send \$1.00 for catalog.

**5220 Carlingford Avenue
Riverside, California 92504**



**Horne's Hardwoods
& Laminations**

Wide selection of handle woods. Over 15 species of laminations in stock. These woods are cut for their beauty under glass, and ground for highest performance capability.

**We now stock glass!!
"Satisfaction Guaranteed!"**

Horne's Hardwoods & Laminations
Mark Horne
P.O. Box 1107
Boyd, TX 76023
Shop (940) 433-5906

the ground. At forty yards, the deer slowed to an unsteady walk and disappeared into the blind spot. As I got out my whistle to signal Oren, I saw he was already coming.

"I shot one," I said.

"I know. Was it a good hit?"

"Real good."

I lowered my gear to the ground and climbed down. We walked over to the piece of broken arrow lying where the deer had stood when I shot—bright, frothy blood.

I was sure the deer had lain, if not fallen, down within a few yards of where I'd last seen it. With dense cloud cover overhead, daylight was fading fast. We stalked slowly to where the deer had disappeared from view. It rose shakily to its feet, ten yards away. Far more excited than I'd realized, I shot two arrows in rapid succession. The first broke the front shoulder; the second was a complete pass through, centered on the lungs. The deer staggered and went down. We remained quiet and still for a few minutes before approaching.

It was an obviously mature buck—probably the largest deer I've ever killed.

My first arrow had entered just to the right of the spine, four inches behind the shoulder blades, and exited the center of the abdomen—where you'd make the first slit when field dressing. We found the front three quarters of the arrow on the ground, where the deer had lain down.

On the way home we stopped at Hart's garage, put the heart and liver in his refrigerator, and left a note, "*Look in your refrigerator again...*"

Saturday, November 16

We rose at four a.m., and started into the woods under a sky full of bright stars. Dawn brightened the sky to clear blue. With it came wonderful light weighted with a strange stillness broken only by a few nuthatches and distant sounds like deer digging through snow and leaves in search of food. We saw nothing.

When we were too cold to sit any longer, we walked in the direction of the feeding sounds to the scrape line on the flat along the North Fork. As expected, we found fresh tracks and dug up areas of feeding—moisture in the exposed humus had not yet crystallized into frost.

Still cold, we walked to warm up, pausing at the artesian well for coffee and a snack. On the way we saw tracks of deer, bear, fox, turkey, grouse, squirrel, rabbit, mouse, and small birds.

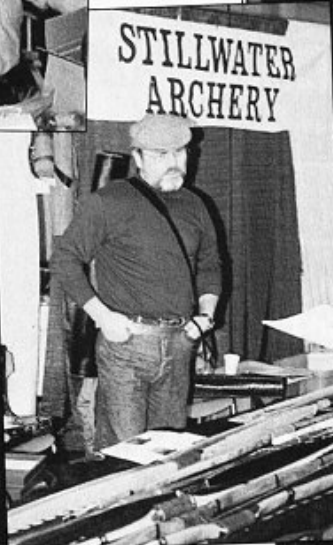
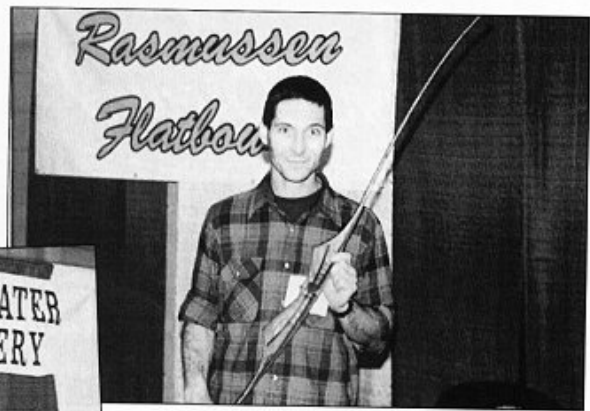
We crossed the creek and went downstream to the flat between the point of the ridge and the confluence of Six Mile and the North Fork. It's an area of open grassy woods, mostly black cherry, with stands of poplar bordering the many small patches of meadow and marsh. We followed deer tracks and talked about our observations. Oren has a good eye for detail and does well at following a particular track through a maze of others.

At midday I asked Oren if he wanted to take a break or continue hunting. He said, "Let's go to Hart's garage." The camaraderie of adults who treat him like "just one of the guys" is important to Oren—and good for him. On the way out we saw two grouse hunters with a dog crossing the meadow, headed toward the apple trees.

Back in the woods an hour and a half later, we sat still and quiet until it was too dark to shoot. On the way back to the car we talked about what a beautiful day and what a good season it had been, how much we had learned, strategies for next year, and how it had probably been dog scent that had kept the deer away tonight. I reminded Oren that the two deer I'd killed were the result of team work.

Conversation faded as we walked quietly in the twilight. I could tell by something more than words that Oren felt as good about this season as I did. We had worked hard, felt our senses keenly, and brought home good food for the coming winter.





1997 TRADITIONAL BOWHUNTER'S EXPO

By Gary Altstaetter

I could see the bull elk moving cautiously in my direction. The wind was in my favor and the only thing that he had on his mind was the bugling of my guide. He stopped behind some cover at about at about twenty yards and wouldn't budge another inch. Finally, he started to move forward. I eased my bow up and began to slowly draw the arrow. My eyes were burning a hole in an area just behind his front leg. I came to full draw, and just as I was ready to release; I was jolted out of dreamland by the ringing of my alarm clock. As my feet hit the floor, I grabbed for the clock. I had to stop the alarm before it woke up my better half. Too late! She was already screaming at me. I gathered my wits, and it hit me! My buddies who work at the Ford motor plant

had been telling me the truth all along. The sun is not up at 5 a.m.! After a quick shower and shave I was off to pick Jay Ryno and Tom Frick, and make the three and half hour trip to Hastings, Michigan.

The Barry Expo center is located about 3 miles north of Hastings on SR 37. If you are coming from the south, you can catch SR 37 in Battlecreek. Just follow the signs through downtown until SR 37 junctions SR 89. Keep your eyes open or you will miss it like I did in 1996.

When we pulled into the expo parking lot, I noticed two things that were different from last year. First the parking lot was packed with cars and the temperature was about 30 degrees warmer than the year before. Anybody who attended

Photos: (upper left) Todd Smith and Kevin Dice of Three Rivers Archery; (upper right) Greg Rasmussen holding a Rasmussen Flatbow; (lower left) Ron LaClaire and his Wife; (lower right) Ron Schwartz of Black Ram Traditions.



Many people took advantage of the range to sample the bowyers' wares.

last year's event will surely remember the bitter cold weather.

When we got inside, the Barry Expo Center was packed with a huge crowd and fifty-one vendors. I don't know how many attended the Sunday show, but the Saturday attendance topped the sixteen hundred mark. That might not sound like a big crowd, but it was almost twice as big as last year.

I spent time talking to a number of the vendors. Every one of them was pleased with the size of the turnout and the amount of business that they were doing. The gang from Three Rivers Archery told me that they were so busy that they could not even squeeze in a meal on Saturday. Steve said they could have used a couple more sets of hands, but they did not have the room.

As I walked around salivating over all those custom bows, I was pleased to see two new bowyers—Paul Schwartz of Black Ram Traditions and Greg Rasmussen of Rasmussen Flatbows. Paul not only produces a sweet shooting bow, but it had more curves than the blond who lives down the street. I just hated to put it down. Greg makes a longbow that is not only pleasing to the eye, but also a good shooter. When I picked the bow up, I was surprised by the mass weight. It felt more like a recurve than a longbow. That added weight makes the bow a really smooth shooter.

Along with the youngsters were some old timers like Mike Steliga of Bruin Bows; Jerry Brumm and Rick Shepard of Great Northern; Ron LaClair; Don Assenheimer; and Gene McGlashen of Stillwater Archery. I spent some time talking to Gene McGlashen and admiring his Osage self bows. Once upon a time, many years ago I took a good whack on the head when a lemonwood bow broke as I drew it. I am still gun shy when it comes to self bows, but the beauty and elegance of his Osage bows are tempting me to try again. Then there was the timeless Floyd Eccleston. He was walking around with a classic 1950s bow made by Sylvester Chessman.

The clinic seminars this year were give by G. Fred Asbell and E. Donnall Thomas. I enjoyed Donnall's talk on bowhunting in Alaska, but I was

so busy talking I missed Fred's clinic on Sunday afternoon. Jerry Brumm told me that the clinics were standing-room-only on both days.

This traditional expo is the brainchild of Rick Shepard and Jerry Brumm of Great Northern Bowhunting Company. I asked them if they had any plans to move to a larger facility in 1998 to accommodate a larger crowd. Jerry said, "We are committed to the Barry Expo Center for 1998, but we will be moving to the Kalamazoo County Fair Grounds in 1999. This will provide us with twice the space of the Barry Center." I questioned them if they had any intentions of changing to a date closer to spring weather. They said they were comfortable with the January date. They felt the winter dates are partly responsible for the turnout. So far, the weather had not been a problem.

The 1998 expo will not see many changes. Most of the 1997 vendors will be returning for 1998, and the space limitations will not allow for any additions. E. Donnall Thomas is booked again next year and they have added master whitetail hunter John Hale, the Wensel Brothers, and Todd Smith of the TNN outdoor shows.

The schedule for 1998 is 5 p.m. to 9 p.m. on January 30th, 9 a.m. to 6 p.m. on January 31st, and 9 a.m. to 4 p.m. on February 1st. Mark those dates on your calendar, and plan to attend. This is the premier traditional event of the winter months, and it is worth a drive of several hundred miles to see.



SOUTHWEST BOW CO.

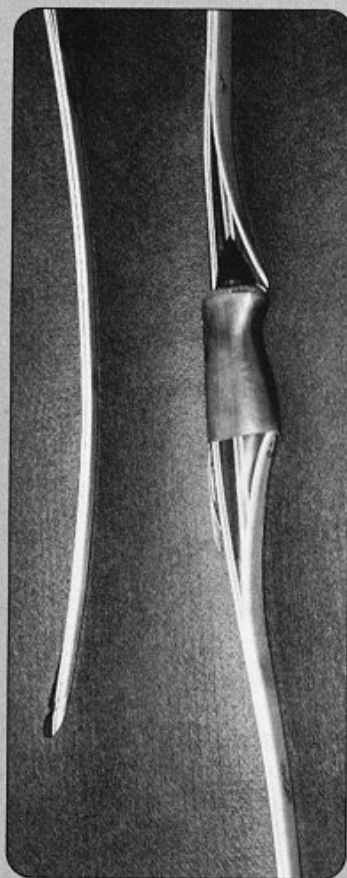
TRADITIONAL ARCHERY

HAND-CRAFTED LONGBOWS

Bowyer, John Bowden
(760) 347-0342

P.O. Box 761
Indio, CA 92202

PRODUCT SPOTLIGHT



SOUTHWEST BOW COMPANY

John Bowden, Owner and Bowyer of Southwest Bow Company, is pleased to introduce his roadrunner Bow Series. With over three years in the development of this deflex reflex design, many hours of field testing by hunters and 3D competitors has produced a bow that is exceptionally stable, fast, and a pleasure to shoot.

Handles of the finest non-endangered, exotic hardwoods combined with limb cores of Osage Orange, Red Elm, and Yew (when available), to name but a few, faced and backed with Gordon Bow Tuff and complimented with expertly coordinated tip overlays, Bowden bows are finished to perfection using super-tough epoxy and hand rubbed to a striking

gloss or satin finish. Available lengths include 64", 66", and 68" with weights to 80# (custom higher weights available).

With a full *two-Year Warranty* against defect, John is confident that once you try this bow, you will agree that is one of the sweetest bows you have ever had your hands on.

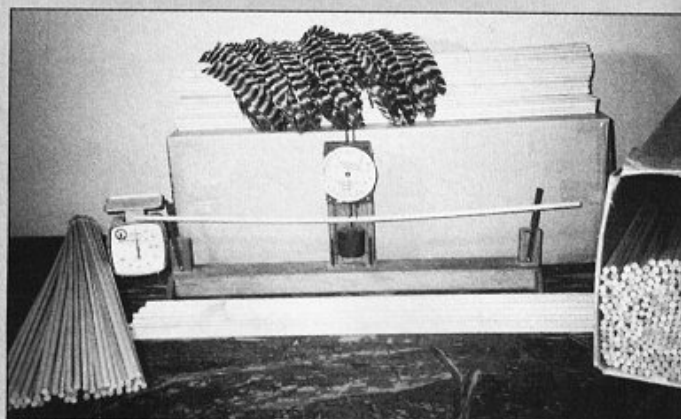
SOUTHWEST BOW CO.

P.O. Box 761
Indio, CA 92202
Phone: (619) 347-0342

They're back, but for a limited time! Direct from Myrtle Point, Oregon, **STAHL'S ARCHERY** is pleased to offer ACME Port Orford Cedar!

Due to availability, these shafts are sold by the dozen only. They are hand-selected, hand-spined, and weight-matched, for optimum performance and accuracy. The cost is \$18 per dozen, postage paid. If not satisfied, you may return them for a refund, less the cost for shipping and handling.

STAHL'S ARCHERY is also a full-line distributor for Rose City's Port Orford Cedar. We have over 50,000 shafts in stock for immediate delivery, and sell only **premium** shafting. These are available in 5/16, 11/32, and 23/64 diameters, and range from 35 to 85 pound spine. They can be purchased factory spined for \$90 per hundred, or hand-spined for \$12 a dozen. We also offer tapered cedar shafts in matched



sets for \$28 per dozen, postage paid. Barrel tapering is also available.)

In addition to our large inventory of true Flight feathers, we are now stocking full-length, natural barred feathers. These have been a really hot item and are reasonably priced at \$7 per dozen, or \$50 per hundred.

Our commitment is to provide the traditional archer with affordable, top-quality products, great service, and prompt delivery. For a free price list of our complete line of arrow-building and traditional supplies, please send a S.A.S.E. to:

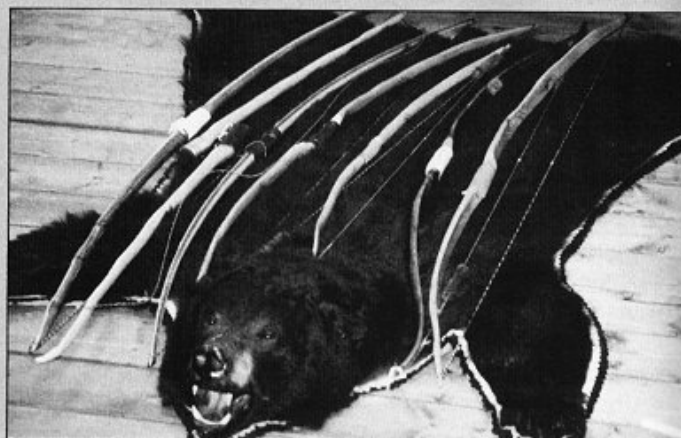
STAHL'S ARCHERY

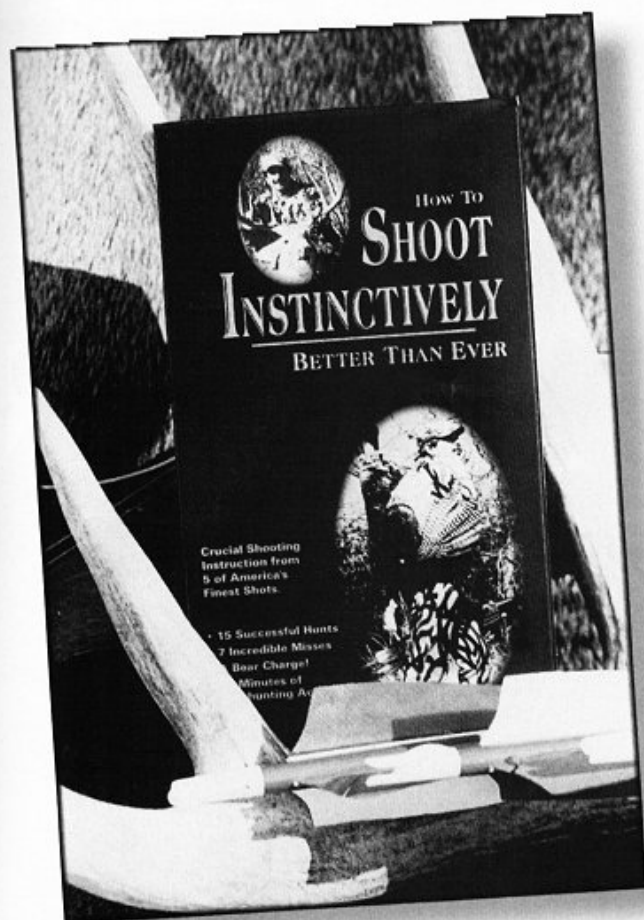
Box 295, Dept. IA
Oakwood, OH 45873
Phone: (419) 594-2109
or Fax (419) 594-3712.

JAVA MAN PRIMITIVE ARCHERY is recreating the all-wood bows of the past. From the English longbow of medieval times to Native American flatbows and American longbows, each bow is individually hand crafted from a single piece of wood or all-wood composite. **Powerful, durable, efficient, and QUIET.** Contact:

Greg Coffey

Java Man Primitive Archery
11673 Orchardview Dr. Dept IA
Fenton, MI 48430
Phone: (810) 629-8084





How to Shoot Instinctively Better than Ever

A Video review by Phillip Foss

Which brings up some questions: what is "instinctive shooting;" what is "instinct;" and what role does "instinct" play in "instinctive shooting?"

Instinctive shooting, in its most fundamental form, is shooting without the aid of any sighting device—although most of us are also pretty suspect of mechanical releases. In its purist form, instinctive shooting is bare-hand, barebow: no gloves, tabs, string nock, and no arrow rest. Most of us fail somewhere on the path to purity; I, for one, prefer my hands when they are not bleeding.

Question 2. I would define "instinct" as inherited behavior. The opposite would be learned, or cultural, behavior. A man attracted to high heels and short skirts is not exhibiting instinctive behavior, it is, rather, a learned, culturally based, response.

Given that, how much of "instinctive shooting" is based on "instinct"? Nothing, is the most I can discern. Archery, in any one of its manifestations, is a learned, cultural, complex, behavior that has nothing to do with instinct.

So what does Dan Bertalan's video "Shoot Instinctively", have to say about instinct? Nothing, which is as it should be. Even in the course of the video, when we have a couple of brushes with the semi-mystical "Golly, I'm just a naturally great shot," that "naturally great" gets reduced to a strictly followed, rigid, group of behaviors designed to get the arrow from point A to B as perfectly as possible.

I think, in fact, that the term "instinctive shooting" has hurt the skills of many archers. It establishes the premise that either-you-got-it-or-you-don't. Sure, as with any other physical skill, some people are more adept than others, but everyone is capable of improving, and most, capable of getting very good. Which is why this video is excellent; it addresses instinctive shooting as a complex of learnable skills, subject to individual variation, which can be mastered with sufficient concentration and practice.

Specifically, Dan Bertalan teams up with shooting and hunting wizards Ron LaClair, Denny Sturgis Jr., Ron Pittsley, and Rick Boggio to address the full spectrum of instinctive shooting. Essentially every aspect of the sport is covered by each archer. And, while there is frequent consensus, just as often the shooters acquiesce that what they do may not work for everyone. I thought this rejection of a one-and-only-one-way attitude by the shooters was excellent. I have a friend who is a Santa Clara Pueblo Indian and he "anchors" about an inch in front of his nose. Bad form? The results are far from bad. This is not to imply, however, that the video has an anything-goes approach. The archers uniformly stress the importance of consistency in shooting form, be that nose-anchor or ear anchor.

Another feature of the video that I appreciated was its concentration on the mental aspects of shooting. Above I wrote that shooting was a physical skill, which it is, but the body is significantly run by the mind. While many aspects of the mental quality of shooting were discussed, two were dwelt upon: buck fever and target panic. These "amateur psychoses" apparently plague the archery world.

