

ARCHERY A WORLD

Las Vegas,
Cobo Hall
Tournaments
Coming

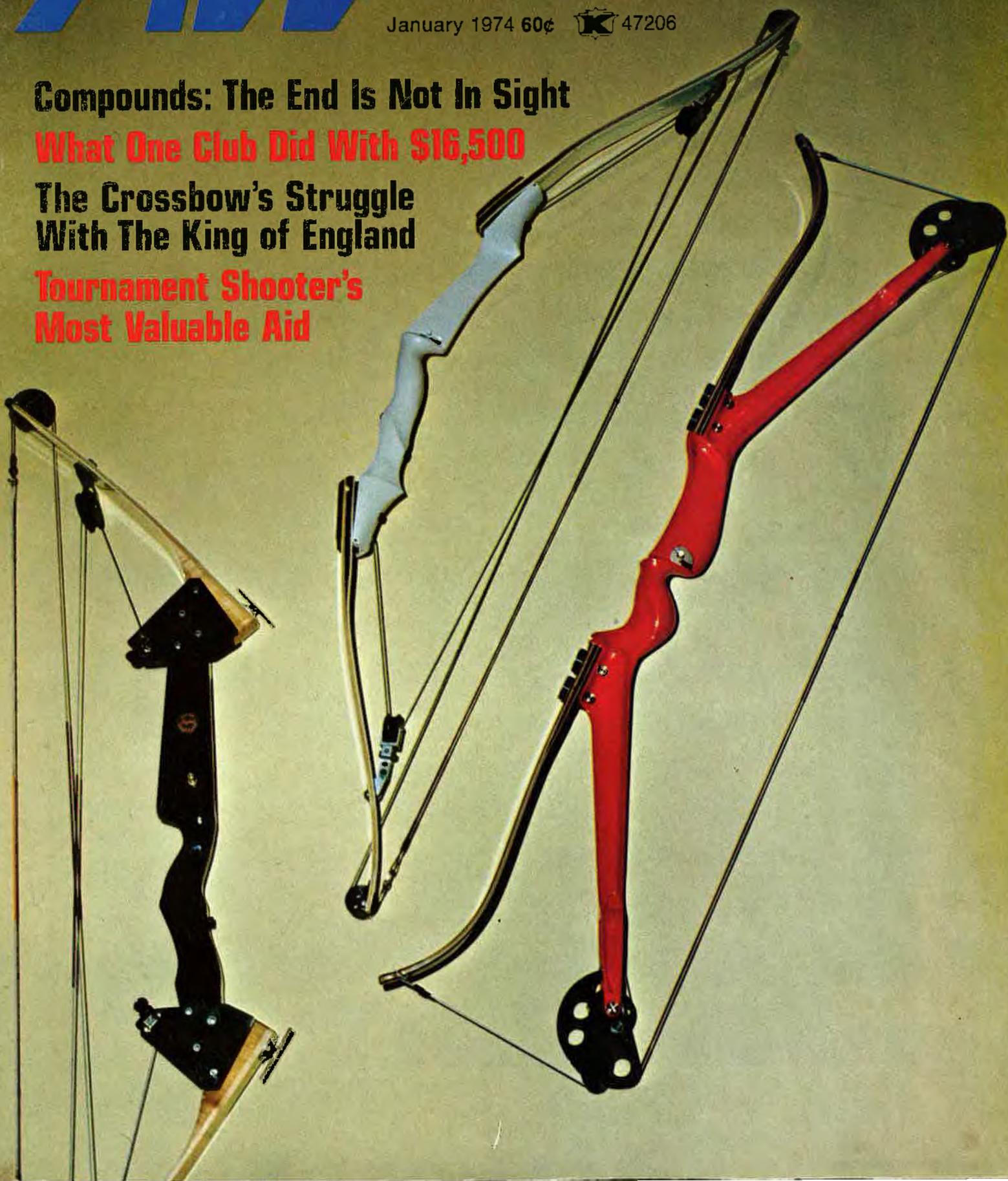
January 1974 60¢  47206

Compounds: The End Is Not In Sight

What One Club Did With \$16,500

**The Crossbow's Struggle
With The King of England**

**Tournament Shooter's
Most Valuable Aid**





silencer td™
58" AMO

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The new Ben Pearson Silencer td is one quiet hunter. Whisper quiet, while casting hotty broadheads with streaking speed and absolute authority.

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It's a sharp looker, too. Hand sculptured from gleaming black Marblewood. With a comfortable feel that gives you firm, positive control. And there's Pearson's patented Rigid Lock take-down that assures stability, portability and split-second assembly.

If there's a better word for "value" it's "Silencer". A sharp buy at your Ben Pearson dealer's.

Get the complete details on Ben Pearson's innovative Hyper-Kinetic limb design, and see the total line of 1973 Ben Pearson archery tackle in our free full color catalog. Write: Ben Pearson Consumer Division Brunswick Corporation, Post Office Box 270, Tulsa, Oklahoma 74101.

EASTON INVITES YOU TO MORE FUN AT THE DESERT INN ARCHERY CLASSIC \$20,000.00 IN CASH AWARDS JANUARY 25, 26 AND 27, 1974 SPONSORED BY: Easton Aluminum, Saunders Archery, Archery World Magazine, Martin Archery, Desert Inn Hotel & Country Club

CHAMPIONSHIP FLIGHT

Over \$4,000.00 in cash will be divided among the divisions for both men and women.

BOWHUNTER

Attention Bowhunters! We've expanded the purse to include you — so get ready to cash in. NFAA rules apply here too.

AMATEUR CHAMPIONSHIP

All amateurs are invited to this — the biggest indoor amateur event in the west. Trophies for men and women.

NFAA-ALOA BONUS AWARDS

Cash will be paid by both the NFAA and ALOA to their members shooting. More information available in the Desert Inn Archery Classic Brochure.

FUN FOR ALL!

The Desert Inn Archery Classic is the most popular, fun-filled archery weekend ever! Las Vegas, great shows, excellent food and excitement of competition, it's all there for you. Write now for your free information and registration pamphlet.

OPEN FLIGHTS

As in the past, the Desert Inn Archery Classic will feature a flight system, so that all shooters have a fair chance of winning cash awards.

SPECIAL "SPEED" ROUND

As an added attraction, we've added two special "speed" rounds, to test your speed in shooting as well as your accuracy!

AMATEUR TEAMS

Tough competition is expected again this year in the amateur team competition. Trophies for men and women.

BONUS DOLLARS

Over 1,000 silver dollars will be awarded in the bonus that created so much interest last year. You may be lucky this year!

EQUIPMENT SHOW

All major archery manufacturers and distributors will be invited to display their products at the Western Archery Show which will be held in conjunction with the Desert Inn Archery Classic.

BAREBOW

All you stringwalkers — there's cash for you at the Desert Inn Archery Classic, and of course, NFAA rules apply.

OPEN TEAMS

Championship and Flight competition for all in the exciting team rounds.

COLLEGIATE TEAMS

This year \$2,000.00 will be awarded to college archery funds of the winning schools. 1st, 2nd, and 3rd place in both men's and women's team.

J.O.A.D. CHAMPIONSHIP

All you Junior Olympic shooters — start practicing. We've got a feature event for all the young archers. Two full rounds will be shot under rules of the Jr. Olympic Program.

SAUNDER'S SLINGSHOT TOURNEY

Second Annual Indoor Slingshot Championships! Be there — try your skill at a new thing — slingshot shooting for CASH! Write Saunders Archery for information.

HOTEL RATES

Single Accommodation	\$18.00
Double Accommodation	\$18.00
Triple Accommodation	\$20.00

Please do *not* send a deposit for rooms. No deposit required.

ENTRANCE FEES

Open Division	\$40.00	Late \$45.00
Amateur	\$12.50	Late \$15.00
Junior Olympics	\$ 5.00	Late \$ 7.00
Open Team	\$40.00	
College Team	\$20.00	
Amateur Team	\$20.00	

Send for your Entry Forms, Hotel Accommodation Forms and complete information pamphlet to:
Desert Inn Archery Classic
7800 Haskell Avenue
Van Nuys, California 91406

EASTON ALUMINUM Jas. D. Easton, Inc., 7800 Haskell Ave., Van Nuys, CA. 91406

ARCHERY WORLD

The official publication of
the National Archery Association

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COVER PHOTO: The Allen Compound, the original compound bow, and two new variations from Wing and Martin grace the cover colorfully. For a roundup of existing and new compounds, see the story on page 10. Photo by Dave Wacker.

ARCHERY / GREAT SPORT / GREAT COMPETITION / GREAT FUN

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6 WEEKS IN ADVANCE

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ARCHERY WORLD
534 N. Broadway, Milwaukee, Wis. 53202

H. LEE SCHWANZ

Publisher

GLENN HELGELAND

Editor

DOROTHY DEER

Associate Editor

BILL VINT

Associate Editor

AL JACOBS

Art Director

RUSSELL TINSLEY

Hunting Editor

JUDD COONEY

Hunting Editor

LEN CARDINALE

AL HENDERSON

BOB SKIERA

Technical Editors

A Market Communications, Inc., publication

CLIFF GANSCHOW

Chairman

MICHAEL GUERINO

Marketing Director

CHRIS LARSON

Advertising Services Manager

GLORIA HISLOP

Circulation Director



ARCHERY WORLD is published bi-monthly by Market Communications, Inc., 534 North Broadway, Milwaukee, Wisconsin 53202. Second Class postage paid at Milwaukee, Wisconsin.

Editorial and Advertising Offices:

534 N. Broadway

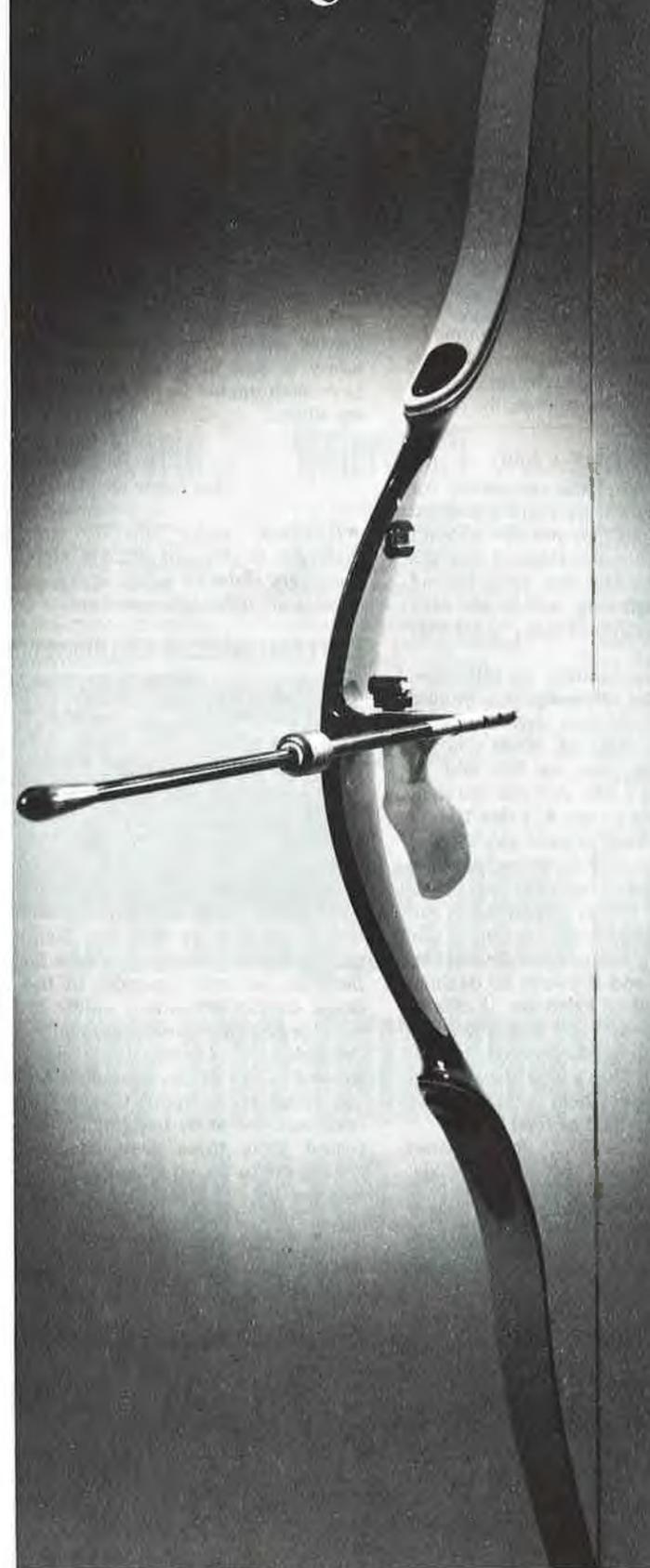
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Subscription prices are \$4 per year in the United States and \$5 per year elsewhere. Address all subscription correspondence to Archery World at the above address, and include a recent mailing label when possible. When changing address, give old and new addresses and ZIP codes and allow eight weeks for change to become effective.

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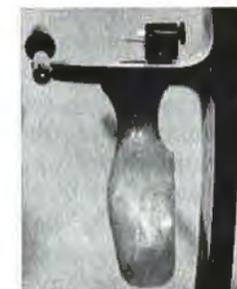
EL DORADO T/D



by HOWATT The Revolutionary Take-Down Bow

Here is a bow that can truly be called revolutionary. The basic concept, the rare beauty of its lines, the careful engineering, the unusual combination of materials used, and the many unique features incorporated in the El Dorado T/D all point to a revolution in take-down bow design. While it has taken us years to develop this superb bow, we at HOWATT are confident that once you see and shoot it, you will be as enthusiastic as we are with the results.

You will note this unusual bow's highly finished cast magnesium frame has been designed to create a clear-view shooting platform rather than a conventional handle riser shelf. The integral pressure point device itself represents a new approach in that it is completely adjustable both as to position and pressure sensitivity. The stabilizer is available with an adjustable prime weight unit.



These are but a few of the numerous unique features of the HOWATT El Dorado T/D. Seeing and shooting is believing. So visit your HOWATT dealer and be convinced.

Available with 66", 68" or 70" limbs.

Weights to 55 lbs.

Handle colors: Black with Howatt Purple, Canary Yellow or Light Blue.

Includes Stabilizer and Custom Case.

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Archery Manufacturing, Corp.

P. O. BOX 2837, YAKIMA, WASHINGTON 98902



NEW!