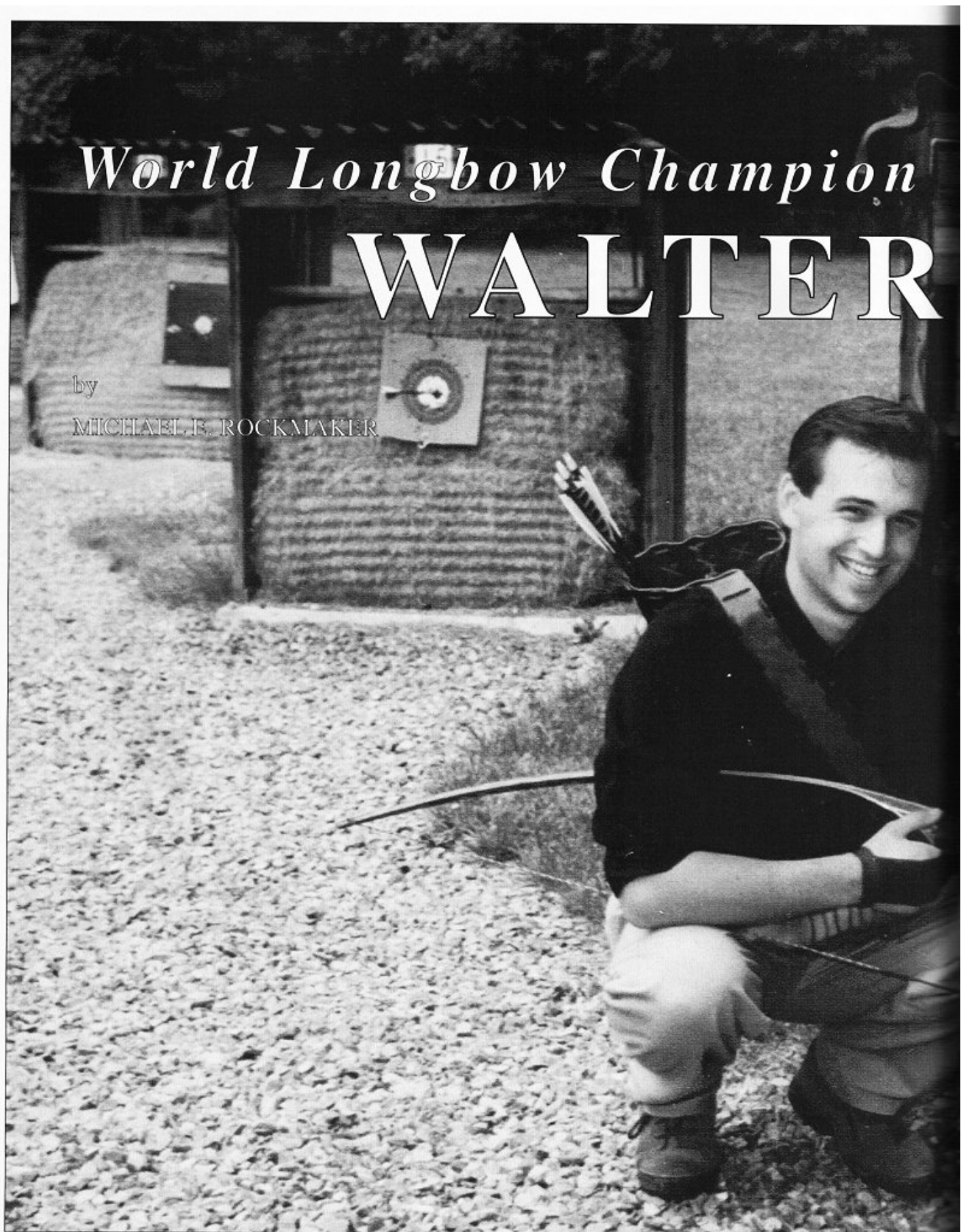
My earlier conclusion that "instinctive shooting" has nothing to do with "instinct" absolutely does not apply to buck fever. Buck fever is instinctive adrenaline I know. At fifteen feet from a bull elk, who is slobbering, rolling his eyes, and screaming, I've been known to lose my knees, have my arrow fall off the shelf, and dental work chatter to the ground like metallic hail. No problem, the gentlemen say, don't look at the headgear, and "pick a spot." I assume they mean pick a spot to run to, because the nervous system can no longer control itself. I have better, although perhaps more cowardly advice: hide behind something and don't look at the beast until you've regained self control.

The other mental problem, target panic, I've never experienced. Each archer addressed this problem with intelligence and experience. In fact, their descriptions of the ailment and its cure were so detailed and convincing that I was becoming something of a hypochondriac, envisioning myself coming to half-draw every time I glimpsed a bull's eye.

Structurally, the video was designed for the greatest impact: each archer's "lesson" was followed by a hunting sequence. The hour and a half long video is thus broken up, and contextualized, by actual hunting from Alaska to Africa which further validates the lessons. There is superb footage here, not the least of which is Bertalan "gunning down" a charging bear with pepper spray.

So finally, what do we do about the term "instinctive shooting?" Nothing, I'm afraid: it is too established in the soil of archery to be eradicated even if we wanted to. We will all continue to use the term to designate our free form of shooting. I would like to suggest, however, that we not confuse "instinctive shooting" with various mystical states or with wildly suggestive odors in an autumn breeze.

—*How to Shoot Instinctively Better than Ever* is available by calling the following toll-free number: (888) 884-3565.

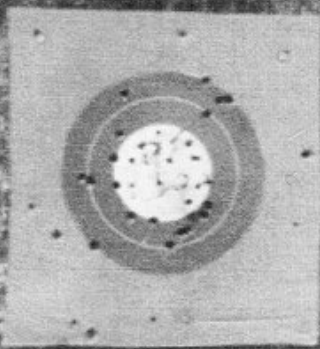


World Longbow Champion **WALTER**

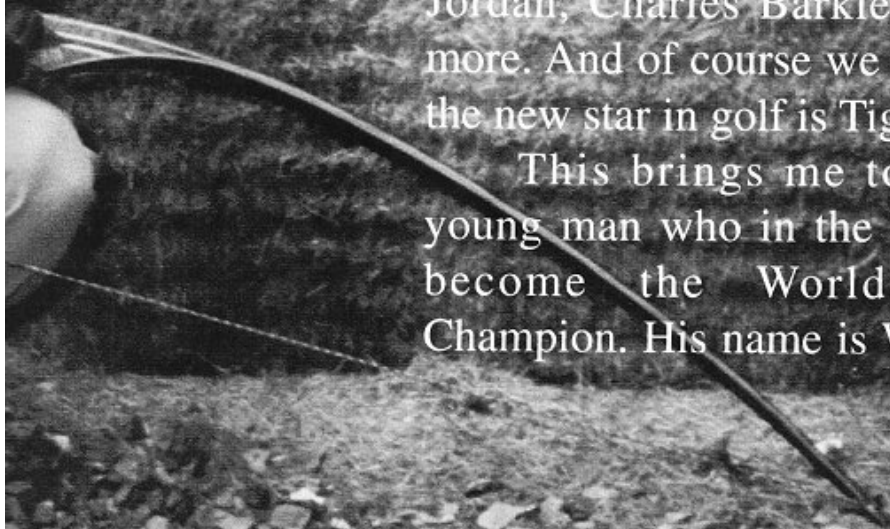
by
MICHAEL E. ROCKMAKER

• 10 •

LUCKI



Sports are among the most exciting things that many of us do for fun and relaxation. Some take it to a higher level, a level where they become recognized as stars of their sport. Among these stars you have Arnold Palmer, Jack Nicholas, Lee Trevino, and Gary Player in golf. In basketball we look up to Michael Jordan, Charles Barkley, and many more. And of course we all know that the new star in golf is Tiger Woods.



This brings me to mention a young man who in the last year has become the World Longbow Champion. His name is Walter Lucki,

of Pennsylvania. At twenty-one years of age, he has already accomplished many of his childhood dreams in the competitive world of archery, as Tiger Woods has in golf. Walter looks at Tiger Woods in total respect for his ways and accomplishments. Walter said *"I feel honored to be living at a time when so many young athletes are among the top of their major sporting events of this era."*

Walter's sports hero is the famous Howard Hill, who was the best longbow archer in the world. The stories and books that have been published on Howard Hill show that he dominated the archery field for many years. Howard's many accomplishments include winning 197 field events in a row without losing. Walter Lucki set a goal to also become a champion archer, a goal which he accomplished with his recent win at the famous Howard Hill World Championships held June 21 through June 22, 1997.

Walter has won all of the events in which he has competed in 1997, and feels that the season so far has been joyous and rewarding. In speaking about the World Championship he said *"When I came back to Allentown after such a long trip, all I needed was rest. The drive to Wilsonville Alabama is a good 20 hours long. Many traveled from all over the States to this big competition. It is the event that I set as my goal to win for a long time. To give you an analogy of my feeling, it is like winning the Masters in golf."*

Last year in 1996 I had a great showing for the first time of shooting so many moving targets at the Howard Hill World Championships. I came in second to the World Champion Keith Bain. Keith has held this title for many years. I was excited that I am the youngest archer to win this title. I've taken much time in becoming the shot. This is what I have worked for since I was fourteen years old when my Dad got me my first Bow."

Walter's feats are being noted and recognized in the world of competitive archery. Many say Walter is the next "Howard Hill." He lives in Allentown Pennsylvania, an area where archery has become the weekend hobby of many. *"Allentown is a big city"* he tells me, not like the small town where he grew up in

Ohio. Walter Lucki was born Sept. 3, 1975 (the year Howard Hill died). *"Howard will always be known as the legend of archery,"* Walter says.

Walter, where were you born and what are your plans in the future of archery?

I was born in Ohio, a half an hour north of Cleveland in a small town called Elyria.

I was just in Cleveland for the IBO Indoor World Championships where I had competed against Keith Bain who held the title as World champion. This is where I became the World Champion and for the first time got a taste of being number one in the World. As for my future in archery; I want to make my living from archery and to bring the sport of traditional archery back to the public who used to see and hear of it more often than the few times when the Olympic Games came around.

The Olympic event is done with a recurve bow with sights and special counter weights. Traditional archery is most commonly known as a stick bow with a string.

Walter, how does this differ in shooting ability between the two bows? The major difference is a recurve bow can be more accurate and consistent.

Do you ever shoot against recurve bows at your competitions?

All the time, but the recurve shooters must take off all the bells and whistles to be called traditional. Then they can compete as a traditional archer.

Why have you stuck with the longbow instead of shooting a recurve?

The main reason is that longbows are viewed as the more traditional bows in archery and are in a class of their own. I really like the longbow. [Author's Note: All during the interviewing, which was conducted at the Unami Archery Club in Pennsylvania, Walter was getting up and shooting the targets. His ability was amazing, even at the seventy yard distance.]

Now that we have a little information on the sport; Walter tell me how the first day went at the Howard Hill event.

The first day was Saturday and

the heat was about ninety-five degrees and the humidity was so thick you could cut it with a knife. You constantly had to drink water and try to stay in the shade. The first day I shot well but I didn't get any breaks at all in the scoring rings. I was always just out of the center five ring and in the three ring. If you miss the target you get a zero and no points at all. I had six misses and I usually don't miss at all but maybe one, once in awhile.

How many targets were there at the event?

We had to shoot at 28 targets per day. Seventeen of them are moving and the others were stationary. Distances were up to 70 yards away. The Elite Delta target was used for most of the event. Jerry Hill and Delta were co-sponsors of the event. Well over 600 hundred shooters attended the largest East coast competition for traditional archery. This year was its 17th year.

Where did you stand after the first day?

When I came off the course I was hoping to stay in the top five because I knew that on Sunday I could get it back.

Did you feel the pressure of the event at that time?

Absolutely. When I got there I saw that I was ten points behind, and that is a lot in archery.

My score was an eighty two and there were two others in front of me at this point. One was ten points ahead and the other was six points ahead. I knew I had my work cut out for me at that time.

How do they group you for the last day of the event?

They put the top six shooters in one group on Sunday.

Did you feel the pressure of the event at that time?

Absolutely. When I got there I saw that I was ten points behind. Everyone keeps each other's scores. I was shooting very well up until the last three targets. I knew I was having a great day but really did not know how much ahead I was.

What happened on the last three targets?

The third to last target was thirty-five yards but I read it at forty yards. I missed high and I then watched

my competitor get a five. I knew I needed a five on the next target and proceeded to get a five on the seventy yard target. Jim got a three and that gave me a little back, but I knew I was still ahead but was not sure by how much. The last target was giving me troubles all weekend and I wanted to nail it. Dan Quillian was up first and got a five. I shot and to my amazement I missed. I still felt that I was ahead but was not sure by how many until Dan came up to me and congratulated me with the win and the new World Championship.

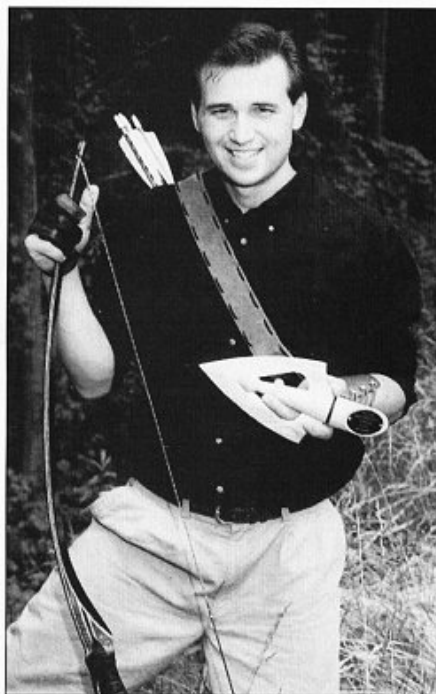
When it was all said and done I had won by 5 points and was announced the new Howard Hill World Champion. The feeling was great and as Jerry Hill presented me the trophy and I got choked up quite a bit. It was a very emotional time for me after all of the time I've spent preparing for this magic day. The day before the trip I came down with a whopping virus that nailed me and I was not going to go but hung in there and figured that the last day of the event I would be feeling better. I was sort of right. [Author's Note: Second place at the 1997 Howard Hill World Championships was taken by Daniel Quillian, John McCormick won Third Place.]

Do you have any plans to get a sponsor for holding new events across the United States?

I am looking at putting together competition that would be held around the United States like it used to be years back in the days of Howard Hill. I would like to hook up with a major arrow company, and a target company. I would also like to put on a show on ESPN 2, or maybe the new FOX sports network that is coming out. In the years to come I would like to see the sport having international recognition and to be heading such a venture. I like the way golfers organize their sport. The TV show would be educational and for the purpose of promoting the sport as a fun but competitive and a safe sport. I'm looking right now for sponsors who would be interested and welcome them to contact me.

Walter I understand that you do quite a few trick shots with your bow and would also like to have a TV show with these besides.

Yes, this is very true. Ever since I saw Howard Hill and a friend of



Walter and the coveted Howard Hill World Championship trophy.

mine Byron Fergusson do trick shots I've always put them into my practice sessions. I enjoy archery to its fullest. I can't wait until I'm doing it for my living as Howard Hill did in his time.

Do you feel archery will be as big as golf?

I would like to think so, but I'm going to take one step at a time. My goal now is to win the Outdoor IBO World Championships where I will head against the best once again.

Where is the IBO World Outdoors event going to be held this year?

This year it will be held in New York state.

As you go into your twenties, how do you feel so far on your accomplishments?

I feel that I have been blessed, and as long as I can do what I love I will always do it. I still need a win in the state of Pennsylvania at an event called the 1200 Round. I hope to get to that one this year if I can.

These events are held all over Pennsylvania. I shot a lot of these when I was younger. I recommend them to the adults and kids that are starting out. You can go to any archery shop and they will be more than happy to guide you to local events and clubs in your area.

Are there any other events that you really enjoy competing at?

Yes, there is one event that is one of the oldest events in the country where Howard Hill really enjoyed going to and shooting, especially at his all-time favorite running-deer target on a railroad-like track. Howard looked at this as his hardest target he ever shot at and by far the most enjoyable event that he attended.

This year I did great in the Spring event that was held just for traditional archers at Forksville Pennsylvania right next to World Inn State Park. I placed first in that event over all.

How did you do at the running deer, Walt?

Out of eight arrows I had a score of six eights and two tens. As I said, my best ever at this target. It's my favorite target because of how hard it is to hit.

How is the compound archer's equipment different than the long bow?

The compound is a bow that lets off when you pull it back. This means when you get the bow back to full draw the amount of the force you have to hold is a lot less than the longbow that gets harder as you pull it back. The compounds also usually have all the bells and whistles like stabilizers on the front of the bow along with a pistol grip and sights to aim with.

For instance, my bow I made with special woods and when I pull it back is seventy pounds at twenty-seven inches of draw. This is not the common weight that you would shoot with. I feel most adults should start at forty-five pounds to fifty-five pounds to start. The most common weight after you shoot for a while is fifty-eight pounds. The bow you pick must be custom fitted to your strength. You also must try the bow to get the feel of it because different weights feel different when it comes to three pounds or more.

What type of bow do you compete with?

I compete with a 66-inch, straight-handled, 70-pound longbow that I have named "Old Reliable" because it shoots so well for me. I have been using this bow exclusively for three years. The



"I use a strong, closed stance, with my feet and shoulders directly in line with the target, and try to keep my bow arm rock solid during and after the shot..."

limbs have a slight reflex, with limb cores of maple with one laminate of carbon in the middle. "Old Reliable" has a 16-inch riser, and a straight handle, with no deflex. I shoot 27 1/2" arrows, and use Fast-Flite string.

Some people are surprised that I have been competing with the same bow for three years, but it shoots so well that I have no reason to shoot another bow. "If it's not broke, don't fix it."

I make and sell three styles of **Walter Lucky Signature Longbows**: a straight-limbed model, one that is slightly reflexed (this is the style I compete with), and a deflex/reflex model.

How often do you practice?

That depends. Normally, I practice three to four times per week. These practice sessions are fairly long, at least a couple of hours each. I may shoot groups of two or three arrows, or I might shoot large groups of six to twelve arrows each. During these types of practice sessions, the more arrows you shoot, the weaker you get; and the more you shoot, the more your shooting weak-

nesses become apparent. This type of practice allows you to recognize where your weaknesses are, and that allows you to work on them, and improve your skills and form.

Two weeks prior to a major competition, I begin practicing every day. During this type of practice, I shoot fewer arrows, only one to two dozen shots each day. But I concentrate intently on each and every shot. I shoot each arrow as if it is the one that will make the difference between a win or a loss. It is an intense type of practice, but I find that it makes quite a difference in my scores.

I use a combination of gap and instinctive shooting. It is similar to Howard Hill's method of aiming, only without the swing draw. The only time I use a swing draw is when I am shooting moving targets, such as flying targets and coins, and even then, my arrow starts out aimed at the target, then follows it up through the air. For most shooting, I have my bow arm already extended with the arrow pointed toward the target before I begin the draw. I use the arrow to align left and right, but I use instinct to tell me

how high or low to hold the bow.

I use a slightly bent elbow, but not quite as much Howard Hill did. I pick my spot by first assessing the upper and lower boundaries of the kill area, then the left and right boundaries, then I pick a tiny spot right in the middle of that area to focus on. This gives me the greatest margin for error on each shot.

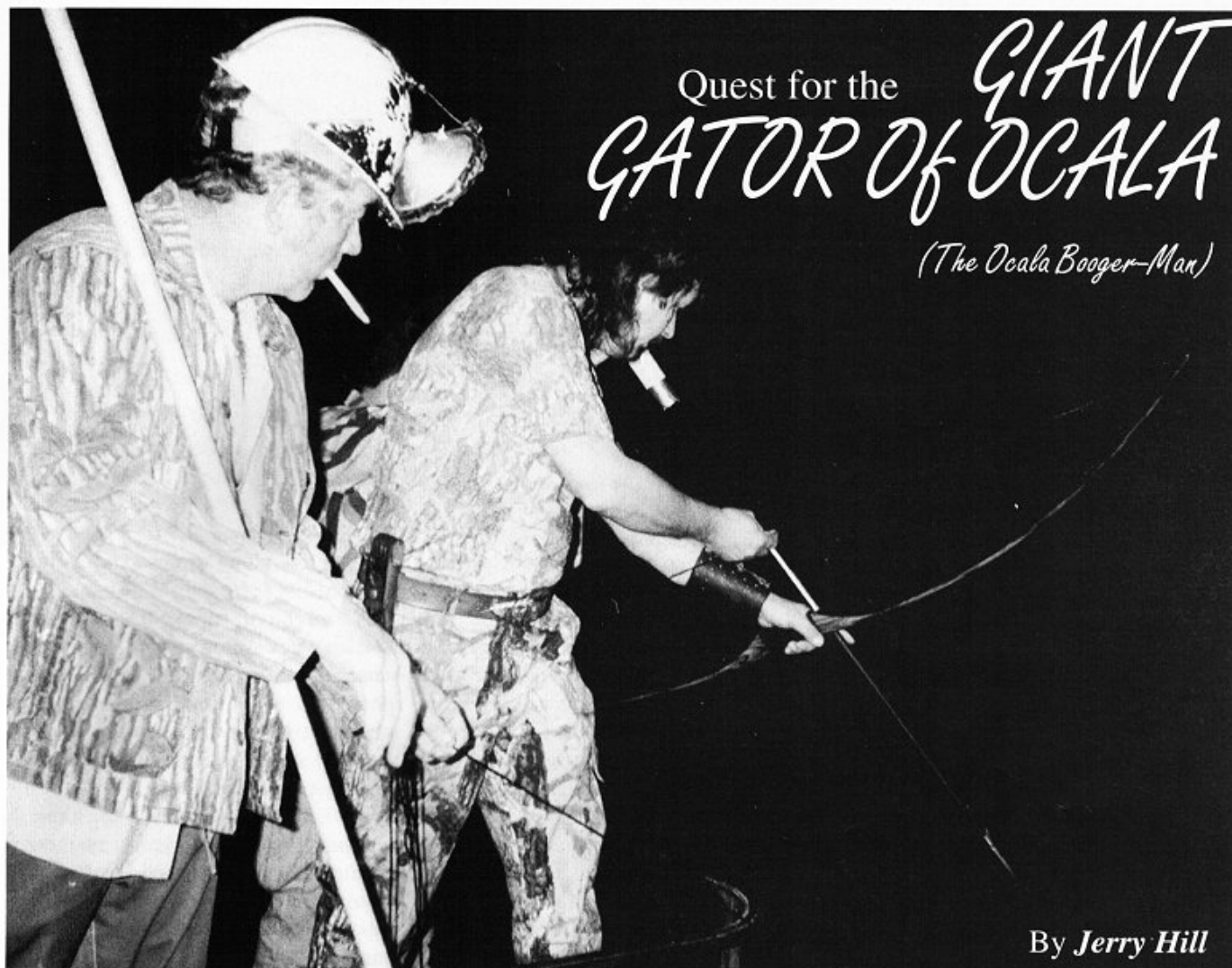
I use a strong, closed stance, with my feet and shoulders directly in line with the target, and try to keep my bow arm rock solid during and after the shot, yet loose enough not to be tense, which can cause bow torque. I shoot with neither a high or low wrist, I like to maintain equal pressure at the web of my hand and at the bottom of my palm as I hold the bow.

The way I approach my shooting is to draw back strongly with a good, strong stance, and achieve a good anchor. I believe that a strong stance can help reduce problems caused by other shooting errors, such as a poor release. If you have a strong stance, with your body weight well-balanced, your feet and shoulders lined up perfectly with the target, and your bow arm solid and stable, a poor release won't affect the shot very much. Learn to build on these strong points, and watch your shooting improve.

I would like to thank Walter for taking the time for this interview and coming out to show the world that there is a new Robin Hood in the woods. All I can say is that this kid is hot off the block and keep your eyes open for the next time he is in your area to see his shooting ability and trick shots. "You will be impressed."

To contact Walter Lucki call 610-740-1643.

All photographs taken and provided by Michael E. Rockmaker.



The telephone rang while I was finishing up work on one of my custom-made longbows for a customer. On the phone was Bruce Hamlin, an old friend for several years. Bruce was a lieutenant with the Florida Game & Fresh Water Fish Commission at the time and was promoted to captain shortly after this story began. The phone call began with Bruce asking me if I would be interested in coming down to Florida, and killing an alligator with my longbow. My answer was a quick answer of "Yes!" But, I continued with "What's the rest of the deal?" "Its got to be legal, or I will have nothing to do with it." Bruce, reassured me that it would be right by the book.

I had killed alligators during years past, when I was younger, but nothing with any size to brag about. I always wanted to kill a big gator, but had never gotten the chance. Bruce explained that Florida had a regular alligator drawing for permits each year. But, due to the fact that many of the area's where alligator hunting isn't normally allowed, gator's were becoming overpopulated. They knew that when this type of situation arises and whereby human's use the same waterways, the chance of an alligator attack increases. Don't ever let someone tell you that alligators won't hurt you. An alliga-

tor is an opportunist, and will eat anything that doesn't eat him first. While on this hunt in Florida, I saw an eight-foot gator killed, with its whole side bitten out. Also, I saw other alligators without their tails, that had been lost most likely in a fight. The normal way that these problems are taken care of is to have a Florida problem alligator hunter come in and remove the excess alligators. Due to the ever-present interest and requests for regular permits during their annual drawing, the Florida Game & Fresh Water Fish Commission decided to hold a "Special Opportunity Hunt" drawing along with their regular drawing. The lucky hunters whose applications had been drawn would be allowed to hunt in special areas. A lot of hunters drawn would use guns and traditional methods of getting their gator tags filled. If drawn, I planned to use my longbow and strive to kill the biggest alligator I could find.

I knew that my uncle, Howard Hill, held a record of around ten feet, killed during the thirties with traditional archery equipment, in the Everglades. If I could get one over the ten foot length, it would be nice. Also, since this drawing was new, I felt that it was very important that I do the job right, so as to represent the sport of archery in a way that would help pave the way for other archer's chances of being

included in future "Special Opportunity" type hunts. Even though I wasn't told that I would be judged, I felt that my failure or success would carry a lot of weight.

While filling out the requested area application, Bruce made a couple of suggestions as to the areas in which he thought my chances for a big gator would be better. My number-one choice was the "SALT RIVER RUN." The Salt River Run begins at a very large spring and flows southeast for approximately five miles, entering Lake George. The Salt River Run is located in the Ocala National Forest and the area abounds with all types of wildlife, including black bear, egrets, blue heron, eagle, osprey, whitetail deer, and believe it or not, monkeys. The monkeys were left over from an old Tarzan movie, and after the movie was finished, all the monkeys were never captured.

The rivers and streams are full of all types of fish, their numbers so many that to tell the truth, would sound like a fisherman's tall tale. You, the reader will have to visit this area and see for yourself. The Salt River Run is a true fisherman's paradise.

People use special areas like the Salt River Run for many recreational purposes including boating and swimming and other water sports. The Ocala National Forest was an area that Maurice and his brother Will Thompson wrote about in their book *The Witchery of Archery*. This book has always been a favorite of mine over the years, ever since my uncle Howard Hill loaned me his copy and recommended that I read it.

After filing out the proper application for the special hunt, all I could do was sit back, wait, and hope that I would be lucky and have my application drawn. To get to hunt in the Salt River Run area would be a real honor. If I got to do so, I would be the first legal hunter to get to hunt this area, except for a problem gator hunter hired by the state. The old saying "All work and no play, makes one unhappy" carries a lot of meaning for the outdoorsman, and this hunter is no different.

After several months of waiting, I finally received notice that I had not been drawn. I thought to myself that it was just my luck and it seems that my one and only chance had just passed me

by. A few days later the telephone rang again, and I figured that it was someone needing information about one of my bows. On the other end of the phone was Bruce Hamlin. He asked me if I had been drawn, and of course I had to tell him that I had not. He said that he had, and the way he understood the law, he could register me as a helper under his permit, allowing me to still do the killing, if and when we found the gator I wanted. His explaining of the law and how it read opened up my chance once again. The major requirements were (1) that he would have to be in the boat when I killed an alligator, (2) that my arrow would have to have a retrievable line fastened to it, and (3) my hunting would only be allowed one hour before dark and no later than one hour after daylight. The requirement of Bruce having to be in the boat at the time of the kill suited me just fine. We were planning to hunt together anyway, as I wanted him along as a witness that only the rules of fair chase were used by me, for the record. I was totally excited and could hardly wait until the day came to travel to the Ocala National Forest and begin my hunt on September first.

Weeks in advance of the hunt I ordered in what materials I would need to build my special arrows. The arrow I would use would be an Easton Classic, 2216, XX75, cut 29 inches from the bottom of the nock groove to the back of the head. Inside the arrow shaft, I put a solid fiberglass shaft that I received from Larry Whiffen of Whiffen Archery Co., to give the arrow plenty of weight for additional penetration, shooting into the tough gator hide. After being crown-dipped and crested with my special crest, the arrow was fletched with True Flight feathers, 5 15/16th inches long and 11/16ths of an inch high, with a burned French-curve shape that has been a favorite of mine for years. The nock I chose for my special arrow was the Stotler Mid Nock, 11/32", white. I like the shape of this nock and it gave my arrow the finishing touch of a truly good-looking traditional arrow. I did however modify the nocks slightly, by using a six inch flat file to cut the nock groove deeper and wider to except my heavy dacron sixteen-strand, hand-made Flemish bowstring.

An archer would hope that when

shooting at an alligator, the shot could be made while the animal was on the water's bank and not in the water. Having hunted them in the past only reminded me that I had better be prepared to shoot down into as much as five feet of water. In order to do this, my arrow needed to be heavy enough to penetrate the water and still have enough force to penetrate well into the tough alligator hide, with great accuracy. My completed arrow was heavy duty by normal standards, but when you are going after a man killer, you'd better not cut corners if you want to live to tell about the hunt. Too many hunters are too gutsy and don't think things out. It would be better to stay at home than to not only put yourself at danger, but others as well who may be along to observe the hunt, unarmed.

I have for years preferred wooden shafting for my arrows, for the same various reasons as others I know who shoot traditional equipment. The main reason I prefer them is because they are quite while shooting under hunting conditions. But, there comes a time when one must decide for himself whether quietness or accuracy means more to them while shooting on targets or in the field hunting. Without destroying the historical aspect of our sport, Easton Aluminum Mfg. Inc., has answered the needs of today's traditional shooter. They have made their Classic Shaft XX75 look like a stained wooden arrow in order to appeal to all types of today's archers. Without a doubt, Easton is king of today's more modern arrow shaft choices, whereby we can make high quality arrows that we can count on for good shooting. The company has devoted two generations of knowledge into developing the best arrow shaft. Their company name has a historical background that is as solid as the shaft material they produce today.

I have always believed in using whatever equipment that was best suited for the task at hand, whether it be bow weight, broadhead design, or arrow material. Having used all types of arrow shaft materials in testing, while shooting target or hunting, and knowing the characteristics of each, it wasn't by chance that I chose the Easton shaft to be my number-one choice on my alligator hunt.



(Left to right) Travis Sherer, Gerald Sherer, Jerry Hill, Captain Bruce Hamlin, and Jerry Hill Jr. standing in front of the airboat used to navigate the waters.

and no one was paying me to do so. My late uncle Howard Hill was good friends with Mr. Easton and they lived only a few doors down the road from each other in California for several years. They enjoyed each others knowledge on the sport of archery, and didn't mind sharing this information with each other. My uncle realized early on the greatness and possibilities of the aluminum arrow shaft, after years of swearing by the wooden arrow. He used the aluminum arrow shaft on his African safari in 1950, the main purpose of which was to kill an elephant with his bow, a unfilled childhood dream that ended in success. I know for a fact that he would not have taken a chance on using the then new aluminum arrow shafts developed by Mr. Easton if he had not believed in them. When I went after my chance-of-a-lifetime alligator, I believed in them, period.

The arrowhead I chose to use on this alligator was first designed and used by my famous uncle. He tested the arrowhead on shark, marlin, sting ray, alligator garfish, etc. While on safari in Africa in 1950, he used this same arrowhead on the African crocodile. I knew that this type arrowhead should do the job just fine. He named the harpoon type arrowhead the "HILL LILLY IRON".

The Lilly Iron heads I built in preparation for the gator hunt were constructed with a JERRY HILL broadhead

main blade at the front, double pinned through a solid ferrule of 3/8-inch diameter. Behind the main blade, which was barred for this occasion, I cut a 1/2-inch slot, whereby two razor-sharp folding wing blades, fashioned out of crosscut saw blade steel, could be attached. I used a 1/8 inch brass pin to not only mount the main blade, but also the winged blades. Also, through the ferrule body I drilled and counter cut a 1/8-inch hole, whereby I fastened a small airplane cable. To the cable, I fastened a 360-pound braided line of 50 feet in length, and to it a one gallon plastic jug, to aid in keeping up with the alligator after the first shot.

The bow I chose to use was the Elite Plus, of my own manufacture, with a draw weight of 65 pounds at 28 inches. I felt sure that it would have more than enough power to get the job done, and didn't see any reason to use a bow of heavier weight, even though I can draw bows comfortably up to one hundred pounds. We found out that a regular tape-on type bowfishing reel would not handle the heavy braided line. My son, Jerry Jr., who was along with me on this trip, suggested that we try something that he and a friend had resorted to when their bowfishing reels had broken. We used a twelve-inch piece of 1 1/2-inch PVC pipe, plugged on each end with slotted foam rubber, taped over and the braided line stowed inside. One end of the line was tied to the airplane-cable leader that

was fastened to the arrowhead and the other end of the braided line was fastened to a plastic jug. While I drew the arrow to make my shot, Bruce held the PVC pipe level beside me. Upon release the arrow flew true to its mark with every shot made. I looked at my son and said, "Who said that you cannot teach an old dog a new trick?"

During the preplanning of the alligator hunt, Bruce and I had many phone conversations. When I asked him if I need to bring a boat he said he had already talked to a man who had two airboats that we could use. The man was an archer of the recurve days during the 1960s, and he wanted to meet me and would be proud to help me get my alligator. His name was Gerald Sherer, and had for seven or more years been a Florida problem gator hunter. During this time, it wasn't uncommon for him to get 60 to 70 problem gator calls per week. These calls may come at anytime of the day or night, and after seven or more years, he grew tired of it all. Over one thousand alligators had taken a ride in his airboat during his seven years of service.

His airboat was powered by an airplane engine with 260 horsepower, pushing a six foot blade. This airboat could take you anywhere you wanted to go, on land or water. The airboat was around 15 feet in length and close to 7 feet wide. Gerald proved to me that he could handle his airboat quite well, and could turn it around on a dime. Also his knowledge of alligators was unequaled. He could spot a gator at five hundred yards without the use of binoculars and know whether he was looking at a female gator or a bull. Many times during the hunt I would see a gator and think that it would be a good one, but Gerald knew what to look for and would say he wasn't worth wasting our time on.

I had often heard of older residents of Florida being referred to as "FLORIDA CRACKERS." Not knowing what this meant, I ask Bruce to explain. He said that the old residents of the Ocala area allowed their cattle to run free in the uninhabited forest that surrounded the Ocala area. During this time, there were quite a few cowboys living in these parts. During the round-

up time for their cattle, the cowboys whips were made of Fox Squirrel hides, and they sounded with a crisp crack, much different from the Western cowboy whips. Therefore, these early Florida residents were named after their whips and referred to as "FLORIDA CRACKERS."

Gerald, Bruce, and Gerald's son Travis prided themselves as being direct descendants of these early settlers. Their down-to-earth friendliness, true outdoor knowledge, and general moral beliefs won my utmost respect from our first handshake. Their knowledgeable answers to my ever-present questions filled me with knowledge about alligators that will always be a source that I may draw from in the years to come. It was apparent that I would be hunting with the very best on the subject of alligators. My trip to the Ocala area introduced me to some of the finest people I have ever met. Whether I stopped in a grocery store, gasoline station, or stopped at the "Advantage Sports Center" that seemed to be the gathering place around Salt Springs, people were always nice and helpful. I just hope that this place never changes, as I know I will be back.

I already felt lucky getting to hunt the Salt River Run for alligator, but felt even more lucky to hear the local sportsmen tell me how lucky I was. I only hope that I would get a gator that they too would be proud of, if they had gotten this chance to hunt. They didn't at all seem jealous of me getting to hunt, in fact, the feeling I got was that they were pulling for me, using a bow and arrow as opposed to the other methods of killing an alligator.

I was up early at 4:30 a.m. on August 29 and left my home in Wilsonville, Alabama for a 10-hour drive to Ocala, Florida. I wanted to arrive early, before the hunt date, to allow myself to adjust to the climate and get to know the area I would be hunting in. I hoped to do some early scouting on alligators, and get to know where the major dens were, etc. Also, since we had planned to do some filming with video



Bruce and Gerald hang on to the "Booger-Man," trying to hoist him into the boat. Notice the one-inch steel bar that is bending from the heavy load of the gator. Jerry stands ready in case another shot is needed.

cameras and still cameras, it would allow us extra time to do so, dependent on the weather. It would also allow time to check our equipment and be sure that everything was in working order. I had learned long ago that if something can go wrong, it usually will. For this reason, I have always tried to bring along backup equipment to cover any plans I may have for filming or hunting.

My son Jerry Jr. and I arrived in the Ocala area at around 3:30 p.m. and spent the rest of the day setting up camp. We got a good night's rest that night and were up early to film some local wildlife. The Blue Heron are majestic birds and we spent many hours watching their every move and the feeding of their young. Hunting with a camera is great practice for real hunting, as the best pictures are made up close.

Gerald called and suggested that we go out for a little night-time scouting with a light on Saturday night. He said that we might not see much with all the weekend warriors vacationing on the Salt Springs Run and Lake George. I was eager to get started and quickly accepted his offer, as long as it didn't interrupt anything he already had planned with his family. He reassured me that it wouldn't, and that we should meet him and his son Travis at the Marina boat landing at 9 p.m.. Jerry Jr. and I arrived early and acquired the necessary boat-launching permits for the two airboats.

Gerald and Travis arrived and greeted us with a smile and hand shake. I have always been a good judge of charac-

ter in people. When I first met these two men and listened to my gut feeling, I knew that we would get along as if we had been friends for years. They made us feel comfortable and well at ease from the start, and I knew that this hunt would end with memories worth writing about. We left the marina on the airboats, the airplane engines idling along with a special sound that sounded something like a Harley Davidson motorcycle engine. A short distance from the boat launch Gerald pointed to the first set of glow-in-the-dark red eyes. As he would shine his light along the shoreline, one set of eyes would appear after another.

The alligators seemed to have all their eyes focused in our direction.

I told Gerald, "Someone must have told them, that I would be arriving tonight." Gerald said, with a grin "You can't ever tell, but I have a feeling they know what we're scouting for." The eyes lit up the night like stop lights on the rear of an automobile, in all directions from the airboat. Jerry Jr. and Travis followed along a short distance behind us in Travis' airboat. It wasn't long before Gerald whispered "There's a good gator. It's a female though, and females don't usually grow over eight feet in these parts. I'm sure that you're after something bigger, aren't you?" My answer to him was "Yes, I hear that there are several on this river that will have to be removed sooner or later. I want to meet the BOOGER MAN himself." Gerald reassured me that if I had allowed enough time to stay for awhile and hunt, I would get my meeting.

This one statement stuck like glue in my mind and the waiting would be tiring, as time went slowly by. Gerald said "Getting that old gator might be something else." and with a stare out into the night he continued "He didn't get big by being stupid or dumb."

We rode the five miles of the Salt River Run, seeing alligators at every turn of the airboat or Gerald's headlight. We finally stopped where the Salt River Run enters Lake George, letting the two airboats drift freely with the wind. I began to ask Gerald and Travis more questions about their understanding of

the alligator, and what they had learned about them over the years. Travis spoke right up and said that he knew one thing about them. *"They really like to eat dogs, you wouldn't believe the bright orange dog collars we use to get out of their stomachs when dog deer hunting was open in the Ocala Forest. When the deer would jump in the streams and start to swim to the other bank with the dogs in chase, the gator would pass up the deer and go after the barking dog."* Gerald's answers to my questions were always direct, to the point, and straight forward. You could tell that this man respected the alligator and considered anyone who didn't take alligators serious was a person who was only asking for trouble. Travis and my son Jerry Jr. seemed to hit it off well as friends, and I was glad to see it. It's hard to tell someone who likes to bowhunt as much as you do that they can go, but can't hunt. That kind of statement has a selfish ring to it that I don't like, but under the circumstances, we had to abide by the laws of Florida, so I think he totally understood. Before this hunt was over, Jerry Jr. had grown so fond of Travis and Gerald that he was ready to go home and pack his bags and relocate. He told me, *"Daddy, I could go wild in this place."* I said, *"Son from where I stand, You smell pretty wild to me already!"*

With all the vacationers on the waterways, I felt sure that the big gators would hold up in their dens along the banks. Gerald said that it would work out well if it would start raining on Sunday evening and drive the vacationer's off the river and lake early. A little later we decided to head back toward the marina. We had entered the mouth of the Salt Springs Run about 1/2 mile when Gerald said, *"He's at home."* and I followed with, *"Who's at home?"* He continued, *"That big gator I was telling you about."* He eased the light down a little from overhead and said his den was next to the bank up under some tree limbs. I peered over Gerald's shoulder, since I was riding in the top seat on his airboat. There, right where he said his den was, were two large, piercing red eyes. This gator had two of the biggest eyes I had ever seen. They glowed with such redness that one would think he was looking into the eyes of the devil

himself. His eyes had a brilliance of red similar to the brake lights of an automobile. You could tell by the look in his eyes that he wasn't scared of anything and if given a chance, wouldn't hesitate to prove it.

I decided right then, without saying a word to Gerald, that I wouldn't take my eyes off him when it came time to shoot. A gator of his size is nothing short of a killing machine, and I would need to place my arrow as accurately into his vitals as possible, or else we would have a boat-load of trouble on our hands. We had seen other gators in the area with their tails bitten off, possibly while fighting this bad boy. He didn't strike me as being the type who liked guests sharing his dinner table.

We had also seen an eight foot alligator that had his whole side bitten out. He was dead and floating when we first saw him, not far from this gators den. The big gator would probably eat him later, if he didn't fill up on something else sooner. An alligator is an opportunist, and will kill and eat anything that doesn't kill him first. His brain is very small and it is doubtful that he thinks about killing and eating with it anyway, when his stomach is so large and has a trap door at one end with over three thousand pounds per square inch of biting and clamping power, and teeth the size of your thumb that can rip a man in half if given a chance.

Alligators are ranked among the most dangerous of animals in the world, and anyone who discredits that statement doesn't know enough about alligators and needs to listen and learn from those that have more than one story to tell. It has been said that an alligator can outrun a quarter horse from a dead start while on land. His tail has so much power in it that he can break a horse's leg bone like a twig. He can drill a hole into a bank quickly with his head by pushing with his legs and powerful tail when trying to get away from a hunter in pursuit. The game department says that an alligator can stay under water for as long as an hour, holding his breath. But Gerald says he has witnessed a bull alligator lay on the bottom of Lake George for at least five hours. Who do you believe?

I believe in experience, and experience has taught me that you cannot

predict what any animal might or might not do, tame or wild. When going after any dangerous game, I recommend that you read everything you can about the animal and watch as much material as you can on TV or videos made by other hunters. Also, if there is anyone in your area who knows anything about the animal you need information on, it pays to listen to this person and learn all you can. After you have done all your homework and have your choice of equipment in order, then its time to give it all a try. Just remember that when the going gets tough, the tough get going to survive. Its great to have a hair-raising story to tell, but its better to have a hair-raising story to tell and survive, with all your parts intact. Many times a person who gets hurt has had an easy experience with a dangerous animal and then later on thinks every animal will act the same as the first. This kind of thinking is foolish and can get you killed or badly hurt.

Gerald suggested that we not get too close to this big gator, if I was interested in trying to get him with my longbow and arrow. He may get the idea we wanted him and slip into his den every time he saw our airboat coming his way. Gerald had told me how after he and Travis had hunted alligators for so long, it got to the point that when they went on a call after a problem gator and a crowd would be gathered around watching the gator, he felt the gator knew why they were there. When he or Travis walked up from the crowd, the gator seemed to able to pick them out and would watch just them.

We left the big alligator and returned back to our camp. My adrenaline was running 100% by this time, and I couldn't go right to sleep. So, I sat outside my camper and thought about that ol' gator and how I hoped I would be successful in taking him. I thought about all the people that I had seen out on the river and Lake George, swimming, skiing, and enjoying their few days off from work. I thought how easy their enjoyable weekend could turn to tragedy if an alligator decided to go on a feeding expedition of its own. More often than not, when people think that an alligator won't hurt them, and start feeding them, the alligator loses all fear of people, and that's when the problems

begin and things get out of control. Pets are lost and human lives are too, much too often, because as I have said before, an alligator is an opportunist and a fearless killer, and only thinks with his stomach.

Before retiring, I did a little rain dance in hopes that it might help my chances. The next day was Sunday, the day before the actual hunt could begin. Halfway through the day it started to rain, and it drove the people off the river and Lake George early. I told Gerald and Travis what I had done the night before, and Gerald said he needed me to do it every few days at his sod farm.