Varmint Hunter's NO-SCARE RED BEAM Headlight

Tested and proved by BURNHAM BROTHERS Varmint callers — bring wild critters right up to you at night! Tests prove that varmints can't see red light — they'll come to your call, even with light shining. Try it! Sturdy "no-scare" lamp is mounted on adjustable headband. Has variable bright-dim switch, cord and case for 4 size D flashlight batteries. Case clips to belt. Or use 6-volt lantern battery. For new calling kicks, order now. Money-Back Guarantee. Complete with case, less batteries, only \$6.50. Without case or batteries, \$5.75. Add 35c postage.

Ask for NEW FREE CATALOG! BURNHAM BROTHERS P.O. Box ARW-123-H, Marble Falls, Tex. 78654

How Is This for Shooting!

"...At Aurora, he recorded a 556 on the first day, a 558 on the second field round, and then Bobby Hunt stopped missing. He cleaned the hunter and animal rounds and compiled the highest aggregate score at this or any other National. He shot a 2794, just three arrows shy of perfect..." Reprint from Sept. '73 issue of "Archery"

We congratulate Bobby Hunt on this record breaking performance and are proud that we had a small part in it. His Olympus compound bow was equipped with a FLIPPER® REST-HD.



Pat. No. 3769956

Regular Version \$3.50 HD Version \$3.75 Standard or Plunger Model

New Archery Products 370 N. DELAPLAINE ROAD RIVERSIDE, ILL. 60546 ADD 25¢ FOR POSTAGE



Archery World welcomes your comments on any topic relative to archery. Address your letters to Write On, Archery World, 534 N. Broadway, Milwaukee, WI. 53202.

GIVE DEER MORE LAND

Until a month ago, I was completely for hunting. I thought it over and wondered what good it does me, and the animal I kill. None. I thought Howard Doyle's statement, "Hunting has been around since man's beginning, and it will stay until the destruction of man," a bit over dramatic.

Man has been hunting all this time, that is true. But originally man hunted to survive... Hunters are the most selfish things I know of. When you kill something, you take its life and its future offspring's life, and also the right for other people to see it. I don't want to see a deer's head in some guy's den. I want to see one alive in the wild where it's free and where I can enjoy it.

Hunters say, "Well, if you don't kill them (deer), they'll starve during the winter." They got along just fine before man got here, and if you're so damned worried about their existence, then why do you take their land away, pushing larger populations of deer on smaller pieces of land? That's why they starve. If you don't want them to starve, give them some more land or feed them.

John Monnet Tulsa, Okla.

'SOME KIND OF NUT'

In the September issue, you printed a letter from Kevin Chambers, field representative for Friends of Animals and director of Oklahomans Against Hunting. To me he is some kind of nut, but what anti-hunter who's trying to take away our sport isn't?

If Mr. Chambers played golf, I wonder how he would feel if someone would start a club to outlaw golf. About the same way we hunters feel about the anti-hunters trying to stop hunting.

I think, to stop this madness, the National Archery Association, National Rifle Association, Fred Bear Sports

Club, all the other clubs and the sportsmen themselves should hit them in their weak spots. We should also try to get the pea-brains to understand that hunting is good for the animal population.

I am 15 years old and enjoy hunting very much, both with a rifle and with a bow and arrow. But if the anti-hunters stop hunting, many boys like me who love hunting may go down the wrong street of life because some fool took away hunting.

Robert Cardwell Shiloh Archery Assoc. Stoneville, N.C.

NEEDS ARCHERY SLIDES

Do you know where I can obtain archery safety slides? I am a California hunter safety instructor, and archery safety is part of our course. As yet, I have been unable to purchase any archery slides.

T. F. Lonergan 2307 - 47th Avenue San Francisco, Cal. 94116

•Readers, write directly to Mr. Lonergan if you can provide him with the safety slides he needs or can suggest sources of such audio-visual aids.

OLD CROSSBOW EQUIPMENT



On my way home from the Nationals this summer, I stopped by to see Fannie Brumble, secretary-treasurer of the National Crossbowmen and widow of pioneer archer and crossbowman Murvil Brumble, in Cincinnati, Ohio. She showed me all of Mr. Brumble's archery and crossbow equipment, stored in the basement just as he had left it when he passed away three years ago. Fannie invited me to take it all and try to put it to good use.

...These four bows are collector's pieces, I feel sure. They were made by Bill Folberth in November of 1937 (and are so stamped). Bill Folberth was a top bowyer in the '30s and '40s, and he invented and patented the center shot bow — which feature is apparent in three of these bows. The other one has an aiming hole through the limb itself. Note the extreme width of the limbs.

These bows appear to be shootable. Three are backed with rawhide and one with snakeskin. I plan to use one of them for deer hunting this fall.

Gil Frey Gaithersburg, Md.

Archery World



Archery World

The magazine for all archers — bowhunters, bowfishermen, field archers, target archers. Beginners to experts. Learn the basics of bow shooting, or brush up on your existing shooting form. How-to-hunt and where-to-hunt features. New tackle and tips. Interviews with top archers and archery personalities. Bimonthly.

WaterSport

Full color features make this the best looking boating book going. Exciting stories cover recreational boating areas, boating personalities, boat types, fishing techniques, canoeing, sailing, racing, water skiing, off-beat activities like gunkholing and water kiting, humor. All the fun of boating — to help you have more family boating fun. Bimonthly.

SnoTrack

The magazine that reports the snowmobile action around the racetrack and on the trail. It is written for the person who enjoys the excitement of racing, and for the families who seek the adventure of winter on the snowmobile trail. Read about top races and racers, new machines, trail developments, club activities. Published seven times in the winter snow season.

Four Seasons Trails

The "where to go" and "what to do" magazine for recreational vehicle owners and all campers. Full color stories on all camping-related activities — fishing, rock-hounding, photography, scenic driving, skiing, hiking, boating, backpacking, and more, but primarily talks about good camping areas and scenic attractions nearby. Bimonthly.

Great magazines to help you enjoy the outdoors!

Take advantage of this special offer for bargain gift subscriptions. List names and addresses on a separate sheet.

Special \$1⁰⁰ off to new subscribers

Please send me subscriptions checked below: (Canada and foreign add \$1.00 per subscription)

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 - 1 yr., \$2; reg. price, \$3
 - 2 yrs., \$3; reg. price, \$4
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- Four Seasons Trails**
 - 1 yr., \$3.50; reg. price, \$4.50
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 - 3 yrs., \$9.00; reg. price, \$10.00
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 - 1 yr., \$3; reg. price, \$4
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 - 3 yrs., \$8.00; reg. price, \$9.00

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OLYMPICS '72

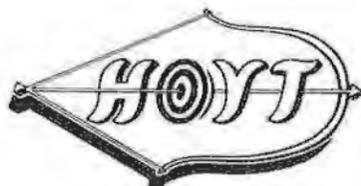
Record-breaking
WINNER OF
**2 GOLD
MEDALS**

PRO MEDALIST T/D

A masterpiece of skilled engineering craftsmanship... with every detail diligently planned for total accuracy! The Pro Medalist Take-Down Bow brings you the ultimate design, backed by 20 years of traditional quality and proven consistently through the years as the "World's Most Accurate Bow."

Sculptured, lightweight magnesium handle comes in 3 sizes and provides for a full range selection of weights and stabilizers to improve your shooting skill. Exclusive, patent-pending limb mounting system has precision-machined bearing surface. Easy, snap-in, snap-out limbs lock in position to insure perfect, solid alignment every time without rattle or squeaks. No tools required. Interchange limb lengths, convert from Hunting to Tournament bow with just a snap. Proven, super-flex, action-powered limbs deliver smooth, quiet speed with a consistent accuracy that will amaze you.

Join the list of champions — see your authorized Hoyt Dealer, or write for information.



11510 NATURAL BRIDGE ROAD, BRIDGETON, MISSOURI 63042

1974 Desert Inn Archery Classic

and 2nd Annual Saunders National Slingshot Tournament

CHAMPIONSHIP FLIGHTS

Place	UNLIMITED DIVISION		LIMITED DIVISION	
	Men (\$1400)	Women (\$600)	Men (\$1400)	Women (\$600)
1.	\$500	\$250	\$500	\$250
2.	250	125	250	125
3.	200	75	200	75
4.	150	60	150	60
5.	125	50	125	50
6.	100	40	100	40
7.	75		75	

OPEN FLIGHTS

Place	No. 1 (\$990)	No. 2 (\$880)	No. 3 (\$770)	No. 4 (\$660)	No. 5 (\$550)
	1.	\$300	\$260	\$230	\$190
2.	190	175	160	135	110
3.	150	130	110	100	80
4.	125	110	95	80	70
5.	100	90	75	70	55
6.	75	70	60	50	40
7.	50	45	40	35	30

Place	No. 6 (\$440)	No. 7 (\$385)	No. 8 (\$330)	No. 9 (\$275)	No. 10 (\$520)
	1.	\$130	\$115	\$100	\$ 85
2.	90	75	65	55	45
3.	65	55	50	40	35
4.	55	45	40	35	25
5.	45	40	30	25	20
6.	30	30	25	20	17
7.	25	25	20	15	12

SAUNDERS SLINGSHOT TOURNEY

There will be a tournament competition January 26 and a special speed shoot January 27. In the first event, each competitor will shoot one round of 12 ends, with five pellets per end. Each hit scores five points; perfect score is 300. The speed round will be scored on the number of hits made in 90 seconds. The top four in each class will have a head-to-head shootoff.

If you don't have a slingshot, Saunders will lend you one at the site. They'll have several of their Falcon models available.

In open competition, for adults 18 and older, men's prizes are \$300, \$200 and \$100; women's prizes are \$150, \$100 and \$75. Amateurs will win trophies. Cash prizes and trophies will also be given in the speed round.

Registration is \$4 for adults (18 or older) and \$2 for intermediates (15-17), juniors (12-14) and cadets (under 12 years). Registration after January 12 is \$5 and \$3.

To register early, send your proper fee, class and division (male or female) to Saunders Archery Co., Box 476, Columbus, Nebraska 68601.

Sponsors:

Jas. D. Easton, Inc.
Saunders Archery Company
Martin Archery, Inc.
Archery World Magazine
Desert Inn Hotel

Las Vegas is where it's at, folks. January 24-27, 1974. \$20,000 in cash and grants and chips. Fun and shooting for all types of archers. And lots of new things. For instance:

New target face, new scoring system and new round. The new Indoor FITA Short Round has a multi-color 15.7-inch face and will be shot from 18 meters (19 yards, 1 foot, 9 inches). Scoring is 10-9-8-etc. Each round will consist of 10 ends, with three arrows per end. Perfect score is 300.

Las Vegas Speed Round, with a \$500 pot (\$250, \$125, \$75 and \$50 for the four top finishers). Two entirely separate rounds will be held; the first will be a qualifying round. In this, six ends will be shot — the first two at a 36-inch face, the next two at a 24-inch face, and the last two at a 16-inch face. This should equalize speed and accuracy. Each archer will shoot for 30 seconds on each end and score all arrows. The top 32 shooters will qualify for a head-to-head shootoff, which will be shot on the Saunders slingshot targets converted for archery. It should be interesting. Entry fee is \$5.

The bowhunter division is new. There is a \$1,500 bonus prize to be divided between the bowhunter and barebow division, on a percentage of participation.

The amateur college team grant has been boosted to \$2,000. It will be split evenly — \$500, \$300 and \$200 grants to the top three teams in men's and women's divisions.

The NFAA will sponsor a \$1,000 shoot for NFAA members in good standing. Entry fee is \$10, to be paid at tourney site. Regular tourney rounds will be scored for this event.

ALOA will sponsor a \$1,500 money shoot. Full information is available at your local ALOA lanes.

OPEN TEAMS

Place	Flight 1 (\$1200)	Flight 2 (\$1000)	Flight 3 (\$800)
1.	\$400	\$360	\$300
2.	320	280	220
3.	240	200	160
4.	160	100	80
5.	80	60	40

The Desert Inn Archery Classic tournament is open to all shooting styles. It's NFAA-sanctioned, and the amateur and college team events are NAA-sanctioned. PAA sanction has been applied for.

For more information, write: Desert Inn Archery Classic, 7800 Haskell Ave., Van Nuys, Cal. 91406. For collegiate team info, contact Lois Cresgy, Riverside City College, Riverside, Cal. 92502.

ENTRY FORMS and HOTEL RESERVATIONS

Send your entry form
and hotel reservations to:
DESERT INN ARCHERY CLASSIC
7800 Haskell Avenue
Van Nuys, California 91406

INDIVIDUAL ENTRY FORM:

Name: Last _____ First _____	Official Use Only
Street Address _____	Target Assignment
City _____ State _____ Zip _____	A.M.
Male () Female ()	P.M.
Limited () Unlimited () Barebow () Bowhunter ()	\$Rec.
Open Division Pre-Reg \$40.00 () Late \$45.00 ()	
Amateur Pre-Reg. \$12.50 () Late \$15.00 ()	
Jr. Olympic Pre-Reg. \$ 5.00 () Late \$ 7.00 ()	
Amateurs: Please Enter Card Number After Name.	
Pre-registration closes January 5, 1974	

TEAM ENTRY FORM:

Team or College Name _____	Official Use
Team Captain _____	Target Assignment
Member No. 2 _____	A.M.
Member No. 3 _____	P.M.
Member No. 4 _____	\$Rec.
Open Team \$40.00 () Amateur \$20.00 ()	
College Team \$20.00 ()	
Contact: Lois Cresgy, Riverside City College, Riverside, California	
Amateurs: Please enter card number after name	

DESERT INN HOTEL RESERVATIONS:

Name _____
Street Address _____
City _____ State _____ Zip _____
Single \$18.00 () Double \$18.00 () Triple \$21.00 ()

NO DEPOSIT REQUIRED

As more and more archers examine the compound bow, the original style keeps going strong and some new versions appear.

JAMES DICKEY, speaking of compounds, said the human mind is diabolical in what it can develop. He also agreed that they're basically ugly and they shoot like blazes. Dickey and countless other archers around the country are fascinated by them.

That fascination ought to grow, because the compound bow scene is changing, growing. There are new compounds being introduced by major manufacturers. The existing ones are slicking up, trimming down and doing something about that inherent ugliness.

But beauty wasn't uppermost in H. W. Allen's mind when he began fiddling with the idea of a bow working off a block-and-tackle effect back in 1961 and 1962. "My son and I had missed a couple of deer, and decided we wanted some kind of a bow that would give more foot/pounds of energy and more speed. I'm not a professional engineer, but I worked in engineering fields in World War II and the Korean War, and I decided to make use of what I knew.

"We started working with concentric pulleys and sawed off recurves. In 1965, we went to eccentrics. As we progressed, we charted the stored foot/pounds of a compound against the stored foot/pounds of a recurve. We found that the compound because of shorter limbs had less limb inertia to worry about, and we could get the desired draw length and lightened anchor weight from the unwinding of the eccentric pulleys.