On Monday, the day of the hunt, we had another rain that guaranteed that nobody would still be out on the water vacationing. After checking over our equipment one last time, we arrived at the boat launch one hour before dark. Everyone wanted to know if I was ready. I told them I was as ready as I could be.

Gerald laughed and said that before I had arrived in the area, Bruce had built me up to be the Daniel Boone of archery, status-wise, and he wanted to see what I could do with my bow and arrow on a big gator to back it up. I looked at him and said that Bruce must have gotten his story mixed up about me, because Daniel Boone was an Indian fighter, and I was part Creek Indian. Gerald laughed again and said, "Well, let's get going and see you do your stuff with that bow and arrow."

Gerald and the other fellows didn't know how keyed up I was. I wasn't nervous or scared, as it is not my nature to get that way. My concentration was so devoted to the deed at hand that I felt I was as ready as I could be. The only doubt I had was as to whether the Big Gator would be at his den tonight as before, with all the outdoor activity that had been in his area over the past several days.

I new of one group of tent campers who were directly across the narrow river from him the first night I got a look at the big killer. Gerald felt

good about the night as it was rainy and quiet, perfect to a gator's liking. He also felt that the gator would be hungry and would be willing to hold his position close to his den, rather than run, giving me a chance for a good shot. I had planned to place my first shot behind his front leg if the shot presented itself, or into the neck area. The finishing-off shots, if needed, would be devoted to the "V" area at the back of its head, into the spine.

We passed a lot of alligators on the river on the way out, but I had a date with the "OCALA BOOGER MAN" and planned to keep it, rather than take a shot at a smaller alligator. As we rounded the last bend in the river before reaching his den, Gerald whispered to me that he hoped I got a good shot on this alligator or we would have a boatload of trouble alligator to deal with. I promised to do my best as we closed in to about 100 yards from the den.

When we were about 50 yards from the den we headed straight for the gator's front door, still running in the dark without a light. We traveled a few more yards and Gerald turned on his

light, holding the shine of the light high up into the sky so as to give only enough light to see if the gator was outside his den. Gerald whispered to me and asked if I wanted to see him. I said yes, and he turned the light on him again. There he was, backed into the den up under some overhanging tree limbs, his head, neck, and part of his shoulders were all that were outside the den's opening. He was in about three feet of water, holding perfectly still, thinking we didn't see him. He had pulled a disappearing act a few nights before, when we first saw him while out scouting. We passed him by and Bruce and Gerald almost said to me at the same time, "It's your choice, you have to call it, you can kill only one." I said to Bruce and Gerald, "What if he doesn't have all his parts? You know I want to have him fully mounted." Bruce said to me, "That's the chance you have to take." I wanted to have this alligator fully mounted, so other hunters could see what a big alligator really looked like, and it was necessary that he have all his parts, but Bruce was right, it was my call and a chance I had to take. I knew that this was the first night of the

hunt, but I also knew a good thing when I saw it. A bigger gator had been seen in the area, but it had been a long time since it was last seen. I told Gerald, "Swing the boat around, I'm going to let him have it." The boat came around as I made full draw. I felt the back of the Hill Lilly Iron broadhead against my knuckle and knew that I was all the way back. I picked my spot in his neck and aimed, while he looked at me with his blood-thirsty eyes. At close range his eyes seemed to burn a hole right through mine. I was looking the "Devil" of death right in his eyes and he knew I meant business, and he was right. My arrow was off the string and out of the bow in the blink of an eye.

The Hill Lilly Iron hit its mark as planned and the Easton shaft penetrated deep into the Ocala Booger Man's neck, a perfect shot. We all felt that my arrow



Jerry Hill
Longbow Co.

"Greatest Name In Traditional Archery"

Distributed throughout the world

"See our products at a dealer close to you, be a part of the Hill legacy, by making your next purchase a Jerry Hill product. Custom hand made, high performance, and sold at affordable prices."

Traditional Archery Is Our Specialty.

515 McGowan Road • Wilsonville, AL 35186
Phone 205-669-6134 • Fax 205-669-0270

had hit something in the gators neck that had rattled his cage. He didn't run far until he rammed his head into a grass bed on the bottom of the river bed and lay perfectly still. I had fifty feet of 360 lb. test braided line on the arrow, but he didn't take more than half the line before stopping. The 30 or 40 feet that he had traveled from right to left had been so quick that I will never forget the sound the free-flowing line made as it ripped through the water at high speed. It made the sound of a zipper on a sleeping bag, if snatched down rapidly. The sight of the black, braided line cutting through the water in a stand-up fashion looked as though it was a shark's fin. Bruce had thrown the bottle overboard in case the alligator headed out to parts unknown or started a run, in which case we did not need a pile of line around and under our feet. We backed off a little ways to see if the alligator was going to make a move, and to be in a ready position to follow.

Alligators are known to be the only animal that once hurt can shut down that hurt portion of their body and proceed on as if nothing is wrong with them. Was this what the gator was doing since he only made a short run? Why didn't he do a lot of rolling, like you see on TV? It was decided that I send another arrow into him, so that we would have more than one line on him. No other weapon could be used, only my bow and arrow, so the use of another weapon to finish him off was out of the question. It had to be a fair chase situation to claim it as a bow kill, and the use of any other weapon would disqualify the kill all together.

I sent another arrow into the back of his head, trying to hit the deadly "V" spot, but missed it by one inch. Blood rushed out and the gator woke up. I new that he was hard hit, but by this time the gator's adrenaline was running at 100% like my own, and he didn't want to give up the fight just yet. He jumped backwards and grabbed the front of the airboat with his powerful jaws, with such awesome strength that if we had been in a small flat bottom boat, he would have surely turned the boat over and we would have had to join him.

The power of his teeth clamping down onto the aluminum front of the airboat sounded like a twenty-two pistol being fired, with a POP! POP! POP! as



Jerry Hill standing in front of his alligator, 700 pounds and 11' 10" long. He is holding the steel bar that bent from the alligator's massive weight.

his teeth dug into the deck and then slid back off. Jerry Jr. and Travis were now alongside in Travis' airboat and Jerry Jr. was trying to get some close up photo's of the gator. He had the camera zoomed in, with one eye looking through the camera lens and one eye closed when the excitement broke loose. Without anyone telling him to look out, he went from the front of Travis' airboat to the top in the blink of an eye. Travis said later that all he saw was a blur and felt the wind in his face, as Jerry Jr. passed him on his way to the top of the airboat. Jerry Jr. said all he could see was a head full of teeth coming his way, and it was time to move. I guess that must have been frightening to be looking through a zoomed-in camera lens and see nothing but teeth headed your way.

Another shot found the "V" spot and the killer was dead. We had to use a boat winch fastened to the bottom of the boat to pull the dead gator into the boat.

He was a monster gator and had lived an estimated life of 60 to 70 years. Gerald figured he would tip the scales at around 700 lbs. I was proud that I had done my job well, and that the one-thousand grain arrow had penetrated so well into such a dangerous animal. It also proved that the long-bow is still a good choice of weapon, and can do the job in stride.

Back at Gerald's house, we unloaded the monster using an overhead lift, while Bruce went about the task of recording the proper paper work for the state of Florida. All the facts regarding the kill are required by law, and a cites number is assigned to my alligator which makes it legal. My cites number for this gator is #97-25485. If you kill an alligator in Florida without a cites permit number, you will have committed a felony, and it won't be long till they will have you making little rocks out of big rocks.

The alligator I killed measured 11 feet, 10 inches, a good record-book animal. It beat my Uncle Howard's gator by nearly two feet. We spent the rest of our time skinning the alligator and preparing the meat, which I might add is delicious. We made the proper arrangements to have the alligator mounted by an expert in Florida who mounts a lot of alligators each year and knows how to make one look natural.

The next day, we packed up and headed my truck north back to Alabama. My head was filled with some of the best memories that any hunter could ask for. I had come to the best place, had the right type of equipment, had done my homework properly, and made the best shot I could have asked for. But all in all, it would not have happened without the best of help; Gerald Sherer, Travis Sherer, Bruce Hamlin, and Jerry Hill Jr.



(This article is an excerpt from Jerry Hill's soon-to-be published book *The Archer*.)

The Lexicon of Traditional Archery

By Phillip Foss

INTRODUCTION

I developed this lexicon of traditional archery for several reasons. First, I thought it would be particularly helpful to those new to traditional archery, but also, I've repeatedly seen veterans use terminology incorrectly: "spline" instead of "spine"; "knock" instead of "nock", etc. Additionally, several terms' definitions seem to be arguable, or at least in contention. I thought the publication of this lexicon would provide an opportunity for discussion in the archery community over these terms and their ultimate definition. And finally, I thought the creation of the lexicon would provide an opportunity for anyone interested to contribute to the completeness and accuracy of the document: there are undoubtedly terms which I am going to overlook, or which I don't know. So if anyone should note an omission or disagree with a definition, please send your suggestions to Instinctive Archer® Magazine; reader input is requested. Finally, I have included non-English terms which have found common usage in this country, but have not included terms common to archery in all languages.

A

Aerial shoot: To shoot at airborne targets.

Anchor point: The chosen point of furthest pull by the archer's string hand.

Archer's Paradox: The "paradox" refers to the fact that an arrow seems to fly in a straight line when shot from a bow, but actually flexes from left to right several times immediately after leaving the bow.

Archery: The use of bows and arrows for sport, hunting, or defense.

Armguard: Same as "bracer." A piece of material strapped to the forearm of the bow hand to protect the arm or keep clothing from contacting the bow string.

Arrow: The projectile which is shot from a bow.

Arrow nock: The slot in the end of an arrow which the bowstring fits into.

Arrow rest: A shelf, or added device, on the bow for resting the arrow.

Arrowsmith: A fletcher, or builder of arrows.

Arrow weight: The gross physical weight of an arrow.

Asiatic composite bow: A bow design traditionally from Asia which usually features several components, often horn, sinew, and wood, and which is reflexed into a C-shape.

Asymmetrical bow: A bow with one limb, usually the upper, longer than the lower. Characteristic of Yumi bows and many Plains Indian bows.

B

B-50: A synthetic material, Dacron, used for making bowstrings.

Back: The surface of the bow facing away from the archer when the bow is drawn. Also, the act of applying a backing to a composite bow.

Backing: A layer of material applied to the back of the bow for structural, decorative, or camouflage reasons.

Back quiver: A device used for carrying arrows on the archer's back.

Banana fletch: Fletching with a high profile resembling the shape of a banana.

Barred fletch: Feathers for fletching with a natural or artificial striped appearance.

Barrel-tapered: An arrow shaft which is tapered at both ends.

Belly: The side of the bow facing the archer when the bow is drawn.

Bleeder blades: Small, usually detachable, extra blades attached to a broadhead.

Board Stave: A wooden board used as a stave for self bow building.

Bodkin: A short, stout, non-bladed broadhead originally designed to penetrate armor and chainmail.

Bow: A device with limbs that propel an arrow through the use of stored energy, which is imparted to the bow by drawing a string attached to the bow limbs.

Bow quiver: A device affixed to the bow itself in which to carry arrows.

Bowstring: The string attached to the bow limb tips which allows the archer to pull the bow. Frequently comprised of modern fibers, but traditionally made from sinew, rawhide, linen, and other plant and animal fibers.

Bowstringer: A device used to flex bow limbs so that a string can be secured to the string nocks. Usually constructed of cordage with two cups of leather or a synthetic material.

Bowyer: An individual who builds bows, usually professionally.

Billet: A short piece of wood, two of which are spliced together to make a full-length bow.

Blunt: An arrowhead with a flat head used for small game or bird hunting, roving, or stump shooting.

Bow wood: A type of wood particularly suited to bow making; frequently Yew, Osage, Hickory, and Locust.

Brace: To string a bow by flexing the limbs to allow the string to be secured to the limb tips.

Bracer: An armguard used to protect the forearm of the bow hand from string slap.

Brace height: The distance, on a strung bow, from the string to the deepest part of the handle.

Broadhead: An edged cutting point used for hunting or war.

Brush button: A round, "button-shaped" object which attaches to the bow string near the limb tips to prevent brush from wedging between the string and the bow.

Bundle: A group of strings twisted together with other groups of string to form a Flemish bowstring. Sinew bundles used in bow-backing.

Burn: The shape of feather fletching. The process for creating those shapes.

Burnish: To compress the wooden fibers on a bow or arrow to help seal the surface.

Butt: A backstop for target practice.

Calf quiver: A quiver which attaches to the archer's calf. Also a quiver made of calf hide.

Cant: Tipping the bow when shooting, said to improve the sight picture.

Carbon glass: A synthetic material used to back laminated bows and to manufacture arrow shafts.

Cast: The ability of a bow to propel a given arrow.

Center-shot: A bow which has the sight window cut to the longitudinal axis of the bow's riser.

Character bow: A self bow with snaky grain and/or numerous raised knots.

Chasing a ring: Following a single growth ring on the back of a self bow.

Chattering, chatter marks: Washboard marks made when using a scraping tool on a self bow.

Chopper: A device for cutting full-length feathers to make fletching.

Chronograph: A device for measuring the velocity of an arrow or other projectile.

Clean: Said of a stave, billet, or bow with consistent grain and no knots or other variations.

Cock feather: The feather which points away from the bow riser when the arrow is on the string. Often of a different color than the hen feathers.

Composite bow: A bow constructed of two or more different materials, e.g., wood, horn, fiber, tendons, etc.

Compound bow: A bow which mechanically reduces the draw weight of the bow at full draw through the use of a pulley system.

Compression cracks, crysals: Small cracks on the belly of the bow from crushing of the wood fibers when the bow is drawn.

Compressed shaft: An arrow shaft which has been compressed to a smaller diameter.

Compression value: The relative ability of a bow wood to withstand the crushing of its fibers on the belly of a bow when it is drawn.

Core wood: The central wood used between outer laminations in the construction of bow limbs.

Crest: To mark the fletched end of an arrow with decorative or identifying markings.

Crown dip: To color the fletched end of an arrow, usually about 1/4 to 1/3 of its length.

Crowned: Generally, the domed back of a self bow from use of a stave from a small-diameter tree.

Cup(s): The ends of a bowstringer, for securing to the bow limb tips.

D

D-bow: A bow which flexes, or works, through its handle section. Also called a C-bow.

Dished grip: A concave grip on the bow handle.

Dogwood shafts: Arrow shafts made from the Dogwood tree.

Draw: To pull a braced bow.

Draw length: The distance from the back of the bow to the archer's anchor point.

Draw weight: The pounds of energy necessary to flex a bow to a determined distance, usually 28 inches.

Dry checks: Small cracks on a wood bow caused by too rapid drying of the wood.

Dryfire: To shoot a bow without an arrow on the string. Likely to damage or destroy the bow.

Dual weight: A bow with two sets of string nocks which allows the archer to utilize different draw weights in the same bow.

E

English longbow: A traditional English bow with a flat back and round belly in cross section.

Efficiency: Used to describe the relationship between bow draw weight and arrow speed, i.e., the higher the arrow speed from the lighter draw weight, the more efficient the bow is.

Elevated Rest: An added rest which is raised higher in the sight window than the shelf. Said to reduce arrow friction.

Endless string: A bowstring composed of numerous untwisted folds of the same uncut string.

F

F.P.S.: Feet per second. Used to measure the speed of a shot arrow.

Fadeouts: The area where a bow's riser tapers and "fades out" into the body of the limbs.

Fast-flight: The brand name for a synthetic bowstring material with little stretch resulting in slightly higher arrow velocities. Can produce damage or breakage in bows not designed for its use.

Feathering grain: The process, and appearance, of gradually diminishing the thickness of a self bow on the belly toward the tips.

Ferrule: The lower portion of an arrowhead which fits over and around the arrow shaft.

Fiberglass: A synthetic material used to back laminated bows.

Field point: A conical metal arrow head used for practice.

Fish head, Fish point: An arrowhead with exaggerated barbs for shooting and retrieving fish. Usually attached to a cord.

Fishhook recurve: A recurve with an especially severe bend to the limbs.

Fistmele: A way of measuring brace height as the distance from the heel of the archer's hand to the tip of his extended thumb.

Flatbow: A bow of which both the belly and back of the limbs are wide and flat, as opposed to an English longbow, which has narrow limbs.

Flemish: A bowstring constructed of two or three twisted bundles of fibers.

Fletch, fletching: The feathers or vanes on the rear of an arrow shaft used to stabilize it in flight. Also, the act of applying the feathers to the shaft.

Fletcher: An arrowsmith, or builder of arrows, usually professionally. Also refers to the clamping tool which holds feathers for gluing to an arrow shaft.

Flight shoot: Shooting arrows to achieve the greatest possible distance. Often performed competitively.

Flu-flu: An arrow with large, often spiraled, fletching to slow the arrow after initial flight. Often used for aerial shooting.

Footed: An arrow which has its tip section constructed of another kind of wood which is usually stronger than the wood of the main shaft.

Foreshaft: A section of hardwood, usually inserted into a cane shaft, for affixing an arrowhead.

Form: A device for shaping the limbs of a laminated or composite bow. Also, the shooting style of an archer.

Four-fletch: An arrow with four fletchings as opposed to the usual three.

Full-draw: Drawing the bow to the archer's anchor point.

Glass: Refers to fiberglass or carbon glass. Used for arrows or to back laminated bows.

Glass bow: A fiberglass bow.

Glove: A device worn on the three fingers of the bowstring hand to protect the fingertips from the string.

Half draw: Drawing a bowstring halfway to the archer's normal anchor point.

Hand shock: Noticeable recoil in the bow hand when the bow is shot.

Heeling: Shooting, usually a long bow, with the heel of the bow hand pushing against the bow.

Helical fletch: To apply the fletchings to the arrow with a twist to make the arrow spin in flight.

Hen feathers: The two fletchings which face the riser when an arrow is on the bowstring.

Hip quiver: A device used for carrying arrows in a holster suspended from a belt around the archer's waist.

Holmegaard design: A bow based on the ancient Holmegaard pattern with limb width parallel for approximately half the length of the limb before tapering to the tip.

Indicator point, nock index: A small raised area on the arrow nock for positioning the arrow correctly on the string by feel alone.

Instinctive archery/instinctive shooting: Shooting a bow without the aid of sights or other devices.

Jumping the String: Said of game animals which bolt at the noise of the bow being shot.

Knapper: A person who makes flaked stone tools, especially arrowheads.

Knuckle-rest: Using the bow hand as the arrow rest.

Laminated bow: A bow constructed with two or more sections of wood and/or other materials glued together on the back and/or belly.

Left wing: Feather fletching from the left wing of a bird.

Limb: The portion of a bow which bends when drawn.

Limb bow: A self bow constructed from a tree limb.

Limb twist: Having one or both limbs of the bow twisted out of plumb.

Linen: A natural plant fiber used for the construction of bowstrings. Made from flax.

Locator Grip: An indentation, usually on the grip of a longbow, so the bowhand is positioned the same for each shot.

Longbow: Various: a bow which is longer than other bows; a bow which, when strung, the string does not touch the belly of the limbs; or the English longbow, which features limbs which are flat backed and round bellied in cross section.

Loop: The ends of the bowstring which secure to the bow nocks.

Mediterranean form: Holding an arrow on a bowstring with the index finger over the arrow and two fingers under the arrow.

Mixed wing: Using feather fletching with both right and left twist on the same arrow. Generally frowned upon, but others notice no difference at hunting distances.

Momentum: The tendency of the arrow to continue its forward motion resulting in greater penetration on game animals. As a rule, heavier arrows have greater momentum.

Node: The raised joint in bamboo or river cane.

Nock: To attach the arrow to the bowstring. Used interchangeably for: String nock, Nocking point, Nock set, Arrow nock.

Nock index: A raised portion on the back of the arrow for string alignment.

Nocking point: The location on the bowstring where the arrow is attached for best flight.

Nock set: A device, usually a metal ring or thread, attached to the bowstring to consistently locate the position of the arrow.

O

Off-the-shelf: Shooting the arrow directly from the shelf with no elevated arrow rest.

Offset riser: A bow with the riser, or sight window, set off center to allow for a center-shot arrow.

One-to-three ratio: Width to length relationship on a broad-head. This ratio is said to produce the greatest penetration and flight characteristics.

One-piece: Usually a bow which does not take down.

Open-throat nock: An arrow nock which does not pinch the bowstring.

Osage Orange: A deciduous tree which grows in the American Mid-West and is especially well suited for making bows.

Overbowed: Said of an individual whose bow is too high in draw weight for the archer to shoot accurately or comfortably.

Overdraw: Various devices, both ancient and modern, which allow the archer to shoot shorter arrows at higher velocities.

Overdrawn: A bow, generally wooden, which has been drawn beyond the length it was tillered for. Usually results in limb set and/or breakage.

Overspined: An arrow which is too stiff for the bow. Will shoot left of point of aim.

P

Parabolic fletch: A high backed rounded fletching pattern.

Pinch: When the angle of the bowstring at full draw compresses the fingers of the drawing hand.

Pinch grip: Drawing the bowstring and arrow by pinching the arrow between the thumb and fingers.

Pistol grip: A bow, usually a recurve, with a deep throat in the grip region.

Primitive archery: Generally used to designate archery where only natural materials are used in the construction of archery equipment.

Propeller twist, barber-pole: A stave or resulting bow, the ends of which twist away from each other.

Proud: To leave a raised area of wood around knots on a self bow.

Pull: Draw weight of a bow. To draw a bow.

Q

Quill: The hard center part of a feather. Needs to be ground flat for use as fletching.

Quiver: Any device designed to carry arrows. See Back, Bow, Field, Hip, etc.

R

Recovery, bow: The ability of a wooden bow to return to its original profile after being strung and shot.

Recovery, arrow: The ability of the arrow to straighten out its flight after having flexed during launching.

Recurve: Manipulated limbs of a bow that severely bend away from the archer. A bow with such limbs.