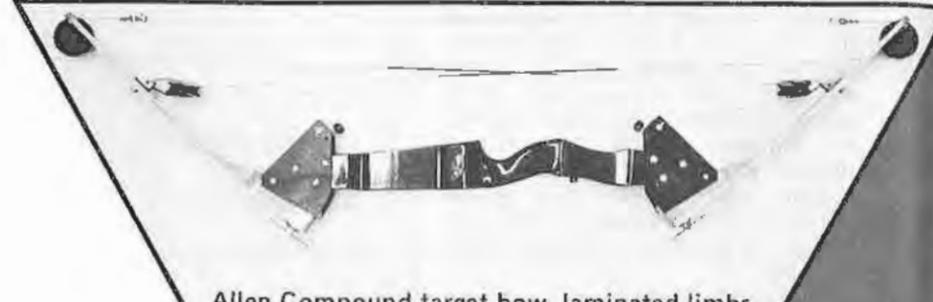
"And since you're holding less than the bow is delivering, this is why you can shoot a lighter arrow from the compound than you can from a recurve of equal draw weight. On the compound, the arrow is already in motion when the peak weight is reached, so there's not the sudden blast of released energy like there is on a recurve."

But all this was basically on paper and in the form of a couple of rough compounds in the mid-1960's, when Allen sounded out some archery manufacturers. He received no takers, and decided to begin producing them himself.

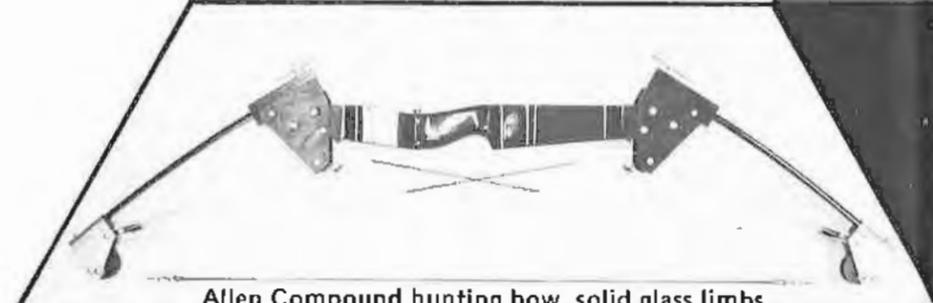
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COMPOUND BOWS:

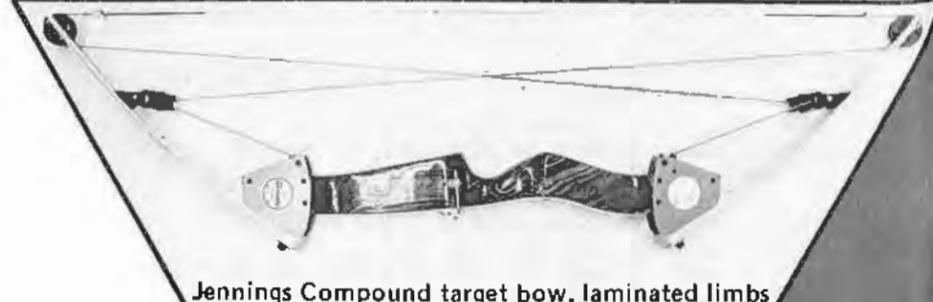
The end is not in sight



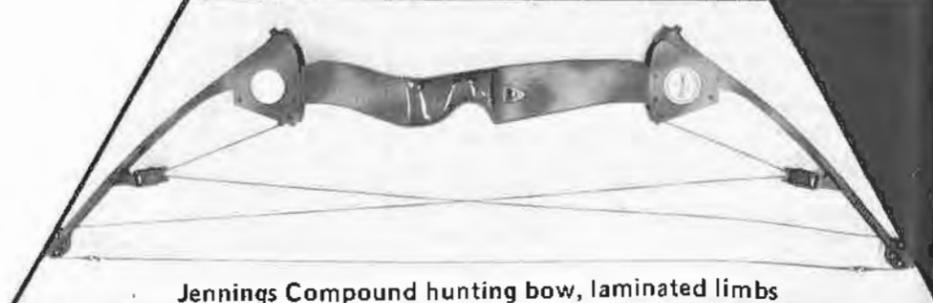
Allen Compound target bow, laminated limbs



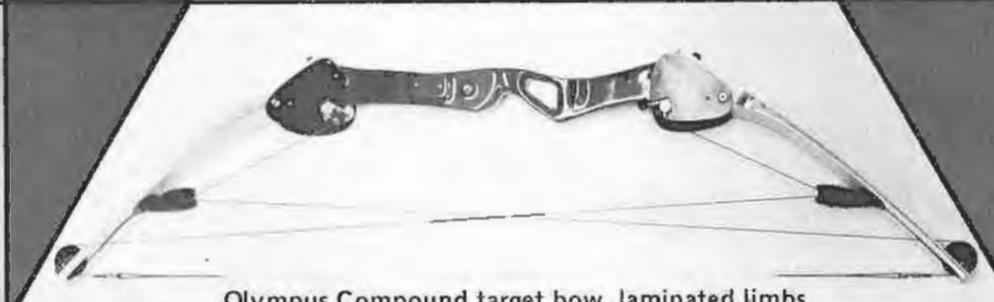
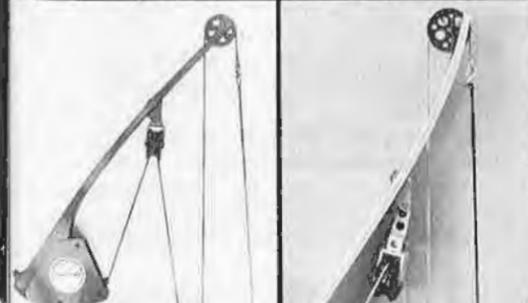
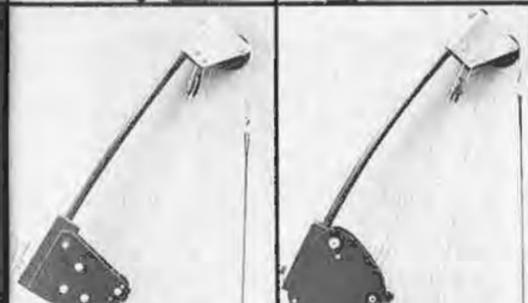
Allen Compound hunting bow, solid glass limbs



Jennings Compound target bow, laminated limbs



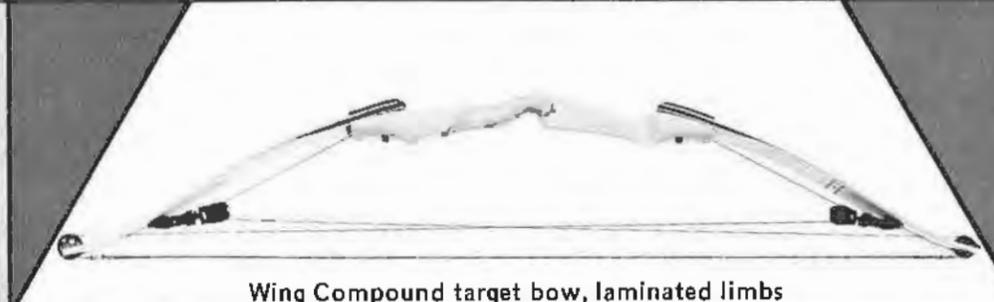
Jennings Compound hunting bow, laminated limbs



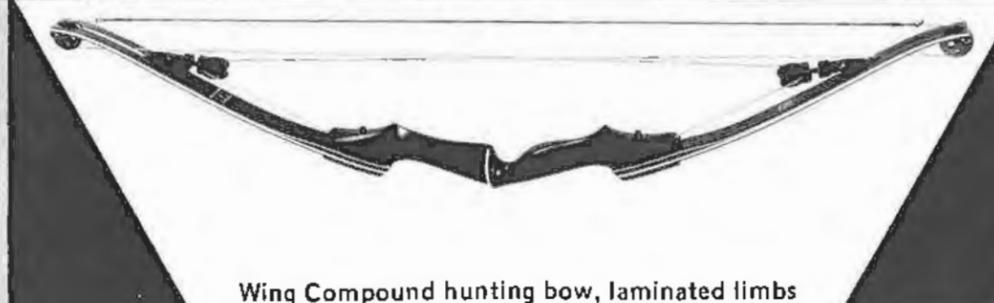
Olympus Compound target bow, laminated limbs



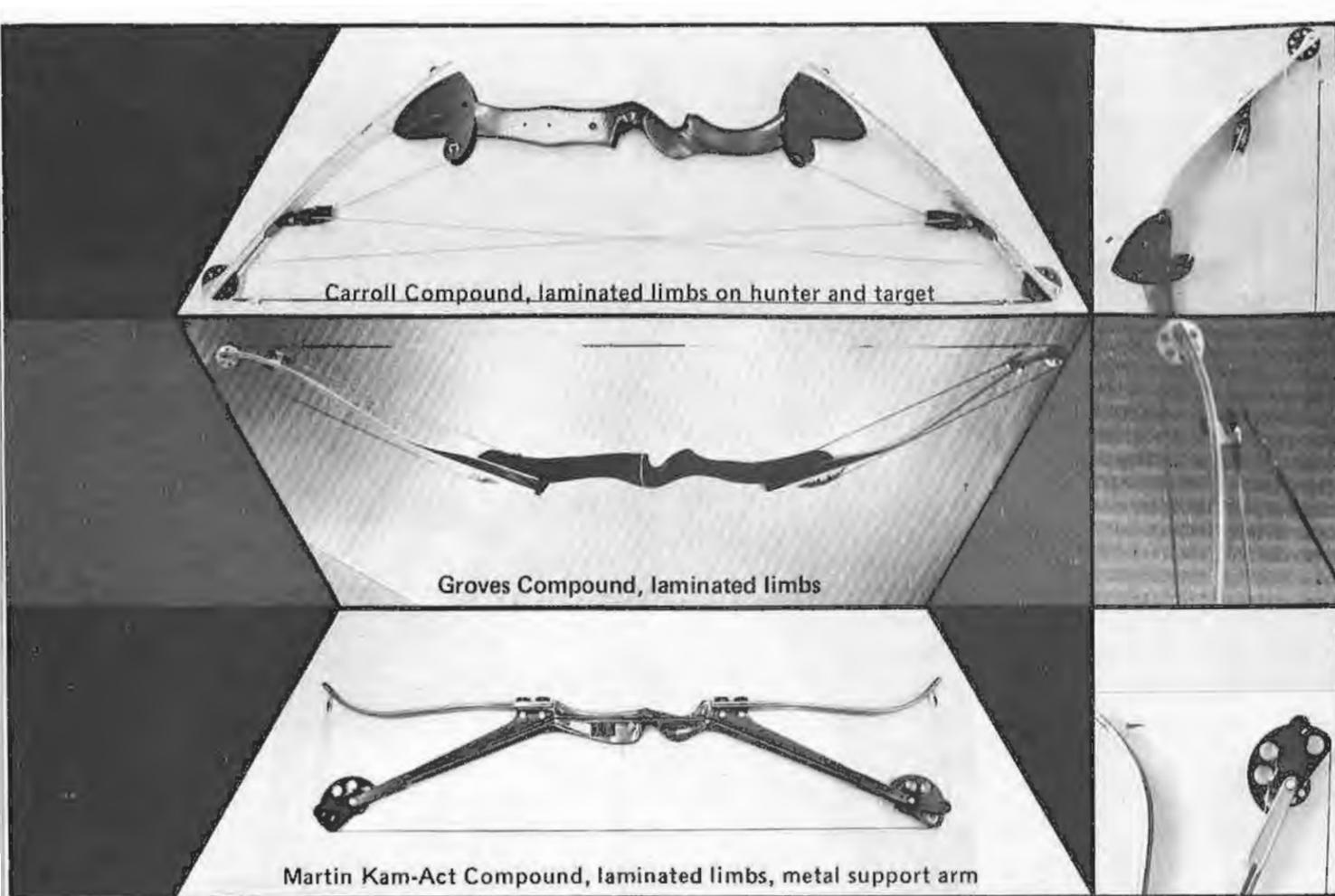
Olympus Compound hunting bow, laminated and solid glass limbs, interchangeable high — low-wrist grips



Wing Compound target bow, laminated limbs



Wing Compound hunting bow, laminated limbs



In 1967 he produced fewer than 100 compounds. "And they were banned from all archery organizations."

Tom Jennings recognized the potential of the compound and in 1967 bought the first license to manufacture compounds under the Allen patent. He had been active for several years in various national and regional archery organizations, and as a recurve bow manufacturer; so he and Allen, working independently of each other but toward the same end, considerably expanded the compound bow scene within a couple of years.

They both say, however, that much of the credit for the acceptance of the compound bow, first as a hunting bow and then as a target bow, is due to the efforts of individual archers in each state. But Allen and Jennings also worked and traveled to counter the restrictions and objections they encountered, Jennings more so than Allen, and the work paid off.

The compound gained acceptance, some rules were changed (in both directions, pro and con), the release came on the scene, and things began to jell.

Is the compound as complicated as it looks?

"The compound can be tough to tune," Allen says, "but it's largely a matter of balancing the two eccentrics

at the limb tips so they turn over at the same time."

"The adjustable pressure point helped ease tuning, too. The compound needs that and a strong flexible arrow rest to get that smooth arrow.

"Releases, of course, because of their crispness, eliminate string plucking and thus help remove almost all the force which creates arrow paradox.

"Those items, all put together, were what helped produce the shooting results you heard and read about. In the same manner, and for the same reasons, these items also helped improve recurve performance."

There have been myths — that the compound could shoot absolutely flat at 100 yards, that the compound was 100 percent faster than recurves, that you could shoot a 100-pound bow yet hold only 20 pounds.

"The first two are absolutely untrue, and the third is totally impractical, at least at this time," Allen says. "You could get 50 percent relaxation, but you couldn't get a decent release. The string wouldn't have enough tension.

"All I was trying to develop was a bow that would get an arrow to a 10- to 25-yard target — a deer — before that target could move, with less physical discomfort and less practice for the archer."

You can get a compound to about 50 percent faster than a recurve of equal draw weight, but not with the same arrow and not with the same fletching. For instance, if you were to properly tune a 45-pound compound, with the hold weight at around 31-36 pounds (figure about 20 to 30 percent relaxation for most compounds), you would have an arrow spined for 31-36 pounds and you'd be using a smaller plastic fletching that was attached straight and not offset — all these factors are recommended to minimize drag on the lighter arrow — then you could get 50 percent more speed.

The smaller fletching is also necessary to minimize contact with the arrow rest. This is why, Allen feels, peg type or other solid projection rests are not as good as flexible rests on the compound. Smaller fletching is easier to stabilize a faster arrow without getting a parachute effect from the fletches.

Allen also believes that a properly tuned arrow would shoot best off a nocking point straight on or not more than 1/8-inch above 90 degrees on the compound.

Summing up, the critical points in tuning for speed are: adequate tension in the anchor so you get a good crisp release; the right nocking point height; as small and as straight a fletching as

possible; plus proper clearance between string and sight window so the arrow is pointed exactly straight ahead, especially with releases. All these things combined will minimize drag and paradox and maximize speed, stability and accuracy.

HUNTING COMPOUND

In target shooting, all this business about lighter arrows is fine. But what about the heavier hunting arrow?

"The extra foot/pounds will give added penetration and speed, but not the great speed of the target arrow," Allen says. "I believe a bowhunter would get best results with a compromise between the speed and the heavy arrow. Something in the 400-450 grain weight would give you a good fast arrow and still be heavy enough to give good penetration. If you go lighter than that, you're in danger of losing penetration."

Jennings adds, "Arrow spine and weight in target and hunting uses depends a lot on the individual's archery form. The recommendations all compound manufacturers give for proper arrow/bow matching are just rules of thumb. Archery is still a personal, individual thing; your gear must fit you."

Most common abuses of a compound bow come from trying to make it do what it wasn't intended to do — like cranking a bow five or 10 pounds past its recommended limits for the eccentrics and limbs on the bow, and drawing it past the recommended draw length limit.

Most compounds of the original Allen design need thicker limbs because the block-and-tackle principle produces a three-time reduction in draw force. So, to get a 50-pound bow, you need limbs that are actually 150 pounds in resistance. This three-time principle is always in effect, so shooters with different draw lengths and draw weights will need different limbs.

Thus, when you change the size of the eccentric wheel to get a different draw limit, you need to know whether or not you also need to change limbs. Space here doesn't permit a critical look at the various characteristics of each and every compound on the market, so when you start comparing them, be aware of these factors and ask about them.

One other point on draw weights and lengths: eccentrics merely determine the limits; the final adjusting to your personal specifications is done with turn-buckles or keys or whatever they may be called. If you don't understand compound tuning, do not experiment; consult an expert. So to answer the question asked much earlier, yes, they can be complicated. But as you gain familiarity, they're less complex.

DERIVATIONS

The Allen, Jennings, Precision, Carroll and Olympus compounds are all of the

same general style, yet each have their own modifications in plate attachments, eccentric design and mounting style, handle design and material and finish, tuning systems, draw length and weight adjustment limits, and available options (stabilizer inserts, sight mounts, pressure button drilling, arrow rests, number of eccentric sizes and limbs available, etc.). Allen and Olympus, for instance, are the only two with solid fiberglass hunting limbs available; all others have wood/glass laminated limbs. They all have target and hunting models.

They range 48 to 52 inches, axle to angle. At full draw, string angle is generally considered to be equal to a recurve 10 inches longer.

EVOLUTION CONTINUES

And the evolution continues. Wing is introducing a compound in target and hunting models that has a partial working recurve. It's built on the basic style of their patented Slide-Loc take-down system, but is not a takedown.

Martin is introducing their Kam-Act bow which has two working recurves and two fixed metal arms on which are anchored the recurves and the working cam at the tip. The cam can be adjusted for a great variety of draw weights, 30 to 65 pounds, and different draw lengths, so one bow fits all archers, according to Martin. Another significant feature of this bow is the system of fitting the cables in the grooved metal handle and cam supports. Due to all this metal, the bow has a mass weight of over six pounds. The bow also has a positive draw check in the cam/support limb arrangement, so you cannot overdraw it.

Groves is introducing a compound in a takedown, working recurve model. There are no eccentrics in the limb tips; the block-and-tackle system is replaced by a cam type limb-lever at the base of the limb, not at the tip, which can be adjusted to a let-off of as much as 50 percent. It, like the Martin, has a positive draw check that can be adjusted to the individual draw. Draw weight can be adjusted over a 25-pound range.

The Wing and Groves obviously look the most like the conventional recurve. All three are considerably longer than the original compound design. The Groves, for instance, will be available in lengths up to 69 inches. The Wing's length on the target bow is the equivalent on string angle at full draw to a 70-inch recurve. This bow, because of the recurve, maintains a higher string tension and less relaxation at full draw. The target bow is 58 inches long; weighs 3 pounds, 10 ounces. The hunting bow is 48 inches long.

There will be other compounds on the market within a year as new designs and modifications are worked out. It'll be interesting to watch the continuing evolution of this bow.

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How To Adjust A Cushion Plunger



When they first hit the market, practically every serious target archer put a cushion plunger, or panic button, on his bow, expecting it to cure a bunch of ills. For some archers, it did just that. But for others, who didn't luck onto the right setting for their tune-up, or who didn't know how to adjust the thing, the experience wasn't encouraging.

So we asked Vic Berger, whose Berger Button is one of the more commonly known plungers on the scene, to explain exactly how the thing should be mounted in a bow and then set up.

Here's his reply.

First, here's the reasoning behind the adjustable cushion plunger, or button: — The force of the string upon the release propels the arrow alongside the bow across the plate and toward the target. The oscillation (side reaction of the bowstring caused by the release) forces the arrow against the plate and causes the arrow to bend around it. The

arrow then goes through several "s" contortions before the guiding factor of the feathers or vanes takes over and stabilizes its flight. The oscillation of the string magnifies with a bad or rough release, causing the "s" contortions to enlarge. The result is a badly placed arrow.

A properly adjusted button absorbs the pressure of string oscillation and thus allows the arrow to leave the bow in perfect flight. The added pressure caused by bad release is cushioned by the button. The plunger compresses a bit more when it absorbs the added tension and causes the arrow to strike much closer to where it is aimed. It is a device to "super tune" a bow.

The button can be installed in any bow. On a wooden bow, a 3/8-inch hole drilled 5/8-inch above the shelf close to the pivotline is all that is needed. Put glue or epoxy on the shank and shoulder of the bushing, slip it into the drilled hole and allow to dry.

In metal bows, drill a smaller hole in the same place as in wooden bows with I(0.272") or J(0.277"). Drill, then tap 5/16-24 thread, remove the burrs, and you are ready for the button. The bushing is not needed on metal bows.

String the bow and load it with an arrow. Thread the button into the bow, line up the string until it comes to the center of both limbs and move the button in or out until the string also centers on the arrow. You have now achieved ideal center! Lock the button in place with the knurled lock nut. Remember, when you're using the button, the button contacts the arrow exactly at mid-point of the half of the arrow toward the button.

Next, remove the fletching from one of the arrows that you are going to use. You are now ready to adjust the spring tension of the button with the bare shaft at two yards for perfect flight. The reason for being this close to the target is that we want to catch the arrow as soon as it leaves the bow. To get an accurate reading, the arrow has to be shot at a right angle into a soft arrow-stop. A straw bale or used Saunders mat is best suited for this purpose.

Keep your eye on the tailend of the arrow after it settles in the backstop. If the tail leans left, then you have to add spring tension. If it leans right, relieve the spring pressure. If the arrow leans left or right quite a bit, by all means

make two or three turns with the setscrew. When the arrow settles close to right angle, then slow the turns to 1/4 to 1/2 turn at a time.

(You realize, of course, that if the nock end of the arrow ends up high, it will be necessary to lower the nocking point on the string until the arrow enters the bale straight. And if the arrow ends up with the nock low, you raise the nocking point.)

When adjusting a Berger Button, please remember it features two setscrews, one as a lock and one to adjust the spring tension. In general, the spring pressure will be quite stiff if a well matched or underspined arrow is used, and soft with overspined arrows.

I recommend you shoot arrows that are five to ten pounds stiffer in spine than the bow at your draw. The button will be easier to adjust, the arrows will group better, and will be less critical. In general, you will get by with a lot more while shooting a little heavier arrow than a closely matched or underspined shaft. You must maintain a relaxed release with the button, either physically or with a finger separating or Kant-pinch tab. Otherwise, the arrow will have a tendency to climb the button.

If the inside mechanism of the button gets wet in the rain, oxidation (corrosion) will set in overnight that might cause the plunger to lock. By all means, finish the day's shooting. But in the evening, disassemble and clean the button, oil and reassemble. One way to arrive at the same setting is to count the turns of the setscrew on disassembly and again on reassembly. Another is to get close to the original tension and reset it with the bare shaft. The sure way is to use the chemically treated "super button," especially designed for the hunter. This button resists corrosion and needs no maintenance.

The button has been field tested in tournaments and also in hunting. The drawback in hunting was the occasional metal-to-metal squeak of the aluminum arrow against the brass plunger — and that is a no-no in hunting. So a special threaded plunger was developed to receive a teflon cap.

For hunting and tournament metal risers and bows with a thin sight window, a shorter button is needed. Other than basic length, it is the same as all other plungers, but won't be in the way of a hunting quiver.

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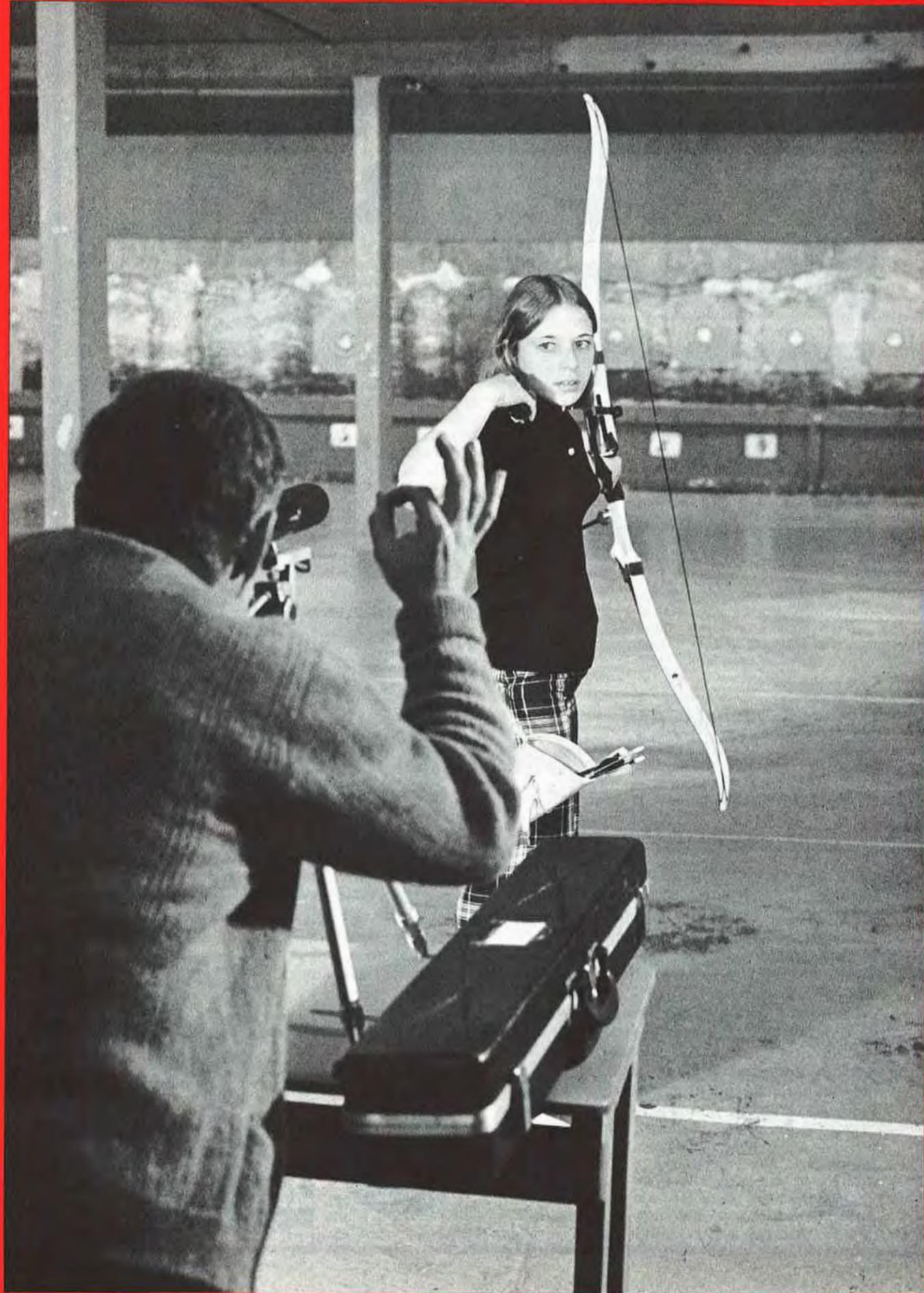
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Contrary to popular belief, a target archer on the line isn't all by himself. He's working in tandem with a spotter, who can either make or break him.

The importance of a spotter

by Bob Skiera

THE SHOOTING LINE is a lonely place. You're up there all by yourself, with just a bow, some arrows, a handful of accessories, and whatever confidence you've mustered.

You *know* you're the only one in the place people are looking at; and if you blew the last shot, you're positive that *everyone* is staring at you and giggling behind their hands.

Whatever . . . your imagination can run wild on the shooting line. Unless you harness it with confidence. But a harness alone won't always do the trick. And that's where a good spotter becomes valuable . . . a good spotter who can pull the reins and steer you in the right direction or just let them hang loose when you're shooting well.

Many top tournaments are won with shooter and spotter working as a team. But the spotter need not be a trained archery coach or, for that matter, an archer. The spotter reinforces the shooter to the point where the man on the line can isolate himself and concentrate on form and equipment performance while the spotter guides the strike pattern into the spot.

Basically, the spotter tells the shooter *exactly* where he is hitting the target. When you're on a strange range, variations of lighting angles and intensity can cause tricky shadows that may cause arrows to appear to be in solid when they are actually hanging on the line or are out. You want to be constantly aware of the different strike patterns on the target in relation to your form and sight settings and the difference in light conditions.

Targets are of many different materials, and they make arrows react and look differently to the shooter on the line. An arrow hitting a straw bale will not indicate a good hit the same way as an arrow hitting an excelsior bale. Excelsior bales have a tendency to hold the arrow straight in on the impact, while straw bales tend to kick the arrow off because they're softer.

● *The look of concern on this gal's face reflects the dependence a shooter has on the spotter. And with the arrow solidly in the spot, that look will relax.*

If you're shooting on a corrugated cardboard target, the arrow on impact will straighten with the laminations of the target. This will give you a false strike pattern because — in combination with unfamiliar light conditions — the arrow might seem low. It will have a tendency to look low to the shooter used to shooting on excelsior or straw bales. Old or worn bales are notorious for kicking an occasional arrow, or the entire group, off to one side.