Reflex: Bow limbs which bend away from the archer when unstrung.

Reflex-deflex: The common designation for the limbs of a bow which initially bend toward the archer and then bend away in an unstrung position. Term is disputed by some bowyers who contend "Reflex-rebend" is a more accurate designation.

Reinforced self nock: A self nock which has another piece of stronger material, usually wood or antler, inserted into the arrow tip at right angles to the string slot.

Release: The act of shooting a drawn arrow. Also, a mechanical device for releasing the drawn string of a bow.

Right wing: A feather for fletching from the right wing of a bird.

Riser: The central, often built up and usually rigid, handle section of a bow.

Riser forward: A bow with the mass of the riser in front of the limbs.

River cane: A wild reed, related to bamboo, that grows throughout much of the world and which has been traditionally utilized for arrow shafts.

Rose cane: Arrow shafts made from rose shoots.

Rug: A pad of synthetic material or animal hide with the fur on and attached to the arrow rest to cushion and silence the arrow.

S

Self arrow: An arrow made from a single piece of wood.

Self bow: A bow made from a single piece of wood.

Self nock: An arrow with the groove for the string cut directly into the wooden shaft.

Serving: Thread wrapped around the center of the bowstring as reinforcement.

Set: Same as "string follow." A permanent bending of the bow toward the archer when unstrung, caused by compression of the belly wood.

Shelf: Usually a ledge incorporated into the riser or handle of the bow as an arrow rest.

Shield fletch: A fletching pattern with the rear of the feather cut in a concave "shield" profile.

Sight: A device added to the bow to create a constant aiming referent.

Sight picture: The visual image the archer receives of his target.

Sight window: A cutout area above the handle to facilitate aiming.

Silencer: A device attached to the bow string to reduce vibration and noise.

Sinew: Animal fibers from tendons.

Single blade: A broadhead with one, double-edged blade.

Snakebow: A selfbow with very twisted grain which, when properly followed, gives the appearance of a snake.

Snakeskin: Used as a decorative or camouflage backing on bows.

Snap nock: An arrow nock which pinches the bow string.

Snap shoot: To draw and release the arrow without consciously aiming.

Snare tip: An arrowhead with protruding wire loops, usually four, to knock down flying game birds.

Split finger: Drawing the bowstring with usually one finger above the arrow and two fingers below. Mediterranean.

Spine: The resistance to bending exhibited by an arrow. Measured in pounds.

Splice: Various, the securing together of two or more pieces of bow, arrow, string, backing, or fletching materials.

Stable: Said of a bow which shoots consistently with little hand shock.

Stabilizer: A device, usually a weighted tube, affixed to the lower back side of the riser to reduce vibration and torque.

Stack: The sensation, at or near full draw, that the bow limbs can bend no further or that the archer does not have the strength required to draw the bow any further..

Static recurve: A bow with recurved limb tips which do not bend when the bow is drawn. Increases arrow speed and changes the angle of the string at full draw.

Stave: A long piece of wood used to construct a one-piece self bow.

Stone head: An arrowhead made usually from a high silicate stone such as obsidian or chert.

Straight fletch: Arrow fletching with no spiral twist.

Straight grip: The handle section, usually on a longbow, with no concave depression for the hand.

String: The bowstring. To shoot a group of arrows in a vertical or horizontal group.

String angle: The angle at which the string meets the arrow at full draw. Shorter bows tend to have a more acute angle which can result in finger pinch.

String follow: Same as "set".

String keeper: A device for keeping the bowstring taut when the bow is unstrung.

String length: The length of the bowstring. Measured from the far tips of the loops.

String nock: The notches on the tips of a bow limb where the bowstring is secured.

String slap: Having the bow string, on release, hit the forearm of the bowhand. The sound of the bow string hitting the bow limbs, especially on a poorly tuned bow.

Striker plate: A flat piece of material affixed to the sight window of the bow to protect the bow and quiet the arrow when being drawn. Usually leather or a synthetic material.

Stump shooting: A form of target practice shooting at various natural objects at unknown distances.

T

3-D: An archery competition shooting at three-dimensional targets usually depicting game animals. Equipment designed specifically for shooting in such a competition.

Tab: A flat piece of leather or synthetic material used to protect the fingers from the bowstring.

Takedown: A bow which comes apart into two or three pieces, usually for ease in transporting.

Takedown sleeve: Metal tubes which slide together at the bow handle to create a two-piece, takedown bow.

Taper: Going from a greater diameter to a smaller diameter. Said of bow limbs, arrow shafts, shaft ends, etc.

Tapered shaft: A shaft which is usually smaller in diameter at the nock end than the tip end.

Tensile strength: The relative ability of a bow wood to stretch on the backside of the bow when drawn.

Three-fingers under: Drawing the bowstring with three fingers below the arrow.

Thumb draw: Drawing the bow string with the thumb.

Thumb ring: A device, usually of horn, which fits over the thumb to protect it while drawing the bow with a thumb draw.

Tiller, tillering: How the limbs of a bow bend in relation to each other, usually symmetrically. The bow-shaping process used to achieve this relationship.

Tip overlays: Additional reinforcing materials laminated to the back of the limb tips. Usually of horn, antler, or hardwood, but also of synthetic material, particularly in bows designed for FastFlight strings.

Toxophilite: An individual very interested, and/or involved, in archery. (*Editor's Note: If you are reading this, you are more than likely afflicted with this incurable malady.*)

Trajectory: The flight path of an arrow.

Trapezoidal limb: A bow-limb design wherein the back is wider than the belly, which forms a trepezoidal cross section.

Tune: To adjust the bow and arrow combinations to create the ideal arrow flight. Variables include brace height, arrow spine and weight, fletch size, head weight, etc.

U

Underbowed: Said of a hunter using a bow considered too weak in draw weight for the game hunted.

Underspined: An arrow which is not rigid enough for the bow. Will result in shooting to the right.

V

Vanes: Plastic fletching.

Velocity: The speed of an arrow released from a bow, usually measure in feet per second.

W

Weight: The physical weight of an arrow; the physical weight of a bow; the draw weight of a bow.

Wheel bow: A compound bow.

Whip-ended: Said of a bow, the tips of which bend excessively.

Windage: The distance any specific wind will force an arrow off course.

X

X-ring: Target center.

Y

Yew: An evergreen tree which is excellent as a bow wood.

Yumi: A traditional Japanese bow whose upper limb is significantly longer than its lower limb.

Z

Z-splice: A splice pattern resembling a Z, used to glue two billets of wood together at the handle.

Thermal Comfort

and Task Efficiency

by Bob Adler

(Photos by Jameson R. Adler)



At first glance this may resemble your local super hero—it's actually the author in his first layer of thermal defense.

Keeping warm while hunting is a flawed concept. Maintaining comfortable body temperatures and being able to have unrestricted, quiet movement during activities associated with hunting is a much better goal than simply keeping warm. In order to accomplish this objective of thermal comfort and task efficiency, no single "outfit" will work in all instances. In fact, if anyone thinks one set of clothing is working for them, they are probably very uncomfortable most of the time and have not admitted the truth to themselves.

There are many factors that raise and lower body temperature. For example, when you are fifteen feet up a limbless, three-foot diameter tree, standing on aluminum alloy steps as you are wrapping a tree-stand chain into place, the

body temperature raises even in 20 degree Fahrenheit weather. Installing tree stands is a hunting-related activity that demands clothing to protect your forearms and hands as you rub vigorously against the tree (hanging on for dear life). Heavy cotton denim "unlined" chore coats work great for tree stand placement and for tracking/dragging game. Cotton breathes fairly well because of its loose weave and wears "like iron." Cotton, however, should not be worn next to the skin in most cold weather situations, as it will absorb and retain moisture which causes you to rapidly loose body heat.

The point is that "hunting" involves many more activities than just sitting in a tree waiting for game to walk on by. For the tree stand hunter, who I suspect makes up a majority of the hunters in north America, there are many parts to the overall term "hunting." Each part may change the factors that affect the body's reaction to producing heat and perspiration for subsequent cooling. For this discussion, the basic parts of the hunting situation are: (1) walking in; (2) climbing into the tree stand, (3) sitting and waiting; (4) shooting the bow; (5) tracking and dragging out game; and (6) driving to and from home. Suggestions on how to clothe yourself properly for these parts will follow with corresponding reasons that hopefully will make sense. One concept that will become evident is "simplified layers."

With rare exception, synthetic materials produced today outperform natural fibers, hands down. Polyesters don't absorb dreaded moisture like natural fibers—and they weigh a fraction of what other fabrics like wool do. Also, wet wool smells like—well, wet wool.

Polyester may have the drawback that it at times smells like you, if not washed often, especially under the armpits. Most of us, however, can use that big white machine in the basement (or know someone living with you who knows how to use the darn thing) that fills with water and sloshes your clothes back and forth with some detergent.

Polyester today is made into warm/fuzzy things like Polar Fleece and Polar-Tec, of which most outer wear comes in every imaginable thickness and camouflage color scheme. It is quiet, warm, durable, lightweight, easily washed, and does not absorb moisture.

Many manufacturers of clothing are producing garments with combinations of fabrics into a single, multilayered outfit. These may sound and look good in catalogs, but if you're really interested in achieving thermal comfort and hunting effectiveness, you may be well advised to stay clear of this route. It just is too much clothing under many circumstances. That's the overview, now to the nitty-gritty.

The First Layer (Next to Your Skin):

I recommend mid-weight, brushed polyester with a hydrophilic finish, because when you perspire, your body tries to cool you off. If there is any breeze, this cooling happens very quickly (rapid evaporation) and you may start to shiver as a body defense mechanism that tries to raise the hair on your body to produce greater warmth through lofting (the trapping of warm air by increasing the height of the air container). If you were wearing cotton next to your skin you would continue to shiver because the moisture is retained by

the fabric. If you had wool next to your skin, you might be itchy with the moisture trapped just past your skin having been driven slightly away from you by your body heat as the wool performed a function called capillary action. So how can we have dry, and therefore, warm skin?

The answer is to "wick" the moisture away from your skin and shed it as far as possible from the body, yet retain the warm air around you. That is exactly what polyester does because it is a water-hating (hydrophobic) fabric. Add to polyester a hydrophilic (water loving) chemical finish blended right into the fibers and you get a moisture spreading effect which quickly transfers moisture to the outside of the fabric away from your skin. This spreading effect is best described like this: when a puddle forms on a tennis court and is squeegeed over a large surface area the water dries up faster than when pooled. The hydrophilic properties of treated-polyester fabric spreads the moisture in a similar way. What all this means is dry skin, therefore a warm body. This fabric is often referred to as Polar-Tec 100, with each clothing manufacturer/distributor referring to it by their own brand name. It generally comes in three different weights, namely light, medium (or mid-weight), and expedition weights. Lightweight Polar-Tec 100 is not advisable as long john type tops and bottoms for hunting as it appears to be too fragile and not warm enough for the hunting temperature ranges we experience in colder climates.

Unless you plan on walking, climbing trees, tracking and/or dragging deer in your birthday suit, the best way to keep your skin dry and therefore warm is by wearing medium-weight (MW) treated polyester underwear. Brand names like Patagonia's Capilene, Eastern Mountain Sports' Bergelene, or Early Winters' MicroClimate, are a few that I know of with very good cut and sew measurements (they fit correctly in the right proportions and for your size).

The Second Layer: The second layer, also of Polar-Tec 100, should be in an expedition weight (EW) thickness. EW shirts with a zipper high neck work like a charm at keeping that back of your

neck area toasty and comfortable. Rarely is it necessary to need a combination of MW and EW on your legs, one or the other is sufficient except perhaps in the most extreme Arctic conditions.

Some very worthwhile accessories in the Polar-Tec 100 category are the following: Face Mask: a totally non-itchy hood made of lightweight material, exposing only the eyes and nose, worn next to the skin, with a length extending down to the base of your neck at your shoulders. Pull a camo fleece hood over this baby and increase the warmth tremendously while cutting down on the effects of the wind. This face mask accessory is so small and lightweight that it can sit in a pocket ready to be used only when needed. In a pinch it can also become a hood ornament to keep your noggin warm (when you accidentally knock your chapeau out of the tree and your fishing hook is not with you).

Briefs: These lightweight tidy-whiteys (or blues) are not a bad investment. Sweated-up cotton boxers or jockeys can freeze those "valuables" and cause you lots of discomfort, not to mention a cold hiney. Remember, sitting around very still for long periods of time is important if you want that trophy to think you are just a big pine cone tucked away in a spruce.

Glove Liners: Slip these mid-weight sweet things under your fleece camouflage grubs (gloves, for those of you who can still enunciate correctly at 10 degrees Fahrenheit) and be amazed at how much warmer your fingertips are. They are also so thin that you don't lose the feel of your bow.

The Third Layer: On the upper body I believe the the third layer should be a camouflage polyester fleece generically called PolarFleece. In my opinion, an "uninsulated" jacket works best. It cuts down on the bulk and allows for rapid moisture vapor escape. Remember, it's the moisture your own body produces in an effort to cool you off that keeps you from being warm and comfortable when you stop being active. If you have "insulated" clothing that traps moisture, you are going to get cold, no matter how thick it is. Thicker clothing also restricts effective movement, like drawing your bow.

For the lower body, cotton is acceptable for the third layer. Heavyweight cotton denim overalls are the ticket. I prefer Carhartt uninsulated overalls with an extra long inseam. This allows for blousing the bottoms of the legs over your boots using bungee cord (a length of three-sixteenths inch bungee tied with a square knot) tucked under the leg bottoms. This accomplishes three very important things: (1) warmth is increased, (2) the breeze cannot blow inside your pant legs, and (3) ticks can't get in to set up shop in your most private parts. I have three pairs of these uninsulated Carhartt overalls. They have lasted through twelve hunting seasons and are still going strong.

For extremely cold weather, buy (or sew for yourself) a double-layer camo fleece hand warmer. Install a piece of Velcro (hook side only) placed so the hand warmer won't fall out when you stand up. This setup is so toasty you won't believe it, and lightweight, comfortable, cozy, and flexible for shooting.

What do you do for those super-cold morning sits. You know the ones when your nose drips and freezes, your heels go numb, and the wind cuts through like a knife. Stay home or break out the ultimate weapon against the cold. No it's not a brandy flask. It's a double-layered fleece vest with draw cord hood, two-way slide zipper and snap bottom (at the bottom of the zipper). Put this puppy on, zip the zipper up fully then slide the bottom zip half way up, snap the bottom, pull the hood draw cord slightly snug, stick your shooting hand through the zip hole and into your hand warmer inside your fleece coveralls, and hunker down for the duration.

The most important part of the vest, as with any cold-weather system, is to cover your think melon (head) to lock in the heat. If it's really cold, you'll hear deer coming from far off because it'll sound like they are walking on potato chips. At that point you can quietly pull the hood back and down to improve your vision. When you discover that the immense sounding creature is not up to your specifications for venison sausage, simply pull the hood back up over your head and gently pull on the draw cords on each side a little bit to close in the heat. You will be amazed at how warm you'll become, even feeling the

improved blood circulation warming up your feet.

The use of a vest also allows your arms unrestricted movement for efficient shooting. Most vests are also cut long in the back to keep your kidneys warm and help to prevent that inopportune nature call. If the weather warms up during your sit it is easy to slip out of a vest without removing your arm guard or shooting glove/tab. Unfortunately, vests don't usually come in double-layer fleece, with a hood, and/or with a double slide zipper and bottom snap. There are a couple of small camouflage clothing makers that will custom modify what they have in stock. Try contacting Tall Timber and ask them about their products that can be customized to your specifications.

Each of us is made up differently and have our own tolerance for temperature ranges. I know of some very thin friends who are always warm and some people with large amounts of adipose tissue (lard butts) who are constantly cold. Think about this, though, if you are in good physical shape and don't have the vices of smoking and drinking you probably will be able to handle temperature changes better than those who imbibe and partake. There is tremendous value to being in good shape for hunting, and life itself. It adds much to your enjoyment and longevity. If you smoke or drink, your blood vessels, especially your capillaries, are going to be restricted from good blood flow and subsequently you will get colder than your healthier counterparts. If you are active and have good aerobic conditioning through running, bicycling, paddling, rowing and the like, you will handle the cold much better.

HANDS AND FEET: Two other areas of the body need to be addressed at this point: your hands and feet. Both are subjects of tremendous differences of opinions and rightly so. If you will be climbing trees and placing stands on super cold hunting days, try a pair of camouflage Supplex (nylon that feels like cotton) insulated gloves with leather palms to protect your hands from abrasion. For your hunting sit, however, the glove with the warmth and feel that seems to work the best are Polar-fleece



Bob Adler, well dressed, and well prepared for any kind of weather.

gloves. Add a Polar-Tec 100 liner if it's mega-cold.

Your feet are worthy of an entire book. If you are hunting the high mountains after sheep or goat, you'll probably need something close to mountaineering boots and high-tech knee high gaiters. But, if you're hunting from a tree stand within a moderate distance from your vehicle or camp, you may be best served using uninsulated pac boots with a ten-inch high leather upper.

By changing the type of socks you wear, you can increase the relative warmth. Remember this though, if your head is covered and warm, your feet will be sure to follow. For most hunting situations, use a variation of wool or a wool blend on your feet. If you hate the feel of wool next to your skin, try a synthetic fiber sock liner like Thermax or polypropylene. I have experimented with these liners extensively and, for me, they somehow don't work as well as wool alone. It seems they don't ventilate fast enough for my feet. I now use a loose-weave, thick, all-wool sock that ventilates very quickly. On super cold days I use a sock that is a wool/Holofil blend. But as soon as I can, when I become more active, I switch back to the open weave.

On those impossibly frigid days, which are rare in my part of the country, I break out the "Frankenstein" (over the

boot) boots. These are those huge bulky camouflage monstrosities that fit right over your pac boots. Honestly, they work well, but not if your feet are already frozen because there is ice against your skin. They also make a lot of noise as far as I'm concerned, so I try not to wear them if it can be done. Speaking of noise and foot warmth, try this: find a car mat (back seat) that fits your tree stand platform and spray the rubber bottom with permanent camo paint in your favorite artistic camo pattern. It's lightweight and easily packable if lashed to your fanny pack rolled up. Not only will this car mat keep the noise down, but it will also help to keep the bottoms of your feet from getting cold on the metal mesh of the stand platform.

If you will be hiking over hilly terrain and the weather is reasonably mild, say 35 degrees or warmer, how do you stay relatively comfortable when you know you will be pouring sweat buckets by the time you get into your tree? Two methods work well. Wear an expedition weight Polar-Tec 100 shirt as your first and only layer when walking in. At these temperatures, you probably won't need long john pants. When you get into your tree and the sweat is pouring off of you, change to a medium weight shirt next to your skin and put back on the expedition weight shirt over it. Within a few minutes your thermal system will adjust to the inactivity and you'll be ready for a comfortable sit. The second method is to stop periodically and peel off layers as your body heat rises. By the time you are in your tree stand you'll be down to your mid-weight layer with your other insulation and camo fleece layers lashed to your fanny pack. There is no way around it, activity creates perspiration.

Whew! We covered a lot of ground here. There's a lot for you to think about and test for yourself. What works for some won't work for everyone, but if you want to be comfortable and warm, get that moisture away from your skin. Let it escape from your clothes and you will enjoy your hunting activities much more than you have in the past. Be honest with your self in evaluating your comfort—and then improve it.



TED FRY of RAPTOR ARCHERY

—Bowyer, Businessman, and Teacher—

By Rik Hinton

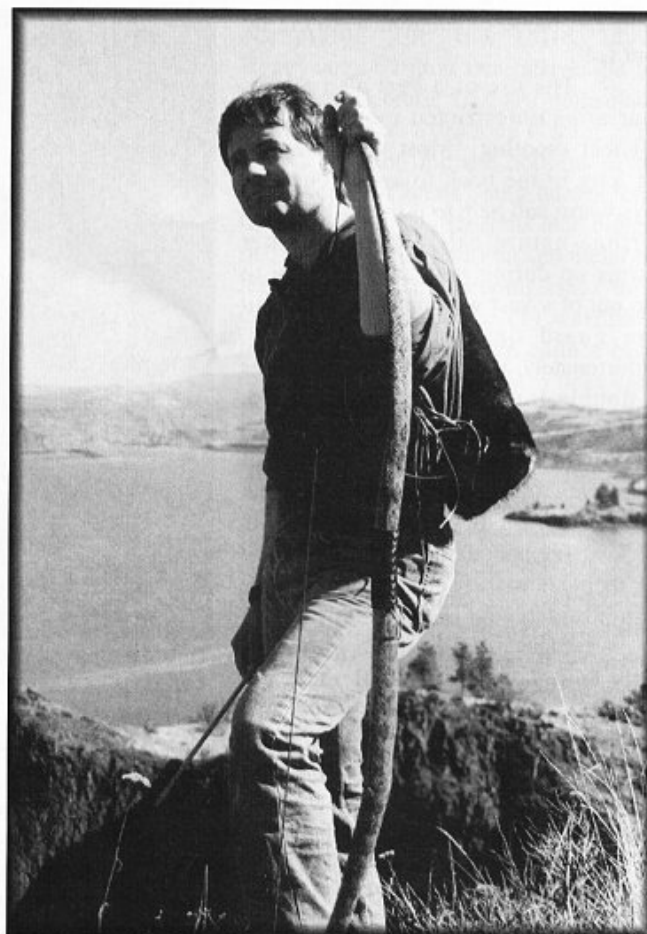
TED, WHAT IS RAPTOR ARCHERY?

Raptor Archery is a full-time, full-line, west coast archery company, with a full line of both traditional and primitive archery supplies. We are the only full-time, full-line, "traditional- and primitive-only" archery supplier on the West Coast. We have a 27-page catalog and carry a large inventory, with everything from custom arrows to custom longbows and recurves, raw materials, tools, and supplies for the do-it-yourselfer. We usually have around 70 longbows and recurves in stock at any given time.