Without the spotter, you might adjust yourself right out of the center and spend the rest of the tournament chasing strike patterns, only to end up where you started.

And even though you've perfected your form at home, and tuned your equipment properly so the arrows are flying right, you'll still need to reinforce or regain your confidence on the new range. This is the spotter's job. Sometimes it's a difficult job because the shooter sees one thing and the spotter another; yet, the shooter, unless he has complete confidence in his spotter, may find it hard to believe that he sees something different from what's in the target.

He is under the stress of competition *and* new shooting conditions; he's excited and tense. Yet, he has the power of delivering; he has a certain amount of confidence that can be developed. The point here is to develop his confidence in his form as related to strike pattern — in only two practice ends plus whatever shooting the archer can do under typical conditions the day before the shoot (providing the shooting area is open for practice). In most cases there are only two ends for an archer to adjust to a new set of shooting conditions at a tournament. The shooter/spotter team must put their act together during those first two practice ends. If the team can work together so the shooter is packing them in the spot by the end of the second practice end, they will have instilled the confidence necessary to carry the shooter through the opening end jitters.

You'll notice that most points are dropped early and late — when the shooters may not have completely adjusted to unfamiliar shooting conditions and when the pressure is really getting intense.

QUALIFICATIONS OF A SPOTTER

A trained spotter should primarily know your temperament, then your form and shooting moves. He or she doesn't need to be a shooter, but he does need to know form well enough to help you groove your strong points and help you avoid weaknesses.

He must know how you tick — how you react to a bad arrow or a weakening of form, how your shooting changes from the beginning of competition to the end. He must develop a rapport with you so even the shrug of a shoulder is a distinct communication with a definite meaning.

He must know when to challenge you . . . "We came here to shoot, so quit goofing off on the line and shoot." He must know when to give a slight boost . . . a nod and small smile will reinforce the shooter's opinion of his shooting and scoring, and will strengthen his game. He must know when to divert your attention to relax you . . . "How about a candy bar, the extra energy will keep you strong."

Sometimes, with new shooters, you almost need to divert them completely and make the shooting secondary. I remember at a Cobo Hall tournament a few years ago a women's team had one new member who had shot well at home, but was an unknown quantity at a tournament. They were having fun to begin with, but they also set up a system whereby every person shooting a gold would get a given number of Green Stamps.

The girl wanted to shoot well, but every once in a while she'd shoot a bad arrow. So the rest of the team would present her with the stamps every time she got a gold. It got to be kind of funny. She also shot out of her mind and came up with a great score.

This system obviously isn't advised for everyone. But now and then, most anything will work. The spotter has to know the shooter well enough to predict when these circumstances

will occur, and then know what must be done.

Above all, the spotter (like a good coach) must be positive in his approach. A negative comment . . . "You're dropping your bow arm" . . . only conditions the shooter to think negatively. Instead, you point out a good shot, and get the shooter to think toward duplicating that shot time after time. The spotter must rally the shooter, not destroy him.

(The worst kind of spotter is a last minute enlistment who doesn't recognize the shooter's form or personality and volunteers coaching comments like "Your problem is that you're wiggling your little finger before you release." Suddenly, the shooter realizes he has a little finger that he doesn't know what to do with. That's a negative distraction, the kind of "help" that is dangerous.)

As a spotter, you can control the shooter without dominating him or her. You can calm him down, challenge him or make him mad (many top shooters are such finely honed competitors that making them mad is the best way to get top performance from them).

The problems of domination occur most often in a parent/child relationship where the parent is the spotter. The parent has more or less put all his/her hopes, desires and ambitions into the youngster, has driven that child into being a good shooter. The kid was probably a good shooter to begin with; the parent recognized this inherent quality and decided to make something of it.

But too often I've seen parents who couldn't contain themselves and were berating their youngster for a bad shot . . . "How many times have I told you, lock that bow shoulder. You're not even trying." Chances are, the kid may have been trying; but at some point he's going to rebel. A tournament, with all the parent's intensity growing, is a perfect time to rebel, because it will really blast a parent out of the saddle if things don't go right.

This *make-or-break* time has to be handled properly. The

young champion's entire shooting future is at stake.

So the time between ends, when shooter and spotter should be relaxing and going over the strong points, is not a time to get hauled off in a corner and lectured to — no matter how old you are and no matter whether your spotter is simply your spotter, or your spotter/coach.

You'll notice that a shooter who is shooting well goes into a sort of shell. He knows his performance is going along smoothly; the spotter knows it too. So the spotter's main job here is to just be there at all times, reinforce the shooter now and then — a wink, a smile, the A-OK thumb and forefinger sign all silently say "You're doing great; hang in there." That reassurance is comforting and relaxing to shooter and spotter.

All this confidence and rapport between shooter and spotter doesn't just happen at a tournament. It is developed over hours of shooting and spotting at practice sessions and tournaments big and small. All teamwork takes training.

The spotter/coach obviously has a tougher job in some instances because his coaching instincts will tell him to get in there and work on a problem, when he should realize that the form should have been brought with the shooter. The tournament line is not the time to get in there and start fiddling. You don't adjust the sight after one bad arrow; you go with the group and go back to the basic archery form checklist to see what caused the bad arrow.

The spotter/coach also has to control his feelings that a sub-par performance is embarrassing him. It may be, but it's too late now for this particular tournament. There is a point where you have to admit it was a good try and the experience will benefit both of you, but the championship will have to wait for a future tournament.

However, if the shooter is doing great, your job as spotter isn't done. Your presence is still a vital part of the teamwork.

continued on page 20

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by 

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IMPORTANCE OF A SPOTTER

continued from page 18

The cardinal sin of the spotter is to abruptly leave his post. Perhaps everything is going well and the shooter is not looking back, so the spotter decides to watch some superstar shoot a couple of arrows. Believe me, if anything can go wrong, it will do so at that moment. In most cases, the shooter has a doubtful arrow. He turns to the spotter for confirmation, to find only an untended spotting scope staring at him like a malevolent Cyclops. At that moment, all the confidence that has been carefully nurtured through good teamwork can be destroyed. Without that needed feedback, the shooter feels he's been abandoned. And he has. This is especially true of a new shooter at a big tournament.

Whenever your shooter glances at you, whether your regular station is right behind the shooter's seats or up in the spectators' stands somewhere, your eyes must meet his with instant communication . . . "It's in."

Not only does this reinforce the shooter, this vital bit of communication helps the shooter continue his concentration and block out the distractions around him.

TELESCOPIC EQUIPMENT

What telescopic equipment should a spotter use? I'd recommend at least a 10X scope for indoor shooting, and somewhere between 10X and 30X for outdoor shooting. Some people prefer binoculars. If mounted on a stand, they work well and won't give you the eyestrain that hand held glasses are famous for. Outdoors, you must have enough power to see the target clearly, but the scope must not be so big that a tripod can't hold it steady.

An indoor tripod should have good rubber shoe tips so it won't jiggle on the stand. Outdoors, spikes that will jab into the soil give a solid base. Either place, you want a solid base so you won't get a headache, so you can see the target without having to search for it, and so you can concentrate on the shooter instead of the scope.

A rugged, widespread, heavy-based stand or tripod is as important as a good quality glass from the viewing standpoint and to keep the scope from being knocked or blown over. I like to wrap the scope with sheepskin or foam rubber so it will be protected if it falls.

Some random summary points: 1) Nothing is more frustrating than shooting a tight group in what appears to be the center, and finding as you approach the target that you're on the rim with two out. 2) A shooter should get his/her target assignment early, so the spotter can locate himself where he can see the target and conveniently be seen by the shooter. 3) In many cases, the shooter/spotter relationship is so intense that the winning arrow builds more emotion in the spotter than the shooter . . . "I knew we could do it." 4) If the spotter knows his shooter is winning, or shooting a great score that will get him right near the top, the spotter must control his excitement and stay calm, simply because the shooter may not know exactly how well he's doing, and doesn't need anything that could throw him off stride. 5) Spotting may be a good job for the non-shooter in the family. This way, it becomes even more of a family sport. 6) Sometimes the spotter ends up as the tournament shooter. Spotting is a good way to gain tournament experience. 7) The spotter can have tackle ready for the shooter — extra arrows, nocks, etc. 8) The spotter must be as comfortable as the shooter. Be sure you have a solid chair or bench, and get your spotting scope set up before shooting.

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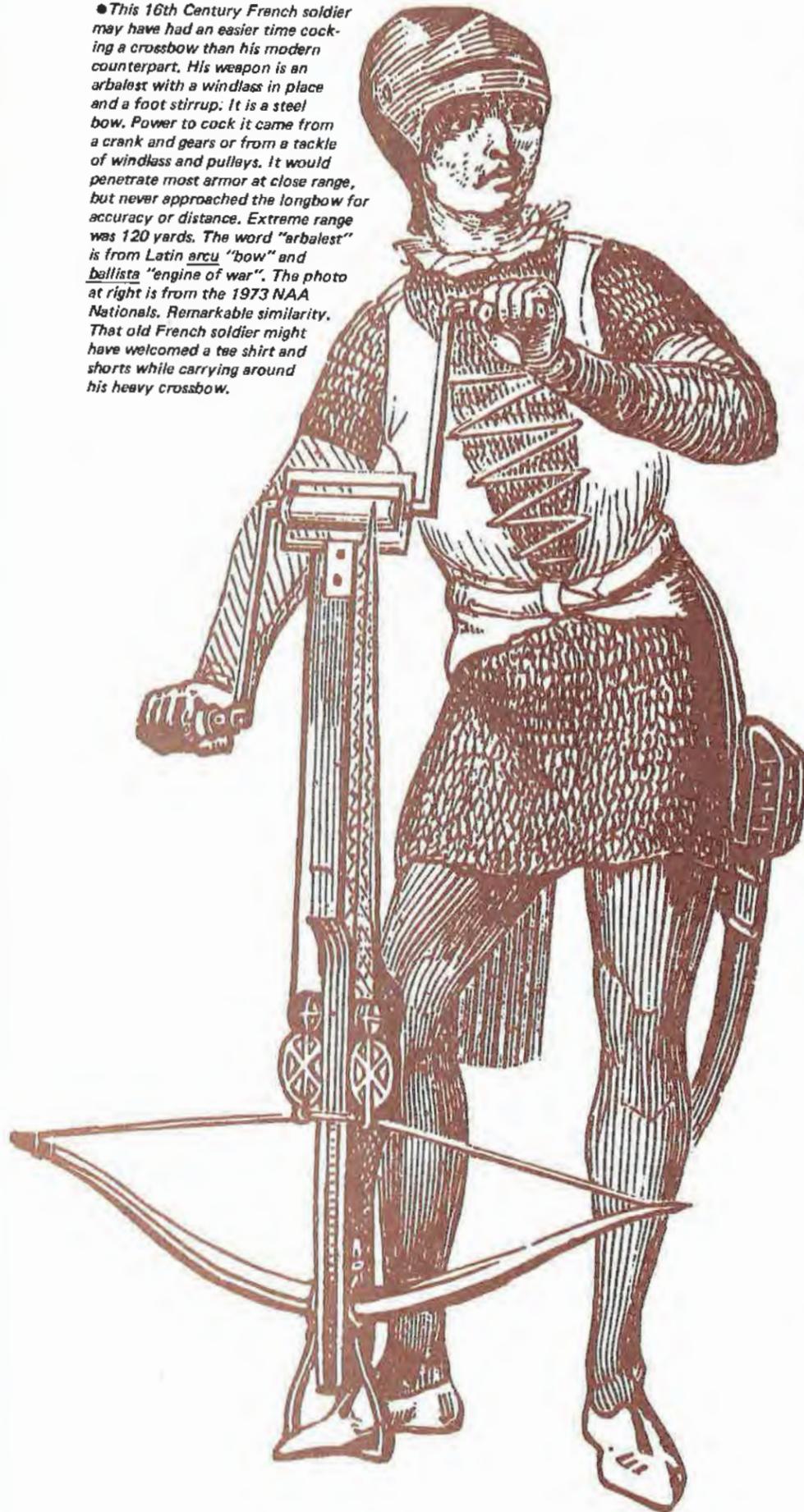
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● This 16th Century French soldier may have had an easier time cocking a crossbow than his modern counterpart. His weapon is an arbalest with a windlass in place and a foot stirrup. It is a steel bow. Power to cock it came from a crank and gears or from a tackle of windlass and pulleys. It would penetrate most armor at close range, but never approached the longbow for accuracy or distance. Extreme range was 120 yards. The word "arbalest" is from Latin *arcu* "bow" and *ballista* "engine of war". The photo at right is from the 1973 NAA Nationals. Remarkable similarity. That old French soldier might have welcomed a tee shirt and shorts while carrying around his heavy crossbow.



The ignominious crossbowman

The crossbowman isn't weird, he's just trying to enjoy his sport under laws 450 years old.

by Tom Hock

On November 17, 1967, James Barrows appeared before the County Court Judge of Mahoning County in the state of Ohio. He was convicted and fined \$50 and costs. His crime — the violation of Ohio revised code, 1533.16, namely, the hunting or taking of game with a crossbow. Such is not that unusual, as 40 of the 50 states have regulatory mandates of some type against the hunting, carrying or even possessing of this ill-understood outcast of history.

Somewhat earlier, in 1521, upon information exhibited against one Christopher Assheton, in the County of Berkshire, England, gentleman and a king's subject, was charged with the same offense, namely, the carrying and shooting of a crossbow without the king's license. He was fined 10 pounds and forfeited his crossbow.

Although similar, these two examples present a number of interesting parallels. Separated by nearly four and a half centuries, both parties were convicted of essentially the same law, a law passed by necessity and forgotten by time.

The crossbow has always been a weapon of interest and intrigue. It's power and accuracy was devastating. It has developed in some form or another in every primitive culture.

It is rather unusual then, that American history should be almost totally void as to any mention of this, the ultimate primitive weapon.

The crossbow has historically been the victim of bad press. As early as 1139, use of the crossbow was forbid-

This article was written as partial fulfillment in legal writing at Salmon P. Chase College of Law in Cincinnati. The subject was of special interest to the author because he's been a competitive crossbowman since 1966, and a good one. To the best of the author's knowledge, the summary of state-by-state regulations given at the end of this article is current.

den by the church as "a hideous and hateful weapon of God and unfit for Christians." Later Pope Innocent III backed up the edict and declared excommunication as the penalty for offenders. Conrad III of Germany followed suit and prohibited the use of the weapon in his army and kingdom. But William the Conqueror had made good use of crossbowmen in his conquest of England in 1066 and Richard I treated the church's edict as "strategy" and proceeded to build corps of crossbowmen into his army. When, in 1307, he was killed by a bolt from a crossbow, the church forbid him a funeral and broadcast it as a judgment from heaven for permitting the weapon.

In 1346, the military future of England entered a crossroad by a climactic turn of events. In the first battle of the 100 Years War, Edward II of England was to face not only a much larger and far superior French army but, more important, for the first time elite forces of Genoese and Gascon crossbowmen, and the use of gunpowder. This battle proved to be the birth of the English longbow. English history writers make much of the Battle of Crecy, as the superior French forces were thoroughly routed by the English longbowmen. It is generally left unsaid that the French army had sustained a forced march of 25 miles in a driving rainstorm (with military crossbows weighing approximately 18 pounds) and that the Italian mercenary crossbowmen became mired in knee-deep mud.

Thus, the story of the State of Ohio vs. James Barrows takes hold.

The longbow became the pride of England; the crossbow, as well as gunpowder, were ridiculed as tomfoolery. Little effort was made to encourage its use or development and when later troops returned from the continent with tales of crossbow firepower and its slow but efficient effectiveness, English monarchs became concerned. The longbow had become the weapon of the peasant class. It was cheaply made and easily maintained. Customs and duties on bowstaves were illegal, thus keeping the

price down. In 1463, Edward IV proclaimed, "all men under sixty must maintain proficiency with the longbow; and every man must supply his son with a bow and two arrows, also, a man with servants was to do the same." He further required a mound "suitable for practice" to be built in every town and that "holidays and other convenient times" were to be used for practice. As is easily seen, Edward was no fool. With a stroke of the patriarchal pen, he was able to maintain a standing army at no cost to himself or his realm.

Crossbows, widely used on the continent, continued to gain in popularity.

Crossbows for killing deer and for shooting at butts were fairly common among the English in the late Fifteenth Century and it was doubtlessly recognized by those in authority that if the people practiced with these easily manipulated weapons instead of their longbows, skill in the use of the latter might be wanting in a time of national disaster. In 1504, Henry VII proclaimed, "no man shall shoot a crossbow without the King's license, excepting be a lord or have 200 mark land." This is the first of the anti-crossbow legislation. Licenses were granted upon the payment of a sum. In the *calendars of letters and papers of Henry VII* volume No. 8, page 47, is the granting of a license in 1535 to the Archbishop of Canterbury for a servant to kill deer and fowl for the Archbishop's use, and also in the *calendar addendum volume* permitting Thomas Restwolde, gentleman, to use his crossbow anywhere except within the King's forests, chases or parks.

LEGISLATION PASSED

This legislation was directed solely at the peasant class. As stated by Henry VII, "the factor of human inertia is a hard thing to overcome even by royal decree. The making of the skillful archer is a matter of years; the making of a skillful crossbowman or an adequate gunner is but a matter of months." His statement proved to be quite accurate. Additional proclamations were required. In 1514 specific penalties were set out

● The man learning all about crossbows, with apparent interest, is David Herbst, Director of Parks for Indiana. The author, right, and a couple of friends are doing all the coaching.

requiring forfeiture of the game and 10 pounds for each shot. And later, two more significant changes appear. Handguns were also now included and an offender could be sent to "gaol" until the fines were paid.

In 1541, the *Bill for Crossbows and Handguns* appears. It, as compared to the original statute of 1503 (consisting of two lines) totals eight pages and includes some 25 sections. Close observation of this statute will reveal the crux of the modern day crossbow problem. Although this law included crossbows and for the first time made it illegal to own or even possess one, the main thrust of its legislation is aimed at handguns. Within 40 years the legislation was beginning to crumble and as the accuracy and proficiency of firearms developed, the glorious days of the English longbow became numbered. The statutes prohibiting their use were largely disregarded.

Firearms made great strides and by the late 1500's had, by and large, surpassed the longbow. Many people in England felt the longbow should be retained and pockets of strength remained for almost 200 years. In 1625, William Neade in a book entitled *The Double-Armed Man* strongly advocated a return to the longbow. In 1798, Richard Oswald Mason authored *Pro Aris Et Focis*, the foreword of which reads, "considerations of the reasons that exist for reviving the use of the longbow and pike in aid of the measures brought forward by his majesty's ministers for the defense of the country." I do not, therefore, feel it particularly unusual that I cannot find any reference, either through record searching or correspondence to indicate the statutes of 1541 were ever repealed or countermanded. The English colonies had to have come under the legislative thumb of the homeland. In many cases, English Charters adopted English Law, chapter and verse.

Continued

Continued from page 23

There are numerous theories as to the total absence of crossbows in colonial America. I think the problem appears rather basic.

The first theory, that English law forbade crossbows and that English law governed the colonies, is entirely plausible. In one instance, the powder supply in the Jamestown colony was burned and crossbows were brought from a foreign ship anchored in the harbor to defend the colony from Indian attack. They were shortly returned to the ship as they were forbidden in the colonies.

The second theory is simply that the crossbow was obsolete by the colonial period and that firearms were much improved and easier to handle. Both may be true, either in part, or wholly, or interrelated. Nevertheless, crossbows are almost totally absent from the English colonies in America as well as Australia and India.

In America, references are made to pikes, swords, firearms of various types and even longbows but not crossbows. A search of the historical records of the New York State Library revealed no reference to the possession or use of crossbows in colonial New York. One point cannot be ignored. In 40 of the 50 states, crossbows are forbidden as hunting weapons. In only three of the 40 is the origin of the law known. Records indicate that the anti-crossbow law has existed in New York since at least the writing of the original General Statutes.

Dale Roach, Enforcement Supervisor of the State of Ohio, Department of Natural Resources, reports that "hunting with crossbows was never permitted after 1926. It is possible that crossbow hunting has always been illegal." An anti-crossbow section appears in Section 1392 of the General Code of the State of Ohio. In the State of West Virginia it is a misdemeanor to own a crossbow. In Michigan, as well as several other states, it is illegal to transport one in an automobile.

Results of a survey conducted in 1972 of all 50 states indicate that only 10 states permit hunting with a crossbow. Most of these add on restrictions of various kinds. In an unusual situation, Wyoming, one of the 10 states permitting crossbows, recently attempted to outlaw the weapon but failed. Only three states east of the Mississippi — Indiana, South Carolina and Rhode Island — do not have anti-crossbow legislation. Rhode Island presents a typical explanation. Correspondence with the Division of Fish and Game, Providence, Rhode Island, indicates that the crossbow is considered to be a legal hunting weapon. They further point out that "mechanical bows" of various types are, however, forbidden. No explanation is

made as to why they do not consider the crossbow as being "a mechanical bow". I then asked where and from what source they obtained their legislation and was informed that most of their statutes were copied from their neighbors. The irony of the situation is that Rhode Island has no neighbors which permit the weapon.

The reasons given by most states are, at best, ipso facto. The reason most frequently given is that the crossbow is a possible poaching weapon. Minnesota, Nebraska and South Dakota feel that it can be easily shot from an automobile. Florida, Michigan and Texas feel that other hunters would object. Seven states, all in the East, admit they don't know why the weapon is illegal and don't know how the law got there.

Most U.S. laws seem to be based on old English laws passed to keep the peasants in line and to have a cheap, standing army of longbowmen.

During the course of this survey, I contacted several states in an effort to find out more information. The Law Enforcement Division of the Pennsylvania Game Commission indicates a total of only seven arrests during the past fifteen years for hunting with a crossbow. The case cited at the beginning of this paper is the only example known of a crossbow violation in Ohio. On the other hand, Indiana, which permits hunting with a crossbow, with the exception of deer and water fowl, indicates they have had no difficulty with their rule and have no recorded incidents pertaining to crossbows.

SO, WHO IS RIGHT?

I'm not really sure it's a question of right or wrong.

It seems pretty clear to me most states have no idea where their laws came from or why they were enacted.

Until recently, Cincinnati had a statute in its traffic code which required that after dusk every motor vehicle was to be preceded by a man on foot with a lantern. This is a classic example of a moot law, as were the crossbow laws. No one cared. To most people a crossbow was a contrivance seen occasionally in a Robin Hood movie. Generations of fish and game people repeated the same old tried and true reasons, most of whom had never even seen a crossbow.

Times are changing, though. Cross-

bows are intriguing; they draw the curious. There is growing interest in this country in crossbows. This interest is being fed by a number of companies who are offering crossbows across the counter and through the mail for amounts of money varying from \$29 and up. No statistics are readily available on how many were sold last year; but on the basis of my conversations, most buyers were going hunting. Most do not know the laws.

My first thought is like most state authorities, "So, who cares!" I'm a target shooter. I enjoy it. I find shooting at a four-inch bulls-eye 60 yards away all the challenge I can handle. The friendship and camaraderie I have enjoyed from coast to coast has been most rewarding. I won't hunt with a crossbow. I've tried it. Anyone who has realizes they are awkward and unwieldy. They are cumbersome in heavy brush, and are a long, long way from being silent. A deer can jump a crossbow twang as easily as a longbow. However, there are those who will for some reason or another enjoy it, and unless the reasons for excluding the weapon are clear and beyond a preponderance of a doubt, then, as I see it, it's a poor law. I am, therefore, struck with two separate goals.

The first is that a law for no reason is a bad one when maintained for the sole purpose of levying some restriction on someone else; and, secondly, if allowed, the natural dangerous propensities of the weapon when combined with the innate stupidity of a certain someone on a certain day could have devastating results. I am aware enough to know that although you can try faithfully to get the scores of the NAA Tournament printed in the Cincinnati papers some 20 miles away without success, those same papers would, along with every other paper in the country, print on the first page the fact that someone was killed or injured with a crossbow.

I am impressed with the forward thinking going on in Arkansas. Since late in 1972 crossbows are legal for hunting in Arkansas with the following restrictions. Their use is confined to gun season and a special crossbow season in Madison and Franklin Counties. Game is limited to in-season, non-migratory game. The bolt must carry a broadhead of at least 7/8-inch width; the bow must have a minimum draw weight of 75 pounds and be equipped with a safety.

Indiana, one of the few states which allows crossbow hunting, is currently evaluating its thinking. At present, deer are excluded from game allowed to be taken. However, the Hoosier State, which prides itself on its young professional posture in its fish and game and parks departments, can honestly see no reason for the restriction.

Continued on page 26

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Continued from page 24

I would pose the following observations and proposals:

A crossbow bolt is roughly half the length and weight of an arrow. It travels over twice the velocity of an arrow and has been known to carry for close to half a mile. I have experienced arrows passing completely through a deer with a sixty-pound longbow. The crossbow with its velocity has much more shocking power. However, the 80 and 90-pound bows available on commercial crossbows are totally unnecessary.

It is also true that laminated and aluminum prods do not perform well when left cocked for long periods of time and in cold weather. In many cases, bows have been known to break without notice to the unsuspecting hunter. In the same vein, bow locks under constant strain, jarring, bumping, or even as the result of weather adjustment, often release unexpectedly. And, lastly, manufacturers are currently only liable for actual breaches of sales contract or for negligence in manufacturing or design of the product. Both, at best, are hard to prove. Manufacturers have no obligation to inform the buyer of any dangerous propensities, possible situational defects (such as aluminum prods under constant stress or ex-

tremely cold weather) or even whether the bow is legal in the state to which it is being sent, or to whom it is sent.

I admire states such as Arkansas and Indiana who are willing to look forward. Constructive, well-thought-out legislation is the only answer. A fair and honest evaluation of the potential problems and/or lack of problems, registration of hunting weapons, and manufacturer responsibility are key inclusions.

It's time crossbow legislation was brought out of antiquity.

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Arizona	N	N	N	N	Y
Arkansas(b)	N	Y	N	N	N
California	N	Y	Y	N	N
Colorado	N	N	N	N	N
Connecticut	N	N	N	N	N
Delaware	N	N	N	N	N
Florida	N	N	N	N	N
Georgia	N	N	N	N	N
Hawaii	N	N	N	N	N
Idaho(c)	Y	N	Y	N	N
Illinois	N	N	N	N	N
Indiana	Y	Y	Y	N	N
Iowa(d)	Y	Y	Y	N	N
Kansas(e)	Y	Y	Y	N	N
Kentucky(f)	N	Y	N	N	N
Louisiana	N	Y	Y	N	N
Maine	N	N	N	N	N

Maryland	N	N	N	N	N
Massachusetts	N	N	N	N	N
Michigan	N	N	N	N	N
Minnesota	N	N	N	N	N
Mississippi	N	N	N	N	N
Missouri(g)	Y	Y	N	N	N
Montana(h)	N	Y	N	N	N
Nebraska(i)	N	Y	N	N	N
Nevada	N	Y	Y	N	N
New Hampshire	N	N	N	N	N
New Jersey	N	N	N	N	N
New Mexico	N	Y	Y	N	N
New York	N	N	N	N	N
North Carolina	N	Y	Y	N	N
North Dakota	Y	Y	N	N	N
Ohio	N	Y	Y	N	N
Oklahoma	N	Y	N	N	N
Oregon(j)	Y	Y	Y	N	N
Pennsylvania	N	Y	N	N	N
Rhode Island	Y	Y	Y	N	N
South Carolina(k)	Y	Y	Y	N	N
South Dakota	N	N	N	N	N
Tennessee	N	N	N	N	N
Texas(l)	Y	Y	N	N	N
Utah	N	Y	Y	N	N
Vermont	N	N	N	N	N
Virginia	N	N	N	N	N
Washington	N	Y	Y	N	N
West Virginia	N	N	N	N	N
Wisconsin	N	N	N	N	N
Wyoming(m)	Y	N	Y	Y	Y

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 (b) legal in Oct. in two counties
 (c) not legal in organized hunts
 (d) no deer or waterfowl
 (e) varmints only
 (f) pioneer areas only
 (g) only during rifle season
 (h) rifle season for small game
 (i) varmints only
 (j) rifle season only
 (k) rifle season only
 (l) rifle season only
 (m) legis. to forbid recently failed

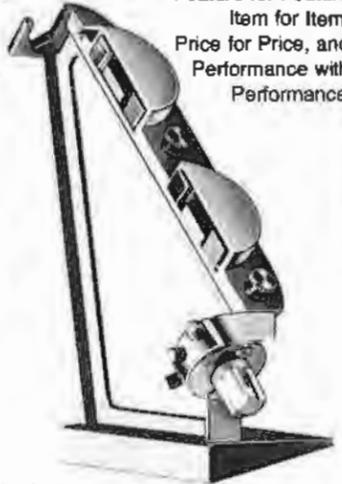
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There probably are as many theories on skinning and butchering deer as there are successful deer hunters. Which means that if you get what you want, you've done the job right. Some people like more roasts than steaks, so they process the meat accordingly. Others like plenty of stew meat, so they don't grind as much for burgers.