Also, I make the Raptor self-bow, and provide a lot of archery education and teaching as a helping hand for those with questions about archery. Anymore, I seem to spend as much time on the phone answering questions from beginning bowyers as I do actually working on the bows that I am making. But I enjoy doing that, it's part of the company's public relations policy, and it's a way to pass on the knowledge that I have gained over the years.

DO YOU SEE THE INTEREST IN PRIMITIVE ARCHERY CONTINUING TO GROW?

I foresee a continued growth for both traditional and primitive archery. A lot of this growth going towards primitive archery, the self bow category, because its part of going full circle as an archer. More and more people want to go from the high-tech compound industry to something a lot more simple, like a longbow or a recurve using actual shooting skills and the "human factor." Then many people naturally want to begin actually making their gear themselves. And the self-bows lend themselves to that, because a person isn't required to have a lot of hand tools, woodworking skills, or machinery. It can be done with a small amount of simple tools. Lately, I have been travelling around the country quite a bit teaching bow building classes.



HOW LONG ARE THE CLASSES THAT YOU TEACH, AND WHAT DO THEY ENTAIL?

Well, I teach different classes, depending on the needs of the people involved. Generally, I do a two-day primitive bow-building class, where we start with a raw log, such as vine maple or hickory, something that is fairly user-friendly. We usually start at 8 a.m. Saturday morning, and we're supposed to stop at about 5 p.m., but a lot of times I end up having to say "O.K. guys, it's 10 o'clock, let's quit so we have enough energy to work tomorrow" because nobody wants to quit on their first day. And then by Sunday, everyone is generally out shooting their bows, so it's usually a two-day class of about sixteen hours. I have held more extensive one-on-one classes in my shop, they can last up to a week. I have had one-day bow-building classes, or seminars, and have taught classes of up to five days, like the primitive bow-building seminar for the Alaskan Sportmen's Show, which was organized by Jay Massey.

I enjoy the teaching part more than I enjoy building the bows. It's really a neat thing to share that kind of an experience with a wide variety of people, people from all walks of life. It's a very fulfilling feeling to pass on something that's as meaningful as taking a raw piece of wood such a log and turning it into a viable hunting weapon. I've taught my oldest



Raptor Archery has plenty of room for inventory and bowmaking in their newly-constructed 1,200 sq. ft. building. Ted Fry is shown here working on a new "Raptor Selfbow" for one of his customers.

son Joey, he is now seven years old, and a couple of years ago he completed, from start to finish, his own vine maple bow. I think he is my longest running student. Since he was about two years old, he would spend as much time in the archery shop as he could. My other son Jesse is two years old now, and he'll probably want to learn to make bows too.

I have had students anywhere from six to eight years old in my classes. In a class I held for the Yakima Tribal Council in Washington, I had a class with students ranging in age from six to forty years old. Some of my students are in their sixties.

There really is no limit on age in archery. Heck, a few years ago Wally Miles was teaching me his style of yew longbows, and after working on a yew longbow together, I pulled out a piece of vine maple and proceeded to show him a little bit about building a vine maple flat bow, and Wally is eighty-three years old.

YOU HAVE BEEN MARKETING A NEW FEATHER DESIGN CALLED THE "RAPTOR SPECIAL." WHAT LED YOU TO DEVELOP A NEW DESIGN?

Probably a desire to find something a little more unique or different. I didn't want to have the same design as everyone else, and I have always been

drawn to the plains indian arrow designs for my primitive arrows, but they were a little too big and slowed the arrow more than I liked, so I began trimming them down until I found what I liked. I started fletching my regular arrows like a flu-flu arrow and then cutting them with scissors, but I found that to be a little inconsistent. So we designed a feather die chopper that I call the "Raptor Special." The Raptor Special has five inches of feather on the quill and the tail end hangs out the back one half inch, similar to a Pope and Young fletch, making it five-and-a-half inches in total. It's three-quarters of an inch high in the back and three-eighths of an inch high in the front. I'm a firm believer that a larger fletch will stabilize an arrow much quicker and make up for release problems that shooters may have. Also you will find that larger fletch will allow you a larger variance in arrow spine. You can go much lighter in arrow spine by using a bigger fletch, because the arrow will stabilize much quicker.

Some people don't like the noise that larger fletching makes, but I find that I enjoy hearing my arrows fly, especially at 3-D tournaments. The two things that I enjoy most about archery are watching my arrows fly and hearing my arrows fly. I did some testing where I stood behind a large oak tree with a target to my side, and I had some guys shooting at the target from the side. I couldn't hear the

arrows coming, but I could hear them as they went by. So I don't think it's a factor in big game hunting. If an animal does hear the arrow, it will be the last thing it hears. I think its more important that you have a good stable arrow with good arrow flight, thus giving you more accuracy and better penetration.

WE'VE TALKED ABOUT BOW BUILDING CLASSES AND FEATHER DESIGN, BUT WHAT TYPE OF BOWS DO YOU SPECIALIZE IN AS A BOWYER?

I make just about all of the self-bow designs. I spend the majority of my time making self and backed bows. These are truly custom bows made from raw logs, using many different types of wood, such as osage, oak, hickory, ash, mulberry, and vine maple, the last being my favorite. I prefer the flat-bow design for all around hunting and shooting, but I also enjoy making the narrow, rectangular-style longbow. As I said though, my favorite is the flatbow. I have also made a few yew and vine maple recurves. If I had to pick one bow design for an all-around hunting bow, which is my priority in archery, it would definitely be a flat bow. I enjoy target and stump shooting, but hunting seems to be the true test of a bow, that's where the proof is laid out on the line. That is where you find out if a hunting weapon is a good, accurate tool.



This big Blacktail now hangs out on the wall, overseeing activities in the new Raptor Archery building.



One of eight students (six women and two men) who came over from Japan for a bowmaking class, listens to Ted's instructions through an interpreter.

ARE MANY OF YOUR BOWS SINEW BACKED?

I do get a lot of people requesting sinew-backed bows, thinking that sinew will increase their arrow speed, and that is sadly mistaken. I don't know where the myth was originally propagated, but sinew does not increase arrow speed. Sinew does allow a long draw on a short bow, and it does allow you to use a piece of wood that you normally wouldn't use, but when you add sinew to a bow, you are adding mass and weight, which slows a bow down. When you have a 64" osage flat bow pulling sixty pounds at 27", if there is nothing wrong with it, what you will actually do to that bow by adding sinew is to slow it down. If you were going to draw it to 30 inches, you might want to think about backing it with sinew, but at 27", there is no reason to add sinew.

I prefer an unbacked bow, mainly because of the amount of work involved. Adding sinew doubles the amount of work in a bow.

I cut the majority of my wood myself, including white oak, mountain ash, and vine maple. Unfortunately, I

Don't have access to a lot of good osage. There is some osage in this area that was transplanted by the settlers for wind breaks and for shade, but not a lot. I also have access to some pretty good black locust, but black locust isn't one of my favorite bow woods. There is a lot of controversy regarding it's compression abilities, some say it has excellent compression abilities, others completely disagree with that. It will make a nice bow, but in my opinion, it has does tend to have poor compression abilities.

A bow pretty much starts in my mind. Then I go out and I look at the wood, then I select a piece of wood, and I see the bow in that piece of wood. A bowyer has to be able to imagine the bow inside each piece of wood, because every bow in every piece of wood is different.

There is as much art to harvesting the wood as there is in making a bow. I don't just go out, walk around cutting down trees and throwing them in the back of my truck. First of all, I won't even cut a yew tree if all I can get out of it is one set of billets. To me, it's sacrilegious to walk up to a tree that is several hundred years old and just whack it down for just two forty-inch pieces of wood. I try to find something that I can utilize to get a couple of staves and several billets out of, otherwise I just walk on and leave it there. With the vine maple, you definitely have to have art involved in looking at a piece of snaky, snarly old wood while trying to figure out if there is a bow in there.

In yew wood, choosing bow wood comes with experience, and the only way to get that is with trial and error. There are two types of yew trees, male and

female, and they both have distinctive differences in their bark. You can tell by the pattern on the bark whether the tree is going to split out straight. Unfortunately with vine maple, there is no way to tell how the tree will split out. It can split perfectly, or it can split with a 180 degree twist, which makes it completely useless as a bow, but it makes fabulous firewood for my wood stove. With vine maple, you have to be something of a visionary, visualizing a bow as the tree snakes back and forth, right to left and belly to back. You have to look for one that will allow the string to lay right where you want it to, and even then you can split some, season and dry it, then pull it out later and say "Why in the world did I cut this?"

Finding time to cut bow wood while running a business and having a family can get tricky. My wife Lois loves this, but what I do is schedule a family picnic, and I always make sure to have my chain saw or a bow saw with me. Lois always complains that I can't go anywhere without having the capability of cutting bow wood. I am always looking at trees wondering "Can I get a bow out of that one?" We coordinate our family weekend camping trips around going down where I have yew wood permits, and incorporate that into family weekends. The family loves that kind of time spent together. My sons especially like to get in there and help me out, which I hope is something that will continue, so that someday they can teach their children.

Being able to go out and take something as simple as a log from nature and turn it into an effective hunting tool is very fulfilling. It let's me know that I

RAPTOR ARCHERY

TRADITIONAL AND PRIMITIVE
ARCHERY SUPPLIES



STAVES/BILLETS ➤ Yew • Osage • Hickory
Ash • Vine Maple • Mulberry • Oak

**CUSTOM ARROWS
& RAW SHAFTS** ➤ Hard Maple • Fir
Sitka Spruce

CUSTOM BOWS ➤ Saxon • Knight
Raptor Selfbows

Braintanned Hides-Deer, Elk & Moose
Selfbow building tools & supplies
Arrow building tools & supplies
Custom Quivers - Leather & Fur
String Material-Dacron & Linen
Sinew - Deer, Elk & Buffalo
Books • Videos • Used Bows

Ted Fry • 923 11th
Hood River, OR 97031
TEL (541) 386-4503 FAX: 386-2434

VISA/M/C
Catalog \$2.00



One of Ted's more satisfying activities is watching the progress of his students. This bowmaking class was held in Fairbanks, Alaska.

can survive on my skills and abilities as a bowyer and a hunter. To me, hunting with hand-made primitive weapons is a true fair chase situation. There is nothing to compare with primitive archery, it's like the saying goes, *"If I have to explain, you wouldn't understand."* People who are reading this interview will understand wholeheartedly. As a society, we tend to learn to run before we learn to walk. We seem to learn all the high-tech things in life like how to operate computers, cars and airplanes, yet we don't learn the most basic skills, which are the primitive technologies. I incorporate my knowledge of primitive technology with in everything I do, but I also use high-tech skills.

I remember when you and I built a raft with rope and duck tape to keep our clothes dry when we swam the river in Alaska to go after the bull moose I had shot the night before. That was a perfect blend of primitive log raft building skills, with a little high-tech duct tape thrown in for good measure.

CAN YOU TELL US ABOUT ONE OF YOUR FAVORITE HUNTS?

Well, I just returned from a successful caribou hunt that is fresh in my mind—but there was a hunt a few years ago that really meant a lot to me. A couple of friends and I were out stump-shooting on a Saturday afternoon in an area covered with oak trees interspersed with plowed fields. As we crossed one of the fields, I began finding some flint

knapping, actually I guess they call it "lithic scatter." Being a flint knapper myself, I began looking around and found some broken points, but more importantly I found a couple of semi-worked blade cores, which the native people used to exchange as they travelled from one place to another, rather than large rocks. I picked up a few of the cores, intending to make points out of them, but after I started working on them, I realized the significance of what I was doing. Perhaps several hundred years ago, someone had actually started working on the point that I was now finishing, bringing it to its intended shape and purpose, which was a stone point. I realized

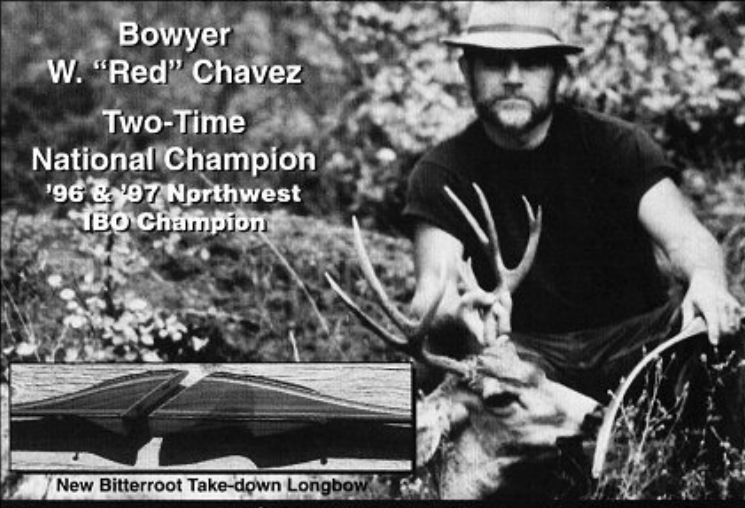
that I had to hunt with it, and made plans to take my next bear with it.

I had been a flint knapper for several years, but had never really felt the urge to take an animal with a stone point, mainly because I wasn't sure that it was the most effective tool I could use. But after making this point and feeling what a significant situation that I was involved in, the next thing I knew was that I was at full draw on a blue-phase black bear. I wasn't conscious of the stone point that I was hunting with, I was simply a part of the cycle of life, the hunter in me just took over. But after watching that arrow go completely through the bear, I realized that a good-quality stone point is a very effective hunting tool.

After following the trail to my bear, I reached down to check my arrow, and discovered that the last four inches of the arrow and my stone point, which had been protruding from the far side of the bear, had broken off and were gone. After field dressing the bear, I walked back along the bear's path to look for the stone point, because I wanted to hold it in my hands. I wanted to keep it, because this was my first big game kill that I had made with a stone point. I searched for about three hours without finding the point, and I finally came to the conclusion that I wasn't meant to find it, that I had to give it back. The point went full-circle—and that was that.



Bowyer
W. "Red" Chavez
Two-Time
National Champion
'96 & '97 Northwest
IBO Champion



New Bitterroot Take-down Longbow

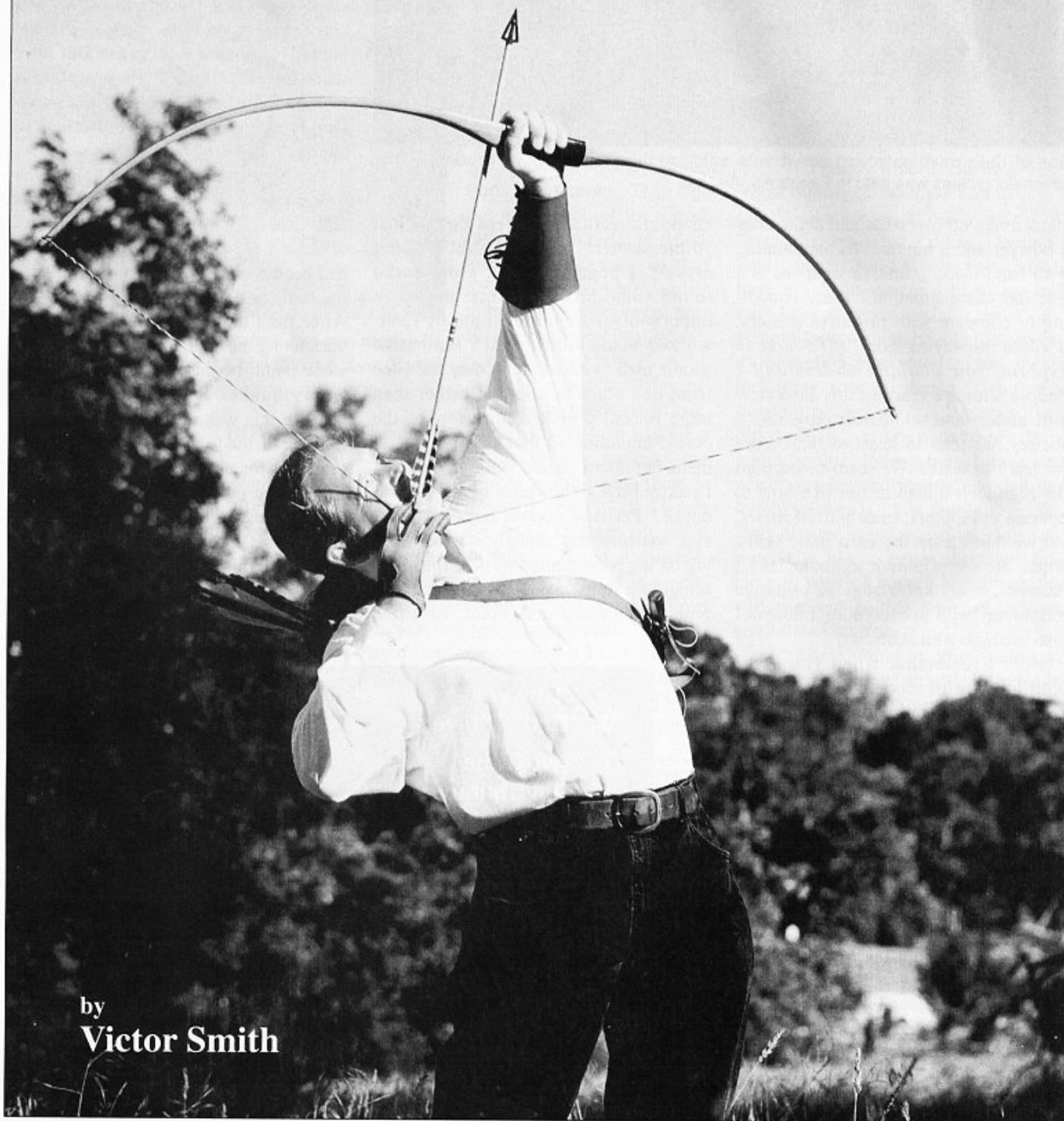
Bitterroot Bow
 Custom Longbows & Static Recurves

PO Box 342
 Hamilton MT 59840

(406) 961-5409

THE MAGIC BOW

AND THE PACIFIC COAST TRADITIONAL CHALLENGE



by
Victor Smith

For thousands of years mankind has sat around the campfire, telling the stories of great warriors and hunters, and their unbelievable deeds. Sometimes our heroes' feats are so fantastic, that they can only be explained by the aid of magic—such is the case in King Arthur and his famed Excaliber sword.

Today I will tell you the story of Thomas Mills and his Magic Bow. A bow of unknown name and origin. A bow so great that it can only be explained through magic. And so the legend begins. . .

The Pacific Coast Traditional Challenge is quite possibly California's most difficult, all-traditional archery contest. Now in its sixth year, this tournament has been the inspiration for many other traditional meets.

Even at a smooth pace, it will take you nearly five hours to finish the fifty 3-D targets.

The Pacific Coast Traditional Challenge is readily known for its creative approach. There are the usual challenging targets, such as the famed steel deer, and the female turkey at thirty yards in front of a solid rock bank—definite arrow eaters. Other difficult targets include hand thrown flying discs, only twelve inches in diameter, at twenty five yards. At yet another target, a rope is strewn across the shooting line only fifteen inches high. This leaves the contestant no alternative but to shoot from a laying position, or on his knees laying over in a complete horizontal position. How about a pop up boar? At varying time intervals, a small boar will pop up from behind a bale of hay for a period of two or three seconds. And then there is the moving-pig shot, I have been to some tournaments where the moving pig is let loose at a slow pace, so as to not make the shot too difficult. Not the case here! This piggy is definitely being pressured by many hunters and is rapidly scurrying along.

Seasoned horsemen will still find it a difficult problem sitting in a saddle and turning completely backwards, and shooting at a cougar. Not exactly your standard shooting position. How about shooting through a truck tire, twenty yards away, onto a deer at thirty five yards—it sounds straight forward and easy...

That's what you might think until you try it, I would say seven out of ten people misjudge the arc and hit the tire. One of the easier shots, that is of the novelty sort, is a shot from a stationary canoe. Believe me, it still takes some finesse. The speed round is my personal favorite. Seven 3-D's are positioned ten to twenty five yards from the stake. You are given twenty seconds to shoot as many arrows as you can. You can have an arrow out and in your hand, but not knocked or even touching the bow until the whistle is blown. A seasoned shooter can get five arrows off. How many he hits is another story.

A new addition to the tournament is three targets shot from inside a ditch. Imagine standing in a large gully, approximately four to five feet in depth, and trying to shoot at a ram or deer at ground level. Major psych out! Your arrow barely clears the top of the gully. Although it is a straight shot, the angles play with your perspective.

By far the most talked about, and eagerly awaited target is the marble shot. For those of us who had not shot

this before, and heard about it through the flyers for the tournament, the marble target brought all kinds of crazy visions. Are we going to be shooting at marbles? From how far? Little did the newcomers know that it is much worse than it sounds. This shot was only introduced for the first time last year. It starts with a full size toilet seat. Yeah that's right, a normal household commode. You must start your shot by sitting on the toilet. Your bow and arrow, however, are stationed on a low rack about fifteen feet away. In front of the commode is an eight foot long, one inch, PVC pipe. While sitting on the commode you must insert the marble into the PVC pipe, get up and run to your bow and arrow, and shoot at a ram before the marble comes out the end of the pipe and drops into a bucket. Your right! This doesn't sound easy, and believe me it's not. The sound alone of that marble traveling down the pipe will send you into a panic. I think your starting to get the picture now, this is no easy tournament. I think that is why they call it a challenge, the Pacific Coast Traditional Challenge—because there are some real challenging targets.