And there's no one way you should begin the process. Some hunters process the animal as soon as the meat is cool; others prefer to skin

and hang the carcass to age for about a week; still others hang and age the carcass without skinning for up to two weeks.

Our intention is simply to show you a basic method that will work. You can provide your own variations, if you want, as you gain experience, and learn what works best for you.

Your decision will be governed by personal preference, time available and general weather conditions at the time of kill.

SKINNING

If the weather is warm, or the meat must be transported before it's thoroughly cooled, skin and quarter the carcass as soon after killing as practical. Wrap each quarter separately in clean canvas or cloth. During transportation, be sure air can circulate around the carcass quarters or it will spoil (i.e., don't close it in a car trunk or under another canvas covered with other hunting goodies).

If the carcass freezes, allow it to thaw slightly in just-above-freezing temperatures. This will make skinning much easier.

To skin the animal, first cut off the hind legs just below the hock (similar in position to our knee) and the front legs at the knee joint. Slit the skin on both hind legs between the main bone and the cartilage. Then run a stout pole through these slits, spread the hind legs as far as possible, attach a rope to the pole and around some overhead support and hoist the animal off the ground.

Slit the skin on the inside of each leg to the belly cut, up the brisket and neck and around the neck just below the head, assuming that you are not intending to have a trophy mount of the head and shoulders. If you intend to have a trophy mount, the skin must be slit up the top of the neck and shoulders, downward behind the shoulders around the chest and at the baseline of the chest on the front legs. (For full trophy handling information, see "After



the Hunt," Archery World, Dec. 1972.)

Pulling by hand, and using the knife as sparingly as needed, begin peeling the skin down over the hams and body.

Pull the skin away from the meat far enough to let you slip your hand between and carefully separate them. (One good way to loosen the hide without tearing meat is to roll your fist into the crevice between meat and skin. This works extremely well in areas that don't skin out easily.)

Keep a steady tension on the loosened skin with your free hand at all times, and get someone else to pull on the hide where you really need to exert pressure. Don't try to go too fast.

Roll the hide evenly off the entire body as you progress toward the shoulders and neck. Keep loose hair off the meat.

Some people hang a deer by the head or antlers and skin from front to rear. This system works well, but you may need to tie a leg securely to keep the carcass from turning.

Another skinning method is to make a half-hitch with a rope around the loosened neck skin and pull the skin off in one fell swoop. To do this, you'll need plenty of space and two or three strong helpers.

After the carcass is skinned, use a damp cloth to remove hair, excess blood and dirt. Adding a little vinegar to the water makes it easier to pick up hairs and debris.

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PROCESSING BIG GAME

AGING

Aging is generally considered necessary to improve the flavor and tenderize the meat. It also gives the meat a firmer "set" which makes it easier to cut and handle.

Hang the meat in a clean, dry place at constant temperatures of 34-36 degrees F. for a week or 10 days.

If you have skinned your deer in the field, hang it 12 to 24 hours to cool before butchering. But if you're in hot weather, or don't have the time, start butchering right away.

BUTCHERING

You'll need a solid table or work bench (hopefully not more than 30 inches high, because you'll need leverage on some of the sawing); sharp meat saw; sharp, heavy butcher knife; smaller sharp knife; sharpening stone or steel; freezer paper; masking tape and felt tipped marker.

There are several ways of going about butchering. The most universally used method is to saw the carcass in half lengthwise, splitting the backbone cleanly if possible, and then cutting each half in two leaving two ribs on the hind quarter.

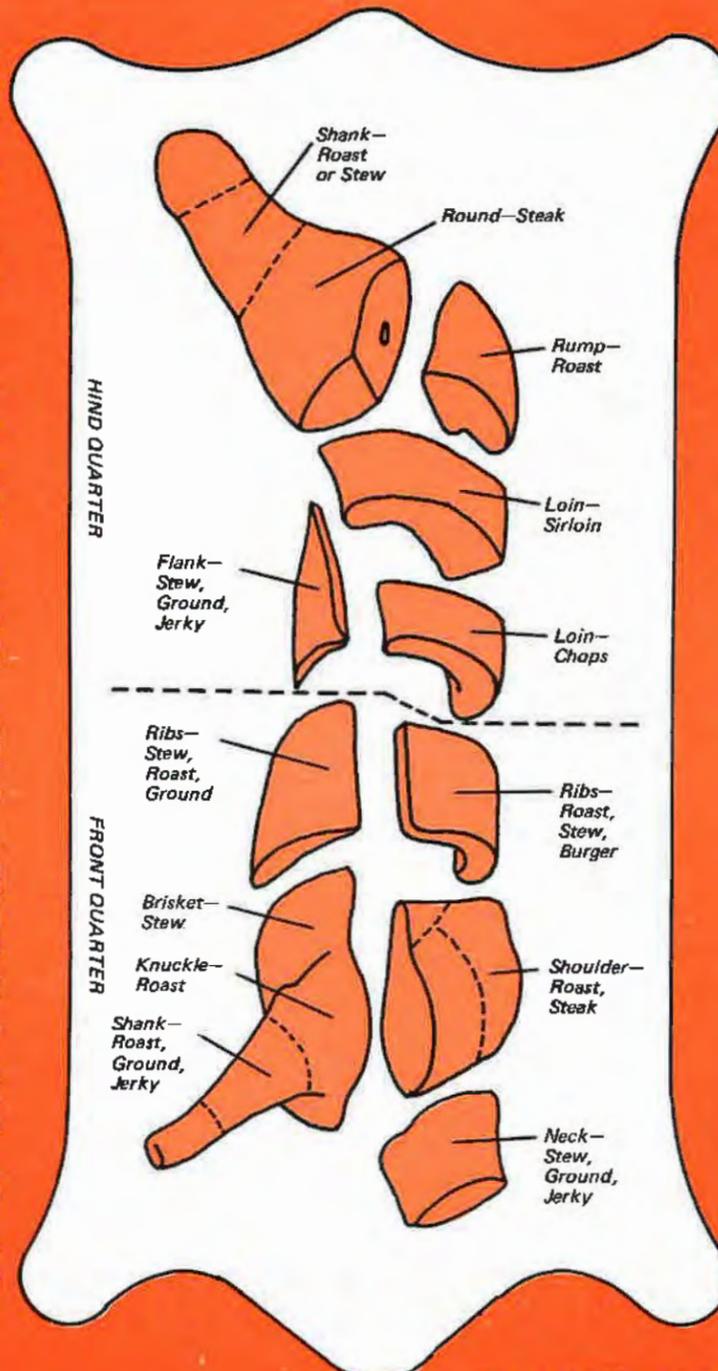
This is done because it's a nebulous area, with everyone basically making up his own mind where rib roasts end and steaks begin. And if you leave the last two ribs on the loin area, the meat cuts will retain a little better shape.

Once you've quartered the carcass, further cutting can basically be achieved by following the sectioning chart shown here. In the round steak area, cut them to whatever thickness you desire (an inch and a quarter is good). Cut loin-area steaks to whatever thickness you wish. The same goes for shoulder roasts or steaks; if you choose to make the shoulders into roasts, they'll be thicker than steaks.

To remove the ham, cut just forward of the pin bone (front part of the pelvis). Use the meat saw only for bone and cartilage, and the knife wherever else possible.

To free the shoulder, make a cut just to the rear of the shoulder blade and up and around close to the rib cage.

You can bone a ham by following with your knife between any of several easily separated muscles. Trim this entire chunk from the bone.



Cut this into boneless steaks; the top of the ham makes a good roast.

Instead of cutting the loin area into steaks with bone attached, you may wish to cut along the dorsal spines the length of the backbone, then along the ribs and lateral spines of the backbone. Now, with a little knife work, you can lift out the entire loin. Good steaks here.

WRAPPING AND FREEZING

Wrap the meat for freezing immediately after cutting. Use the proper freezing paper; double wrapping is advised for moisture retention. Trim as much fat as possible from the cuts and clean them of bone sawdust and scrap. Package the meats in amounts to suit your family's one-meal needs.

Pull the paper as tight to the meat as possible to force out air. Make packages firm and smooth for easier stacking. Seal with masking tape and label and date each package.

To wrap securely, use the "butcher" wrap. Fold one corner of the paper over the meat, roll once or twice toward the opposite corner, then fold in the sides of the paper so they will be enclosed as you continue rolling the package toward the last corner.

(Since venison is dry, it's suggested you add about 20 percent beef suet or whatever amount of beef or pork you wish. The amount can be governed by your personal taste preferences. If you use pork, you defeat your purpose because you have to cook the meat too well done, and it again becomes dry.)

Plastic bags, which can be sealed very tight, work well as the inside wrap for ground meat. After sealing the plastic bag, wrap it in a layer of freezer paper.

With steaks and chops, place two layers of wax paper between each cut. They won't freeze together and will be easier to handle when thawing for cooking.

For best results, send the entire batch of packages to a locker for fast freezing. Then store them in your home freezer. If you can't get a locker to do this for you, turn your freezer to its coldest setting, spread the packages as equally as possible over all shelves and place them as close to the walls as possible. Once they're frozen, turn the temperature back to 0 degrees F. for continued storage.

Hints for Serving Venison, Helpful Books and Publications

SERVING VENISON

Use the same methods for cooking venison as for beef of similar grades. It's best to trim the outer layer of fat from the meat before cooking because it will have a stronger flavor than the meat.

In general, tender cuts of meat are cooked by dry heat; less tender ones by moist heat. Young bucks and does furnish the more tender meat. Strips of bacon over the outside of a roast will help to keep the meat from becoming too dry.

Tender cuts, such as rib and loin chops, round steak, leg roasts can be pan-broiled, oven-broiled or roasted. Less tender cuts, such as neck, shanks, chuck and brisket should be cooked with moist heat. These cuts may be ground for deerburgers or meatloaf.

Less tender cuts may be made more tender by marinating for 10 or 12 hours in French dressing or a spicy marinade. Many people, however, feel the entire flavor of venison is lost with a marinade and prefer simpler cooking. Rather than killing the original venison flavor with spices and herbs, use salt, freshly ground pepper, monosodium glutamate which blend with but do not destroy the original flavor. Vegetable flavors, such as onions, garlic, tomatoes, chopped parsley and celery, are complementary and bring out the taste of the meat.

An excessively strong flavor indicates improper handling of the meat: the meat was not bled properly; paunch juices leaked onto the meat and were not wiped off; the meat was not cleaned properly; the carcass was not kept cool during transport; or too much fat was left on the meat.

Cumulatively, this means you haven't done your fieldwork, nor your homework. And that would be a shame, because venison is food fit for kings.

BOOKS

BOWHUNTING FOR DEER, by H.R. Wambold. Stackpole Books, Cameron & Kelker Sts., Harrisburg, Pa. 17105. \$5.95.

THE CATCH AND THE FEAST, by Joie & Bill McGrail. Weybright & Talley, Inc., 750 Third Avenue, N.Y., N.Y. 10017. 1969. \$20.00.

COOKING FOR CAMP AND TRAIL, by Hasse Bunnelle with Shirley Sarvis. Sierra Club Books, 597 Fifth Ave., N.Y., N.Y. 10017. 1972. \$3.95.

GAME COOKERY, by E.N. & Edith Sturdivant. Popular Science Publishing Company, Inc., 355 Lexington Ave., N.Y., N.Y. 10017. 1967. \$1.95.

GAME COOKERY RECIPES, by Eugene L. Conrotto. Filter Press, Box 5, Palmer Lake, Colo. 80133. 1971. \$3.50; paper, \$1.00.

GAME AND FISH COOKBOOK, by Harriet & James Barnett. Grossman Publishers, 625 Madison Ave., N.Y., N.Y. 10022. 1968. \$7.95.

GAME AND FISH: FROM FIELD TO TABLE, by Roy Wall. The Naylor Co., 1015 Culebra Ave., San Antonio, Texas 78201. 1972. \$4.95.

GAME IN THE KITCHEN, by Barbara Flood. Barre Publishers, South St., Barre, Mass. 01005. 1968. \$3.95.

GOURMET COOKING FOR FREE, by Bradford Angier. Stackpole Books, 1970. \$4.95.

THE HOME BOOK OF SMOKE COOKING MEAT, FISH & GAME, by Jack Sleight & Raymond Hull. Stackpole Books. 1971. \$7.95.

HOW TO COOK FISH AND GAME, by Winifred M. Goddard. Tri-Ocean, 62 Townsend St., San Francisco, Calif. 94107. 1967. \$5.00.

HOW TO PREPARE GAME, by Jack L. Brinhall. Deseret News, 44 E. Temple St., Salt Lake City, Utah 84111. 1964. \$3.95.

HOW TO PREPARE AND PRESERVE GAME, by Charles Elliott. Popular Science

Publishing Co., Inc. (to be published Spring 1974).

PROFESSIONAL GUIDE'S MANUAL, by George Leonard Herter. (Written for North Star Guide Assoc.) Herter's, Inc., Waseca, Minn. 56093. 1971. \$3.79; condensed version, paper, 45 cents.

REMINGTON WILD GAME COOKBOOK, edited by L.W. Johnson. Remington Arms, Box 206, Fairfield, Conn. 06430. \$1.95.

SHOOTER'S BIBLE COOKBOOK, by Geraldine Steindler. Follett Publishing Co., 1010 W. Washington Blvd., Chicago, Ill. 60607. 1964. \$3.95.

SMOKE COOKING, by Matt Dramer & Roger Sheppard. Hawthorne Books, Inc., 70 Fifth Ave., N.Y., N.Y. 10011. 1967. \$5.95.

THE SMOKE FOOD RECIPE BOOK, by Jack Sleight. Stackpole Books. \$8.95.

THE STEW COOKBOOK, by Johnrae Earl & James McCormick. Price/Stern/Sloan Publishers, Inc., 410 N. La Cienega Blvd., Los Angeles, Calif. 90048. 1973. \$3.95.

THE VENISON BOOK, by Audrey Alley Gorton. The Stephen Greene Press, Box 1000, Brattleboro, Vt. 05301. 1957. \$1.95.

WILDERNESS COOKERY, by Bradford Angier. Stackpole Books. 1970. \$1.95.

BOOKLETS, LEAFLETS

"AFTER YOUR DEER IS DOWN," Ohio Dept. of Natural Resources, Div. of Wildlife, 1500 Dublin Road, Columbus, Ohio 43215.

"CARE OF VENISON," Colorado Department of Fish & Game, 6060 Broadway, Denver, Colo. 80216.