THREE RIVERS ARCHERY SUPPLY



WORLD'S LARGEST TRADITIONAL PRIMITIVE ARCHERY SUPPLIER

- *Quality Products*
- *Fast Service*
- *Reasonable Prices*
- *2700 Items in Stock*

Send \$2.00 for Catalog #12

P.O. Box 517, Dept. 3 • Ashley, IN 46705

No Overseas Orders

www.3riversarchery.com

A couple of weeks prior to this tournament a close friend of mine, Curtis Hermann, and I were driving back home from another fun archery meet in mid California. During the three hour drive we discussed many of our archery philosophies. Curtis had just bought another bow at the meet. A bow that he had wanted for a couple of years. He said in an almost guilty voice "You know, I don't really need another bow. . . I've got more than I know what to do with now...I'm not even sure if I've got room to hang it in my showroom."

Curtis has a small room dedicated to all of his archery equipment. A small room lined with beautiful archery treasures. I immediately responded to his slightly guilty pleadings. "Yeah but this bow is particularly smooth and fast. And it is absolutely beautiful. Who knows, this could be the bow that does it for you, lets you shoot the best you can" (in my mind you can never have enough bows and arrows). Curtis responded in his usual rational thinking. "I have plenty of bows that shoot smooth and

fast, and very straight. In fact I don't think that there are many bows that don't shoot straight. You see, there are many great bows, but a bow has to turn the archer on, for some reason—the way the bow feels in his hands—or how it pulls. That bow has to turn the archer on, for whatever reason, in order that he might perform at his best."

I thought deeply about Curtis' statement, and knew him to be right. The bow must turn the archer on. There must be a trust between the archer and his bow. For me, it must melt into my hand so that I and the bow become one. It must be made of beautiful exotic woods so that I may stop and gaze at its beauty from time to time. It must be made to exacting tolerances. Just two weeks later I was to learn the true meaning of Curtis' statement.

THE MAGIC BOW

Tom Mills is one of those persons who is talented in most everything he tries. I believe this to be so because he attacks everything with such enthusiasm

and vigor. An earnest enthusiasm. I say this because whatever he does, he does not for ego, but rather because it fascinates him. Even more important than archery itself, Tom loves all the crafts that go along with it. He makes his own leather quivers, and arrows, and is attempting several self bows from trees he has cut down. Currently he is making a basket style quiver from pine needles. You know that would take some real patience!

Tom stepped into archery about eight years ago. He quickly caught on to proper form and was shooting good scores. He went through the normal transformation of shooting different styles of bows. He started out with a good quality recurve. Then switched to a higher-priced take-down recurve. He had been wanting to try a good longbow, because he liked the simplicity of it. An unusual opportunity came up for him and he picked up a very high quality used longbow. His scores plummeted.

Even so he seemed to like archery even more. This is when he also



The hunting in Nevada was tougher than any year I could remember. When it came time for the one and only shot of a long, difficult season, my Wilderness longbow put the arrow right where I was looking!
Butch Olsen

Once again, my Wilderness bow made the perfect shot possible.



Bowhunting is more than a pastime for me, it's how I make my living. When I'm in the field, I know I can count on my PIN-NACLE longbow by Wilderness Bows 100%.

Bill "Bearcrazy" Wiesner



Whether you pursue higher scores at your local 3-D shoots or the cagey old buck at your favorite hunting spot, with Wilderness Bows, you can achieve your highest goals.



Wilderness Bows

MODOC Broadheads

1015 Central Pit Lane
Nampa, ID 83687
(208) 466-1827



- Made with .050 Spring Steel
- One-piece, 125 or 140 grains

MODOC
Broadheads by
Wilderness Bows

PERFECT FLIGHT GUARANTEED!



- Machined-aluminum ferrule
- One-piece, 125 or 140 grains

started to make his own archery tackle. Slowly but surely his scores climbed back up the scale. He then purchased another high-quality longbow, this time of an ever higher-tech design, and his scores once again improved. We met every Wednesday evening for an indoor shoot, so it was very easy to see his progression.

One evening, about three years ago, Tom showed up with a new bow and a gleam in his eyes. He proudly walked up and showed us his latest find, a bow that he had found at a garage sale. He proudly boasted that he had only paid five dollars for this bow. One quick look at the bow, and a couple of us told him that he had overpaid. It is a bow of the most simplistic design. There are no manufacturer's labels, only a stamp on the back of the bow telling us that it is 64 lbs. at 28 inches and 62 inches long, and three capital letters, H. S. B. The bow only has one lamination of glass on the back of the bow, and two laminations of black and white in the middle of the handle. It is most likely made of lemonwood in the fifties. The belly is slightly rounded, starting to resemble an English longbow D shape, but it is most definitely a flatbow design. He then told us that it was in such bad condition when he got it that he had to refinish the bow and add a new leather handle.

Upon his enthusiastic insistence each one of us was made to handle and shoot the bow. Tom had inserted a small piece of leather, about a quarter inch in thickness, under the leather handle. This was to be the arrow shelf. When I pulled the bow back to 26 inches or so, it was like hitting a brick wall. This bow stacked greater than any other bow I had ever pulled—and I have been pulling bows for over thirty years.

Upon release of the arrow I was even more disappointed for the bow seemed to have no cast. About this time I gave Tom the old eye. The kind that says "are you crazy—you kidding me!" But Tom just kept on telling us how much he really liked the bow. Again his scores plummeted to new lows. This didn't seem to bother Tom, he was happier than ever at the



Close-up view of the magic bow's" riser.

archery game and his simplistic, forty-year-old flatbow.

Some time later Tom met the girl of his dreams. On one of his first dates he took her out to the local archery range with his flatbow. With his first arrow he hit the center of the X mark of a field target at thirty yards. She later confessed that she was so impressed when Tom shot the X, that her knees became shaky. Needless to say they are now happily married. In preparation for marriage, and the buying and filling up of a new home, Tom partially set aside the bow and arrow for a couple of years until a few months ago.

Tom had attended the very first Pacific Coast Traditional Challenge six years ago. He had missed the last four years for one reason or another. He had exclaimed how much he was looking forward to shooting once again with all of his archery compatriots and going to the Pacific Coast Tradition Challenge. A month before the tournament we all began practicing together. Tom would gather odd targets, like paper cups and place them on the end of a branch on a small tree or shrub. Six or seven of us would shoot at the paper cups at anywhere from twenty five to forty yards away. All of us did well at these targets, or so we would like to believe. If you fling a hundred arrows, eventually you will hit your target. But Tom called his shots most of the time. With a large, boyish grin he would pretend to be an Indian and stalk up on the paper cup while narrating, *"Slowly the great hunter saw his prey and crept up silently until he was in perfect position."* Then Tom would swoop down in a kneeling position and let loose of an arrow in one continuous motion and, more often than not, hit that paper cup!

The morning of the tournament the anticipation was great. All of us dreamed of doing well—except for Tom. He exclaimed that he was just here to be with his friends and to have fun. He later told me that his primitive style flatbow took all the pressure of shooting off him. *"It's not an expensive tech bow, so I don't feel like it is expected of me to shoot high scores. Therefore, I can just let go and have fun"* he modestly said. And Tom did just that at the meet.



**Little Beaver
Trading Post**

"Home of the Stave Master"

Specializing in Self Bows ➤ Self Bow Classes
Primitive and Traditional Archery
Primitive Living Supplies

Roy & Lori Henderson P.O. Box 209 Waterloo, IN 46793
(219)668-7459



The pop up pig—easy. The Flying disc. . . well, he missed that one. The speed round—he hit four out of four, and two of them were tens.

Tom was just having fun, and hitting very well. The steel deer, no problem. The turkey in front of the solid rock bank—piece of cake. The pop up pig—easy. The flying disc. . . well, he missed that one. The speed round—he hit four out of four, and two of them were tens.

None of us in our group had realized just how well Tom had done until all the scores were up on the board. Then I blurted out "Hey Tom! I think you have the highest score in the longbow division!" Tom who had been paying no attention to his score, or the score board, couldn't believe it. A few minutes later Randy Hall, one of the designers of the Pacific Coast Traditional Challenge, announced over the loudspeaker system "And first place in the longbow division is Tom Mills, and by the way, Tom is shooting a bow that he bought at a garage sale for five dollars!" The crowd wailed with laughter and excitement at Tom's unbelievable deed. His five dollar

bow had taken one of California's most difficult tournaments.

During the minutes that passed after the announcement of Tom's Victory, all the surrounding archers gave their opinions as to why Tom had done so well. "It's his lovely wife!" (She had accompanied Tom throughout the shoot) "His love for her has made him so happy! After all he couldn't shoot that well before he met her." Another profusely rebutted "NO! NO! It's because he is happy with himself. Another can't give you that kind of confidence. You must first be happy with your inner self in order to shoot with perfect form." Another yet argued "Tom is just one of those Naturals. He is just a natural shot. You know, it comes easy for him."



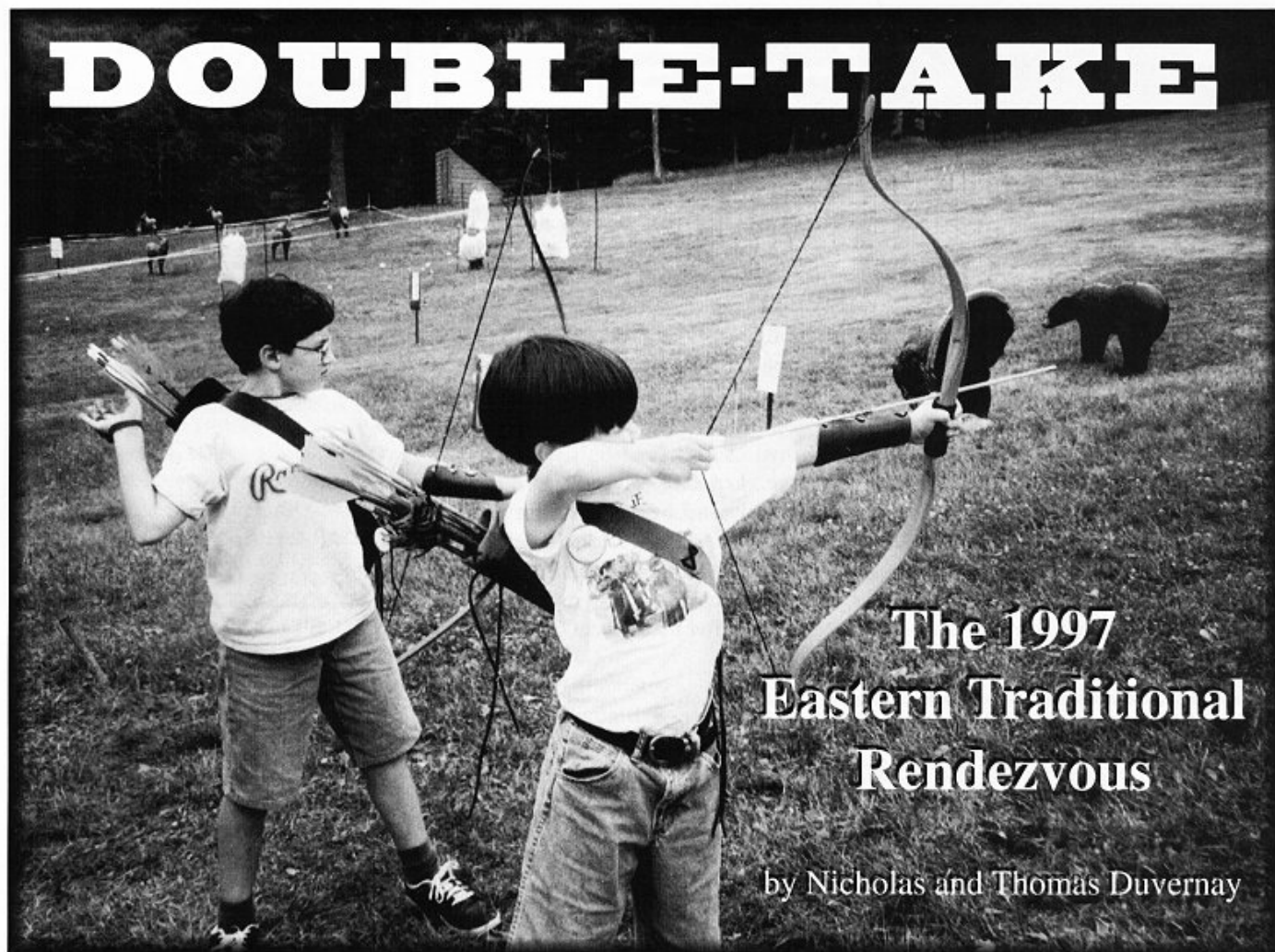
Hunters Rendezvous
Traditional Archery & Muzzleloading Supply Post
Largest & Best Stocked Store in New England
 Custom-Made Longbows, Recurves, Custom Cedar Arrows & Accessories. Over 100 Custom Bows in Stock at All Times. Antique, Reproduction & Custom Muzzleloading Firearms. Largest Selection of Custom-Made Muzzleloading Rifles in New England. Barrels for T.C. Hawken & Renegade. Handcrafted Authentic Accoutrements. Buckskin Clothing • Dealer for Shiloh Sharps
When In New England, Stop By And See Our Store.
 Rte. 119 (South Road)
 Pepperell, Massachusetts 01463
 (508) 433-9458 • Fed. Lic. #05976
 Exit 31 Off Rte. 495, 11 Miles West On Rte. 119 — Look For The Log Cabin

But I alone knew the real truth! It is quite simple really! Tom has a Magic Bow. A bow that is Magic for Tom, and it turns him on!



If anyone has any information as to the maker of Tom's Magic Bow, bearing the marks of H. S. B., please call Tom in the evenings at (818) 794-9158.

<p>NEW Custom Recurves by Bob Lee & Dale Stahl</p>	<p>Jim & Marcia Rebuck</p>	<p>Custom Long Bows by Dale Stahl & Susq. Archery</p>
<p>J & M Traditions</p>		
<p>ALL Traditional Supplies Recurves Long Bows New & Used</p>	 <p>R.D. #2, Box 413 Sunbury, PA 17801 (717) 286-7887</p>	<p>Flemish Strings Custom Arrows Aluminum or Cedar</p>



The 1997 Eastern Traditional Rendezvous

by Nicholas and Thomas Duvernay

The following stories about the Eastern Traditional Archery Rendezvous (ETAR) at Denton Hill, Pennsylvania are by father, Thomas and son, Nicholas Duvernay (10). First, Nicholas will give his account.

PART I (by Nicholas Duvernay)

Wednesday, July 23

When we first arrived at Denton Hill, we stopped at the gate to check in. My dad was supposed to give a demonstration, along with Jaap Koppedraye and Don Shymanski on Asian archery, so he was checking in. His name wasn't on the list, so we had to wait while people checked on it. After awhile, we were told to go set up our camp and to check back later.

We went to find a place to put our tent. There were maybe about a quarter of the number of people who would be there later on. When we got to the place where we would set up our tent, we went to work. We were more than half done when the stakes for the tent wouldn't go in the ground, because it was so rocky. After several minutes of struggling with it, we finally made it. After that, we put up a canopy that felt like it took twice as long. When we finally finished, I became bored.

Later, my dad went to shoot at "Bullwinkle," a target that's shaped like a moose, up on a ski hill. I watched. My dad always joked about "going to frighten Bullwinkle." After that, when we went to our tent, it started to sprinkle. As soon as we got inside the tent, it started pouring. We were lucky we had that canopy, otherwise we would have had to stay inside the tent or car. Instead, we were under the canopy watching the rain. That night, it rained so hard that I was sure the canopy would blow away (and maybe us with it!).

Thursday, July 24

When I woke up, I was sure the canopy would be blown off somewhere on the ground but, surprisingly, it was still there. Before noon, the dealers were getting ready. My dad and I went to town (Coudersport) with Jaap Koppedraye's wife, Kay, to get some groceries and stuff. When we got back, there were lots of dealers and customers. Some people were in at the dealers' booths and others were out shooting.

That afternoon, there was a swap meet, where people could sell things. However, as it was sprinkling, many people didn't stay long. Still, many people came.

Above Photo: Nicholas Duvernay (right) on the practice range, enjoying his new osage recurve.



Settling in for a relaxed ride up the hill.

That evening, we went to the Koppedray's campsite to have some chili and talk. Jaap, Kay, and Don Shymanski were there and we had chili, but mostly talked. It was a lot of fun. After that, we went back to our camp and got ready for bed. That night, it

wasn't really raining, but there were sprinkles.

Friday, July 25

We got up at six o'clock in the morning. Around seven, Don, Jaap, David Gray (from Krackow Company), my dad, and I had breakfast. They discussed what they were going to do for that afternoon's demonstration.

After that, my dad and I went to the lodge to take a shower (during the day, the showers were empty). Then we went to look for a new bow for me.

We found a nice bow for me from Northwind Archery. It is a 27# osage recurve. I tried drawing it back. It drew back easily and I even went out back to test shoot it. At that time, I couldn't hit the target but I knew that all it would take was getting used to it. So my dad bought it for me. After that, I went out to shoot a little bit.

The WOODSHED



Hi. Let me introduce you to the WOODSHED.

First, we have one of the best selections of archery woods available for bowyers. We purchase quality woods in quantities to get volume discounts, which means savings to you.

Second, we are able to produce LAMINATIONS to your specifications. Our custom lamination forms were milled to precise stan-

dards, which mean repeatable high quality laminations for you.

Third, shop around, compare prices and quality, then give us a try. Your satisfaction is guaranteed!

The WOODSHED

4585 N. Columbine St
Boise, ID 83713
(208) 375-2662



The Krackow Company

UNIQUE CATALOGUE OF INTERNATIONAL ARCHERY EQUIPMENT

full color catalogue - four dollars

RD #1 Beechwood Road
New Wilmington, Pennsylvania 16142 USA

412.946.8332

By the lodge, Stacy Groscup was giving an aerial shooting demonstration. It was fun because he could throw axes, shoot targets in the air, shoot darts with a blow gun at a target and stack them up. At the end, he even shot aspirin out of the air. When the demonstration was over, I went to buy some flu-flus and try them out; they worked fine.

Later was the Asian archery demonstration that my dad, Don, and Jaap were going to do. My dad had me videotape it. Don demonstrated kyudo, Japanese archery. At first, to everyone's surprise, he made a dead-on bulls-eye (my dad later joked to Don that if it were him, he would have turned to the crowd to say "thank you" and leave). Jaap demonstrated Indo-Persian and then my dad demonstrated goongdo, Korean archery.

After the demonstration, all of us (my dad, Jaap, Kay, Don, Mark Gabel, and I) went to a restaurant. It took a long time for my meal to come, but it was very delicious. At night, we got to throw atlatls. An atlatl is a special wooden stick that is used to throw a long dart. It was a lot of fun.

"PULLING BIG BOWS"

—The first in a series of videos on "Archery Fitness." Train at home with your bow and simple exercise equipment. Increase your bow poundage by as much as 25 lbs. in six weeks.

"I personally have never seen a really great archer who did not have a rock-solid bow arm. This video definitely helps give you better bow control, which equals better accuracy." **Paul Sparks, 1996 World Recurve Champion** (left-handed)

\$19.95 + \$3.00 S & H. VISA/MC (915) 737-2343.
Checks or MO to: Price Ebert, P.O. Box 1128, Dept. IA,
Sweetwater, TX 79556-1128.



PACIFIC YEW, INC.

FINE YEW LONGBOWS BY JAY ST. CHARLES
P.O. BOX 3963 KENT WA 98032

PH: (206) 946-1064
FAX: (206) 946-0973

VISIT OUR WEBSITE:
www.sellbow.com

E-MAIL: info@sellbow.com

We went to the pay phone to call my grandparents in Michigan. We had to wait about thirty minutes, as there was a long line. The wait was boring, but it was nice to talk with my grandpa and grandma.

Saturday, July 26

This was the day that I really did a lot of archery. I kept shooting for hours. As I became more used to my bow, I became much better.

After I had been shooting for awhile, my dad and I went up a ski lift. While going up, you could see many archers shooting at the 3D animal targets. We also got to go down the hill on the lift. While going up and down, my dad took many pictures.

After the lift, I tried shooting at a carousel that has foam targets on it. While it spins, you shoot at the targets. It was fun. My dad bought me a turkey call, made from turkey parts. It was loud and fun.

At night, we all went to David Gray's tent (next to ours), where we shared s'mores and the adults talked.



Shooters on one of the ranges, as seen from the chairlift overhead.

SHADOW
Custom Bows

Handcrafted Performance Lifetime Guarantee

SHADOW BOWS: (406) 475-9443
3689 Keir Lane • Helena, MT • 59602

Sunday, July 27

This was the last day. Everyone was packing up to go back home. Around eleven o'clock, we packed up, too. I realized that I would miss everyone at Denton Hill, but we had to go. Besides, next year we can all meet again.

PART 2

Several months ago, I was asked if I would be interested in demonstrating Korean archery (Goong Do) at Denton

Hill. Particularly, my part would be a demonstration of the Korean horn bow. The idea was intriguing but also a bit overwhelming. I guess the main reason being, I consider myself an average archer; in my view, a Korean master would better represent the art. Unfortunately, all the Korean masters I know are in Korea.

By default, that left me. I decided I would do it. Besides, it would be a good experience, both for me and my son.

I kept in constant contact with Rik Hinton, Jaap Koppedraayer, and David Gray. Within a short time, the ideas were flowing through my mind constantly; for the next several months I was making plans to head out to ETAR.

For two-thirds of the year, I teach at a university in Korea; I spend vacation time, along with my son, visiting with my parents, other family, and friends. My wife, unfortunately, finds vacation time to be her busiest, so she has been unable to travel back to the States for several years.

While in Korea, I practice Korean traditional archery whenever I can. In the months preceding ETAR, I discussed the event with our club members. They were not only supportive, they were excited and welcomed the idea of Korean archery being introduced to such a large, international audience.

Fast forward to ETAR. I brought with me many things related to Korean archery—bows, arrows, and ideas. However, I had no idea what to expect, as this was the first time I ever attended such an event. Talk about culture shock!

My son covered all of the main points of our trip. I'll just add a few of my own. We drove around seven hundred miles, one way, from my hometown

*Serving the
Traditional and
Primitive Archer
since 1984*

Welchman Longbows
Mahaska Custom Bows
Blue Ridge Archery
Hollenbeck Archery
Robertson Stykbow
Howard Hill Archery
Medicine Stick Selfbows

Custom Cedar Arrows
and Accessories

DISTRIBUTOR OF
Rose City Archery
Port Orford
Cedar Shafts

Send \$2.
for catalog

Worldwide
mailorder

Visa and
Mastercard
accepted

**SILVER ARROW
ARCHERY**

106 Fordway Ext. Dept. 1A
Derry, NH 03038
(603) 434-0569

in Michigan to Denton Hill in Pennsylvania. It was a time for me and my son to spend time together, getting to know each other better and to share our interest in archery.

I have been teaching archery to my son, on and off, since he was six (he's ten this year). I had taught him, up to ETAR, the Western-style three-finger draw; only recently have I been teaching him how to shoot using a thumb ring.

At first, I felt a little like an outsider, as it was my first time to ETAR. It seemed like most other people were veterans of the event and I didn't know anyone. That soon changed, however.

Within an hour of arriving, I recognized Gary Ellis (*Legendary Longbows/Primitive Archer Magazine*). We had never met before, but had talked on the phone a few times, as he was interested in Korean horn bows and bamboo arrows. That first contact put me at ease.

We had great neighbors on all sides. There were those who asked if they could help me when I was obviously having a hard time with our

canopy. I politely declined, as I felt my son and I should try everything on our own. The first night, it almost blew away, but I finally figured it out by the next day.

We also had wonderful neighbors who were quick with a hot cup of coffee at six in the morning. It was more of the same, wherever we went.

By the second day, I met up with David Gray of *Krackow* and Jaap Koppedraayer of *Yumi*. All of a sudden, I was in familiar territory. It was the first time I had actually ever met David or Jaap, but we had corresponded and talked on the phone many times.

From the first time I met Jaap and his wife, Kay, I felt as though I had known them all my life. Very quickly, I found myself joking with Jaap, just as people who had known him for several years were doing.

At this time, I had the pleasure of meeting Don Shymanski, who would be demonstrating kyudo and also with Mark Gabel, who makes great arrows. My list of friends was growing fast.

Most everyone who was at ETAR came from a hunting background. Although I have never hunted in my life,

**We've Got Port Orford
Cedar Shafts For You.**

Over 50,000 shafts in stock for quick delivery

- ♦ **Parallel or Tapered Cedar Shafts**
(Diameters available: 5/16", 11/32", 23/64")
- ♦ **Easton Aluminum Shafts**
(Gamegetter, XX-75, & Classics)
- ♦ **Custom Arrow Building Supplies**
- ♦ **Broadheads & Field Points**
- ♦ **Dacron / Nylon / Fast Flight**
- ♦ **Popular Archery Books & Videos**
- ♦ **Martin Recurves & Longbows**

Now Available TrueFlight Feathers

CALL TODAY
**STABLE'S
ARCHERY**
22523 SR 613 W,
Oakwood, OH 45873
Send SASE or
Ph (419) 594 2109
or (419) 594 3712
Dealer Inquiries
Welcome

I understand the issues and respect ethical hunters. On the other hand, Asian-style archery, I found, was rather unknown among most of the attendees. Most people I talked with had never seen a horn bow or thumb ring so, naturally, many of the questions people asked were about bracing a horn bow and using a thumb ring.

It was great to see such a variety of styles of archery. From standard recurves, to Native American and on to European and Asian; the world was well covered. In a corner of the dealer's tent, Jaap and David had a bit of the world in just two small sections. Jaap has been crafting fine bows and arrows in the Asian style for several years.

Also there with the horn bows they had made were Lukas Novotny and Tony Horvath. Although I didn't get a chance to see the bows shot, they were very beautiful to look at.

**TOP-QUALITY
RAWHIDE & SINEW**

Rawhide from eastern whitetails, either whole (for drums, quivers, and tanning) or in strips (2 1/4" x 36" for bow backing). Leg and back sinew from eastern whitetails (for backing, string-making, sewing, etc.) either as whole, dried tendons or pre-processed (only minor separating required). Top-quality hide glue also available.

Chuck Homitz
34 Meyers Rd. Washington, PA 15301 Ph: (412) 222-5861

The main reason I was at ETAR, the Asian archery demonstration, went quite well. Jaap demonstrated an Indo-Persian bow. Don showed a little about kyudo and I shot a few in the Korean style.

Jaap braced a Korean horn bow. He did it using what Koreans call a "dojigae" and what is called in the West "tepliks." We decided to use this device, rather than hand bracing (which is faster), for reasons of safety of the bow. Our demonstrations were short, but we had a chance to introduce styles of archery not well known in the West.

Next year, we hope to be able to expand the Asian archery concept. We would like to have a tent dedicated to the Eastern arts. In it would be Korean, Japanese, Chinese, and Indo-Persian sections (and possibly others). Not only would there be Asian archery products for sale but there would also be workshops for such things as kyudo, goongdo, bow bracing, and thumb ring use.

Aside from the demonstration, it was fun to go out and shoot the bows. People seemed intrigued by the 48", 50-pound Korean FRP bow I was shooting. It has a core of bamboo, laminated back and belly and wood siyahs. It's backed with Chinese birch bark. Unbraced, it looks like any recurve. When braced, it looks just like a Korean horn bow. The amazing thing is its power and cast. It is sweet to shoot!

Several people took it out for a spin. Not one came back disappointed. Frequently, people mentioned how nice it would be to hunt with; compact and powerful.

Another interesting part of the event was taking the chairlift up to the top of the mountain. Most people took their bows with them, to shoot the 3D courses on the way down. My son and I, however, just took a camera. The scenery was spectacular and you could tell the people going on the courses were having a great time. We rode the lift down, too.

All in all, we had a really great time. As my son stated, we will miss everyone at Denton Hill, but we can, hopefully, all meet again next year.



Photos:

(above) Jaap Koppedrayer practicing Kyudo in the kneeling position.



(right) Lots of smiles and happy archers were evident on the chairlifts throughout the Rendezvous.



(below) Thomas Duvernay shooting a Korean FRP bow at a 50-yard target, which is much closer than those he is used to shooting at in Korea (180 yards).



CLASSIFIED ADS

KNIGHT YEW BOWS, O.T.A. FIR SHAFTS!

Quality products direct from the manufacturer. Distributor and Dealer Programs available. FREE brochures. **Doug Knight**, 553 Elm Street, Jefferson Oregon 97352. Phone: (541) 327-3806. Fax (541) 327-2852.



LEARN WOODEN BOW MAKING with **ERRETT CALLAHAN**. *50 years experience*. Workshops in May (archery), June (flintknapping), and October (primitive technology). Write for details. Cliffside Workshops, 2 Fredonia Ave., Lynchburg, VA 24503 Ph: (804) 528-3444.

HOW TO MAKE A DOUBLE-LOOPED FLEMISH TWIST BOWSTRING by Martin Maynard **USING THE RIGHT BOWSTRING MATERIAL** by Dan Quillian. Get this illustrated booklet with Dan's recommendations for just \$9.50 which includes postage. Call **BCY, Inc.** (860) 434-3126 now.

TWIG ARCHERY.

Raw shafting, pre-finished shafts, finished arrows. Cedar, pine, maple, "pass-through" hardwoods, and all new CHUNDOO. Parallel, custom tapered, barreled shafts. Arrow-building supplies. Tanned snakeskins, only \$12 - \$15, very nice!! Beautiful, hand-laced, leather quivers and accessories. Free brochure. **TWIG ARCHERY**, 45194 TR 432, Conesville, OH 43811. (614) 829-2847, Monday-Friday 4-8:30 p.m., Saturday 9-5 p.m.

PREMIUM PORT ORFORD CEDAR SHAFTS AND CUSTOM ARROWS.

Stotler custom TD bows, call Bob at **ANTELOPE TRADITIONAL ARCHERY** - (510) 680-7219.

BOW STAVES - IMPORTED WOODS AND HANDLE RISERS. Books - Tools - Glue - Instructional Booklets - Catalog \$1.50. **WOODS UNUSUAL**, P.O. Box 1722, Hawaiian Gardens California, 90716-0722.

BOW LIST:

Bear, Pearson, Wing, Shakespeare, etc. Shooters and collectibles. Send long SASE for list. Ken Efaw, Box 89, R.D. #1, Waynesburg, PA 15370.

SOLID SCULPTED STAVES—from \$110. To get our complete offer send \$1 cash to Cliff Rhodes, 7514 Kisco Drive, Fayetteville, NC 28303-1937.

CLASSIFIED AD RATE:
\$1.00 PER WORD. \$20.00 MINIMUM.

**USED-BOW ADS: \$10.00. ONE BOW PER AD,
20 WORD MAXIMUM.**

JAVA MAN PRIMITIVE ARCHERY:

Durable, efficient bows from a variety of hardwoods and styles. Designed and built to meet your requirements. Greg Coffey, (810) 629-8084, 6-10 p.m. EST.

YOU WANTED THEM, HERE THEY ARE. All-wood bows by Greg Harris. **Quality Northwest Bow Woods**, 289 West Bartlett Rd. Lynden, WA 98264 Phone: (360) 398-7146

WATER BUFFALO and GEMSBOK HORN. Bamboo, hide glue, moose and caribou billets, knapping materials, rawhide, feathers, much more. **The Rock Shop**, 1251 Copper Creek Rd., Wasilla, AK 99654, (907) 373-3094.

TAPERED PORT ORFORD CEDAR SHAFTS. We make our own shafts from fire-killed old-growth Port Orford cedar. Currently we have 11/32 & 23/64, both tapered to 5/16. Our customers say we have "the finest shafts they have ever seen." We are **Rogue River Archery**, 4244 Leonard Rd., Grants Pass, OR 97527. Phone: 1-888-8arrows, Fax: 541-474-4441.

WOODEN BOWS

From Ash to Zebrawood. Ancient, Traditional, and Current Designs. Smooth, Fast, and Durable. Quick Delivery. **PAUL RODGERS** (510) 634-1835

SUNDOWN PRODUCTS

Deer Leg Sinew (whole and processed), Rawhide (whole and strips), Hide Glue, Back Sinew, Beaver Silencers, AND MORE! Call or write for price list. Charles Homitz, 34 Meyers Road, Washington, PA 15301, (412) 222-5861.

CHESAPEAKE, DESPERADO, GREENHORN, AND EXCALIBUR LONGBOWS. Full line of traditional and primitive archery, tapered shafts, accessories, free catalog. **NO FRONTIERS ARCHERY**, 8206 Townsend St. #203, Fairfax VA 22031.

O'I'E BUFF ARCHERY, Custom tooled leather products, "25" styles of quivers, book releases; *Arrowsmithing, A workable Knowledge from Primitive to Traditional, The Osage Orange Static Recurve, A Workable Knowledge From Live Tree to Finished Bow*, \$7.00 each plus \$2.00 shipping, traditional/primitive supplies. Catalog \$2.00. 3790 Pecan Drive, St. George KS 66535 (913) 494-2797

CUSTOM WOODEN ARROWS BY RICCARDELLI'S ARROWSMITHING. Available in ash, birch, cedar and Douglas fir. P.O. Box 868, Havertown, PA 19083. Phone or fax: (610) 853-3992.

INSTINCTIVE ARCHER[®]

M A G A Z I N E

The Lore of the Bow—The Flight of the Arrow...

IF YOU...

See beauty in the flight of a perfect arrow.

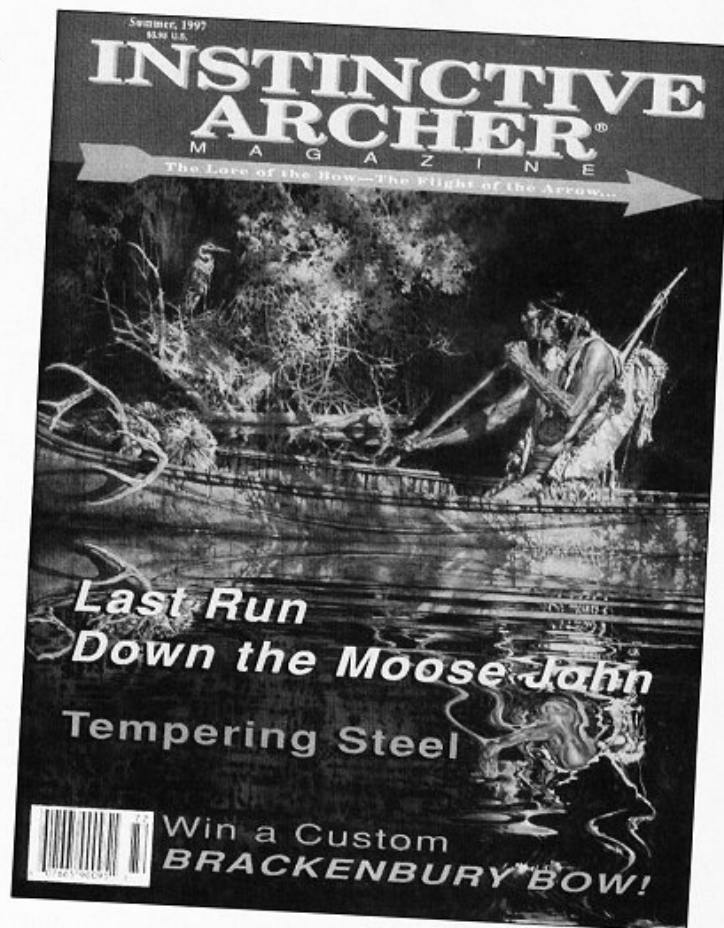
Want instructive articles written by archers
from around the world.

Love the history and romance of archery
almost as much as the sport itself.

Enjoy the thrill of the hunt *AND* the
challenge/camaraderie of traditional archery.

Want to become a better archer.

*Then Subscribe to an Exciting
Archery Magazine With a
Refreshingly-Different Perspective.*



SUBSCRIPTION INFORMATION

U.S. SUBSCRIPTIONS:

One Year: \$12.00

Two Year: \$23.00

CANADA SUBSCRIPTIONS:

One year: \$22.00 U.S.

FOREIGN SUBSCRIPTIONS:

One year: \$30.00 U.S.

Please send a check or money order to:

INSTINCTIVE ARCHER[™] Magazine

P.O. Box 45299, Boise, ID 83711-5299

Allow 6 to 8 Weeks for Delivery

We also accept VISA and Mastercard[™] (Phone: 208 465-9893)

**Begin your collection today!
Order the BACK ISSUES of
Instinctive Archer[™] Magazine.**

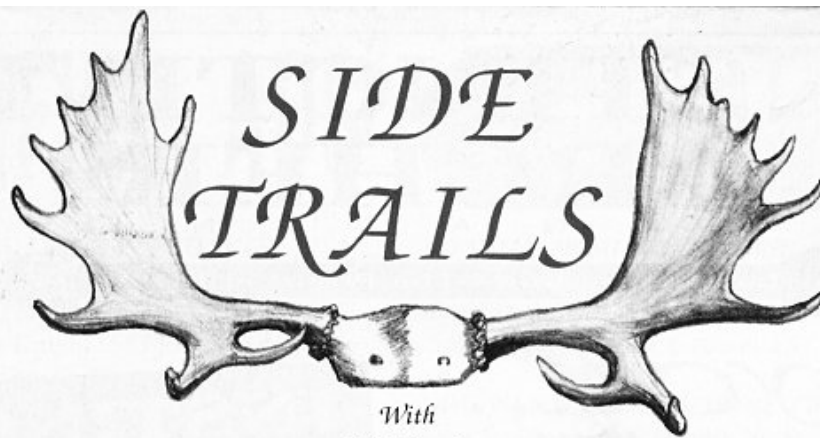
Premier Issue, Summer/Fall '96, ~~W~~ SOLD OUT, '96, Spring '97,
Summer '97, Fall '97. (price includes shipping and handling)

U.S.\$6.50 each

Canada:\$7.00 each

Other Countries:\$8.50 each

LORE: A body of wisdom or knowledge . . . especially when it is of a traditional nature.



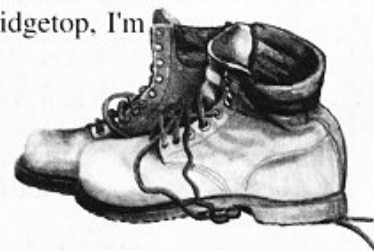
A shiver ran through me, I was cold and wet. My boots were sopped from the constant soaking rain, wet brush, and creek crossings. My hands were partly numb and the wet wool pants I wore steamed from my own body heat. I huddled over the small pack stove that hissed merrily under the tarp to the accompaniment of the patter of rain drops. On the stove a small skillet sizzled with the remains of several grouse that had the misfortune of crossing my path in the twilight of early morning. My arrow had quickly and efficiently dispatched the tasty timber fowl. Dehydrated onions and wild mushrooms sauteed slowly and merged with the aroma of the grouse to create a wonderful anticipation as it cooked slowly to a golden brown. As I sat back to enjoy the feast, my hands warmed as I held the stainless steel plate....alone in my thoughts.

Our camp was far from the nearest road over a rugged mountain trail that traced its faint path over miles of steep canyons and creeks. Hundreds of miles from home in the misty dampness of the mountain valley, darkness came early. The day's hunt had led me over several distant ridges chasing a herd bull for miles through thickets of shoulder high huckleberry brush, across spring bogs, and rocky ravines filled with deadfalls. The bull finally lost me in a steep three-way canyon, the sides of which were so steep and the acoustics such that it became impossible to determine where the bugles were coming from as they echoed from everywhere into nowhere.

Which canyon he had meandered up as he herded his small band of cows along was a mystery. I sat and listened for about an hour as the distant bugling would sweep up and down the canyon with the ebb and flow of the wind. The sun came out briefly and great barges of clouds cartwheeled as they tripped on the craggy ridgetop above me. The bugling subsided along with any clue of the bull's location. Heading towards camp the incredible beauty of the mountains soothed my weary thoughts.

The grouse were done to perfection and were a feast so incredible as to defy description, washed down with mountain spring water, well you just had to be there. The rain poured, the campfire smoked its defiance as its light danced against the sides of the tarp. Sustenance for more than just the body, I gave thanks to God the Creator. I was very thankful for the company of a faithful stalwart friend, for the opportunity to experience the mountains again, thankful for life. Having survived cancer, thankful for another day and the opportunity to recognize what is truly important in life, my wife, my family, my friends, to make the most of my time with them while I can.

So by chance if our trails should meet on some mountain path someday, forgive me if I have a tendency to ramble a bit or if I may seem a little distracted when that hawk sails overhead, or if I linger awhile for no apparent reason on that ridgetop, I'm just glad to be here and I hope you are too.



MARV'S FRAMING & GALLERY

Presents:

These fine art pieces are of the highest quality and each one comes with a certificate of authenticity. Call for more information or free brochure.



The beautiful new prints illustrated here are only a few examples of the outstanding artists and exciting variety of colorful subjects available from Marv's Framing and Gallery.

RETURN OF THE ELDER, by Ernie Cselko
975 S/N 28" x 18" \$155 U.S.



TRAILBLAZER, by Carl Brenders
3,500 S/N 31" x 21" \$235 U.S.



THERE WAS A PLACE, by Frank Miller
1,000 S/N 26" x 18" \$155 U.S.



THE GATHERING, by Nancy Glazier
1,200 S/N 34" x 17" \$175 U.S.

MARV'S FRAMING & GALLERY • 5901 Overland Road • Boise, ID 83709

CALL TODAY
(208) 375-4229



Everything You
Need From
Tournament to
Treestand™

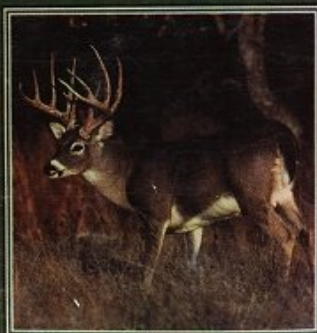
McMahon

TRADITIONAL ARCHERY

125 High Street,
Mansfield, MA 02048
800-627-3199
508-261-9783



WHITETAIL TACTICS
WITH
RECURVES & LONGBOWS



JIM HAMM

WE DO HAVE EVERYTHING YOU NEED

With over 800 different items listed in the catalog we do have everything you need for traditional archery.

WANT HELP? TALK TO WORLD CLASS ARCHERS

Get professional advice on how to choose equipment for tournament archery and hunting from Easton Eagle Eye champion, Dan McMahon. We are all archers here, and some of the people who answer the phones are world class tournament archers.

OPEN 7 DAYS AND EVENINGS!

Convenient hours. Order M-F 8am to 8pm, Saturday 12-8pm and Sunday 12-3pm.

LIFETIME GUARANTEE

If you are ever unsatisfied with the quality or workmanship of a product you purchased from McMahon Traditional Archery, send it back for a full refund! In addition, any product you order may be returned in new condition within 30 days for a full refund.

TRADITIONAL VALUES

Values. A simple word that carries a lot of responsibility. Responsibility like passing on marginal shots, good sportsmanship at tournaments, and a financial commitment to our sport. Last year the McMahon Eagle Eye contest raised \$3,434 for the Wildlife Legislative Fund of America.

WHAT DOES ALL THAT SERVICE COST?

Nothing actually. Even with better guarantees and longer operating hours, a financial commitment to your sport and world class customer service, you will find our prices to be the best around. We guarantee it.



FREE CATALOG



Fall Hunting Issue - 1997

Call for your free catalog,
or email your name and
address to:
catalog@mcMahonarchery.com
Visit our WEB site at
www.mcmahonarchery.com