"DEER," "THE WHITETAIL DEER," "SO YOU DON'T LIKE VENISON," "VENISON NEEDN'T BE POTLUCK," "WEIGH YOUR DEER WITH A STRING," Pennsylvania Game Commission, P.O. Box 1567, Harrisburg, Pa. 17120.

"FAMOUS GAME RECIPES," "HOW TO BUTCHER YOUR DEER," Virginia Commission of Game & Inland Fisheries, Box 11104, Richmond, Va. 23230.

"FIELD CARE OF BIG GAME," Montana Department of Fish & Game, Helena, Mont. 59601.

"FIELD CARE OF YOUR GAME," by Bill Sizer, Arizona Game & Fish Department, 2222 West Greenway Road, Phoenix, Ariz. 85023.

"FIELD DRESSING BIG GAME," "BUTCHERING THAT MOOSE," "THE ALASKA HUNTER'S COOKBOOK," Alaska Department of Fish & Game, 333 Raspberry Road, Anchorage, Alaska 99502.

"FIELD DRESSING A DEER - DO'S AND DON'TS," "BIG GAME COOKERY," New York State Conservation Department, Albany, N.Y. 12226.

"FIELD DRESSING YOUR DEER," "GAME COOKERY - MAIN STYLE," Maine Department of Inland Fisheries & Game, Augusta, Me. 04330.

"GAME RECIPES," "SKIN IT, TAN IT, SEW IT," Michigan Department of Natural Resources, Mason Building, Lansing, Mich. 48926.

"A GUIDE TO GAME COOKERY," Vermont Agency of Environmental Conservation, Department of Fish & Game, Montpelier, Vt. 05602.

"HOW TO BUTCHER YOUR DEER," "HANDLING YOUR BIG GAME KILL," Tennessee Game & Fish Commission, P.O. Box 40747, Nashville, Tenn. 37220.

"HUNTER'S GUIDE TO THE DEER OF NEW MEXICO," New Mexico Department of Game & Fish, State Capitol, Santa Fe, N.M. 87501.

"VENISON FIELD CARE AND COOKING," Utah State Division of Wildlife Resources, 1596 W.N. Temple, Salt Lake City, Utah 84116.

"WHAT DO I DO NOW/FIELD DRESSING," South Dakota Department of Game, Fish & Parks, Pierre, S.D. 57501.

"YOU AND YOUR WILD GAME," "THE PRONGHORN ANTELOPE CARCASS," Wyoming Game & Fish Commission, Cheyenne, Wyo. 82001.

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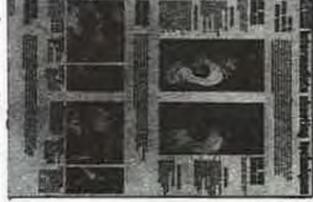
Basics



Intermediate I



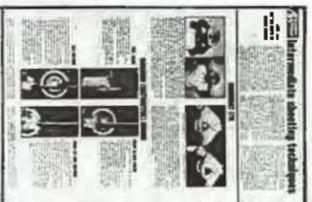
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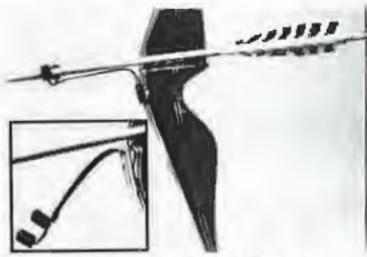
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Great Days Afield...

The
Thrill And
A Half
Bear

by James P. Williams

I HAVEN'T THE slightest idea how it all began. Perhaps I got the idea from reading so many archery articles. The idea also could have been encouraged by Dick Vance who owns the Dewey Avenue Archery Shop in Rochester, N.Y. Dick has taken bear in Canada.

About two years ago, I asked Dick for the name of a guide and outfitter who would cater to archers for a spring bear hunt. He gave the name of Harvey Fortunato who operates Moose Horn Cabins near Chapleau, Ontario. At that time I thought of the possibilities, but dismissed the idea. I couldn't justify it in my own mind.

Shortly after Christmas, however, I made the decision to go and asked my neighbor, Jack Landuyt, to go along. Jack used to watch me practice in my backyard, and then he started shooting the bow and arrow. He agreed immediately even though the month of June is a busy business month for him. To round out our party we asked my father, Bill Williams, of Salamanca, N.Y., and my brother-in-law, Ronnie Bryant, from Perry, N.Y. Both men eagerly accepted.

I quickly sent a letter to Harvey Fortunato, and scheduled a June hunt. Soon we received confirmation and a letter answering the many questions that I had asked concerning stands and weather conditions. By the end of January the die was cast.

As the time for the hunt approached, I stepped up my practice routine and general preparation. Last year I had installed a three-pin sight on my Wing Gull, targeted in for 15, 25 and 35 yards. From a tree stand, this bow and sight combination works very well for me. I decided to use Herter's aluminum 2219 shafts with Howard Hill broadheads. I find this head one of the most effective that I've ever shot. I constructed three tree stands, and made three rope ladders.

During the last month I practiced every other day, shooting from 30 to 60



arrows per day at various ranges. I spent some time shooting from a six-foot ladder. As my groups tightened up, my confidence increased.

On June 2, Jack and I, who live in Canandaigua, N.Y., packed the cars and drove to Perry where we picked up Bill and Ronnie. Sixteen hours later we arrived in Chapleau.

About 3 p.m. on that same day, Harvey took us out to show us our stands. All the baits had been hit recently. Tired but excited, we settled into our areas. We put up tree stands for Ronnie and me while Bill and Jack settled into ground blinds. As soon as we were settled, black flies and mosquitoes covered us. I was actually thankful for the darkness when I could hide in the station wagon. Both Ronnie and Bill had seen bear and each had a shot, but neither had connected.

We awoke the next morning to the itching of bug bites. When I looked in the mirror, my neck was bigger than my head. Nervous and bug-shy, we agreed to go back on the stands in the afternoon, making sure head nets were properly in place.

Ronnie's stand proved to be the most active. Bears hit the bait as much as three times a day. We considered putting up a sign to read "Ronnie's Diner." The bears always hit the area when no one was on the stand.

Monday, Ronnie and I started hunting both morning and afternoon. No bears appeared. We even began to smell like the rotted beaver and beef that was used for bait. On Tuesday evening, there was a noisy party of people about 200 yards from my stand. I sat out the hunting hours in the hopes that they would go away, but they didn't.

Harvey woke us up about 7:30 a.m. on Wednesday. He had heard about the party near my stand and decided to move me to an area about a mile away from Jack's stand. When we went in to check the stand, the bait had been hit. We rebaited the area and Ronnie and I set up the extra tree stand that we had brought along. The stand was about 14 feet from the ground and some 15 to 18 yards from the bait. It looked like an

ideal setup for getting a bear.

I had been on the stand about two hours when I heard a shot from Jack's direction. About a half hour later I saw Jack standing on the road and waving. He had shot at and hit a bear. I quickly climbed down, and as we drove toward his stand, Jack explained he had left his blind to give his cramped legs a stretch. As he came back to the blind he saw a bear at the bait. The bear saw him at about the same time. He raised his Marlin 30-30 and got off a shot which knocked the bear down hard but didn't keep him there. Jack figured it would be better if two went in after him.

I left my bow in the car and began the job of tracking with Jack's rifle. The blood trail was good. The bear had stopped about 30 yards from the hit, but we must have spooked it when we started into the thick undergrowth. The bear circled and wandered over about 100 yards of thick brush. Just as the blood trail began to disappear, Jack shouted, "There's the bear and he isn't dead." I quickly stepped toward Jack and could see the bear starting to get up about 25 yards away. I held the rifle on him, but it was almost impossible to pick him out in the telescopic sight in the dim light. When the post settled on the bear's back I pulled the trigger. The bullet hit exactly where I aimed and the bear went down. Just as quickly, he let out a roar and was on his feet and coming straight at us. I tried to find the charging bear in the scope again. It seemed like an eternity before I found him and pulled the trigger. The bear dropped about 15 yards away.

JACK'S FIRST BEAR

We dragged the 150-pound bear out and took some pictures. It was Jack's first bear and I was as proud as he was. If the hunt had ended then it would have been all right with both of us.

It was about 7 p.m. when I headed back toward my stand. I had had enough excitement to last me a long time, and I also had mixed emotions about going after a bear with the "two sticks" in my hands.

As I slowly approached about 100 yards from the stand, I saw a bear near the bait; but the bear had seen me and headed for tall timber. Had I been on my toes I could have stalked him from behind a log pile and had a shot from about 30 yards. At that time I felt that I had blown my hunt, so I walked straight to the stand and wearily climbed the tree. The excitement of the previous experience and the fact that I had seen a bear at my bait encouraged me enough to remain confident.

For the first time, time seemed to fly by. The woods were strangely quiet. Thirty minutes after I had gotten on the stand I heard a twig snap and a low grunting sound.

I slowly looked over my left shoulder and about 25 yards behind me was a bear. The bear stopped making noise and began a slow cautious circle in toward the bait. It stopped several times and sniffed the air. When it began to cross the log pile, about 12 yards away, I began to draw. Just as I started to draw, the bear looked straight at me and I froze. It sniffed and again moved toward the bait, only to stop when I moved for a better position. Each time the bear stopped, it sniffed the air and looked straight at me. I said to myself, "The next time he stops, shoot!" Now, at about 15 yards the bear stopped and looked away from me. Just as I was coming to full draw, the log the bear was standing on broke and the bear fell into a hole between the logs. Now I said to myself, "You've not only got a stupid bear, but a clumsy one."

MY 250-POUNDER

I let down and the bear gathered himself and climbed over the remaining logs. I drew as it approached the bait. I aligned the 15-yard pin on the bear's side. The bear was quartered away from me and stopped at the bait. As the bear's head went down, the arrow was in the air. The white and orange feathers disappeared in the black fur about two inches below where I was still holding the pin. The bear let out a "woof" and jumped. Then I could see the arrow buried in the soft soil opposite the bear. I already had another arrow on the bow and began looking for an opening to get another shot. I swung on an open trail about 30 yards away and held, waiting for the bear to come through the edge of the woods. The bear didn't arrive.

About 10 yards away from the place where the first arrow had hit, the bear was behind some small trees and I had about a six-inch opening to shoot through about 25 yards away. I aimed at the black fur and released. The arrow went through the opening but was deflected by the many small branches. The next arrow didn't make it through the opening. The third arrow flew true and the bear stopped moving.

Later, we found the second hit had traveled along the outside of the bear, slitting open the belly, passed under the left foreleg through the neck and lodged in the skull at the base of the brain. I'm confident that the bear died from the first hit, and had died quickly and humanely. When we field-dressed the bear, we found the lungs had been penetrated and shredded. The bear was a sow and weighed about 250 pounds.

I sat on the stand platform and watched the bear for about 40 minutes. The whole episode had taken about 20 seconds. This was the payoff for the many months of practice I had put in. I had even planned the shot before, and everything went exactly my way.

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At Cobo Hall...

1974 American Indoor Open to All Archers



Archers at the 1973 American Indoor stroll across the floor to check targets and pull arrows.

The \$24,000 1974 American Indoor Archery Championships at Detroit's Cobo Hall March 23-24 will have limited and unlimited shooting divisions, in championship and flight brackets. The announcement was made by Bob Rhode, Archery Champions, Inc., manager of the tournament. "We wanted to have a shoot for all archers, so this is the only way to go," he said.

Cash and merchandise prize breakdowns are listed on the opposite page.

In addition to the divisional change, new — and different — rounds will be shot. Limited Division shooters will score on the new International Indoor Round (Short FITA), at a 40 centimeter (15.6 inches) target with a 10-9-8-etc. scoring. They will shoot two rounds, with each round constituting 60 arrows, three arrows per end with a three-minute time limit. Unlimited Division archers will shoot two rounds at a 12-inch, five-color target face, scoring 5-4-3-2-1. Each end will be three arrows, with a three-minute time limit.

There's also a possibility, according to Rhode, that the amateur division competition will be a National Archery Association indoor national championship. Should this come to pass, all amateurs will need to acquire an NAA membership card to compete. But this shouldn't be too big a change because it seems most amateur competitors at the event are already NAA members.

As the rules now stand, it is impossible for the PAA to sanction the tournament. However, we're hoping that within the next two months the situation will change. We hope to announce a decision on this in the next issue of *Archery World*. If not possible, a direct mailing will be made to PAA members notifying them of the status of the tournament.

A decision on the officiality of the Amateur Division will be announced in the next issue of *Archery World*.

"We've received great support from manufacturers," Rhode said, "which has enabled us to boost both cash and merchandise award totals. I want to point out that this is not a complete list of all co-sponsors. They are the co-sponsors to date; we hope to add a couple more good archery names to the list."

A complete list of all merchandise prizes and co-sponsors will be published in the next issue of *Archery World*.

"Last year's tournament was good; this one should be even better," Rhode said. "We have more cash and merchandise; the two divisions should give us more competitors, and it's been a good year for archery all around. Cobo Hall is the place to be next March 23-24."

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1974 American Indoor Archery Championship

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4th 350	10th 200		4th 250	10th 200		4th 350	10th 200		4th 250
5th 325	11th 190		5th 200	11th 190		5th 325	11th 190		5th 200
6th 300	12th 180		6th 150	12th 180		6th 300	12th 180		6th 150

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Limited Flight 3		Unlimited Flight 3	
5 places.....	\$1,100 in Merchandise	5 places.....	\$1,100 in Merchandise
Limited Flight 4		Unlimited Flight 4	
5 places.....	\$1,000 in Merchandise	5 places.....	\$1,000 in Merchandise
Limited Flight 5		Unlimited Flight 5	
5 places.....	\$ 900 in Merchandise	5 places.....	\$ 900 in Merchandise

All Limited competition will be shot under AAC equipment ruling. Limited Division will shoot new International Indoor Round (60 arrows at 40 centimeter face scoring 10,9,8,7,6,5,4,3,2,1), 3 arrows per end, time limit to be announced. Unlimited Division will shoot 60 arrows at 12-inch, 5-color face scoring 5, 4, 3, 2, 1. 3 arrows per end, time limit to be announced.

AMATEUR CHAMPIONSHIP

Men Free Style	1st	2nd	3rd	Trophies
Women Free Style	1st	2nd	3rd	Trophies
Men Bare Bow	1st	2nd	3rd	Trophies
Women Bare Bow	1st	2nd	3rd	Trophies

Amateur Division must shoot under AAC equipment ruling. Amateur Division will shoot same round as Limited Division.

JUNIOR OLYMPIC CHAMPIONSHIP

Girls	Trophies	all classes	1st	2nd	3rd
Boys	Trophies	all classes	1st	2nd	3rd
Team	Trophies		1st	2nd	3rd

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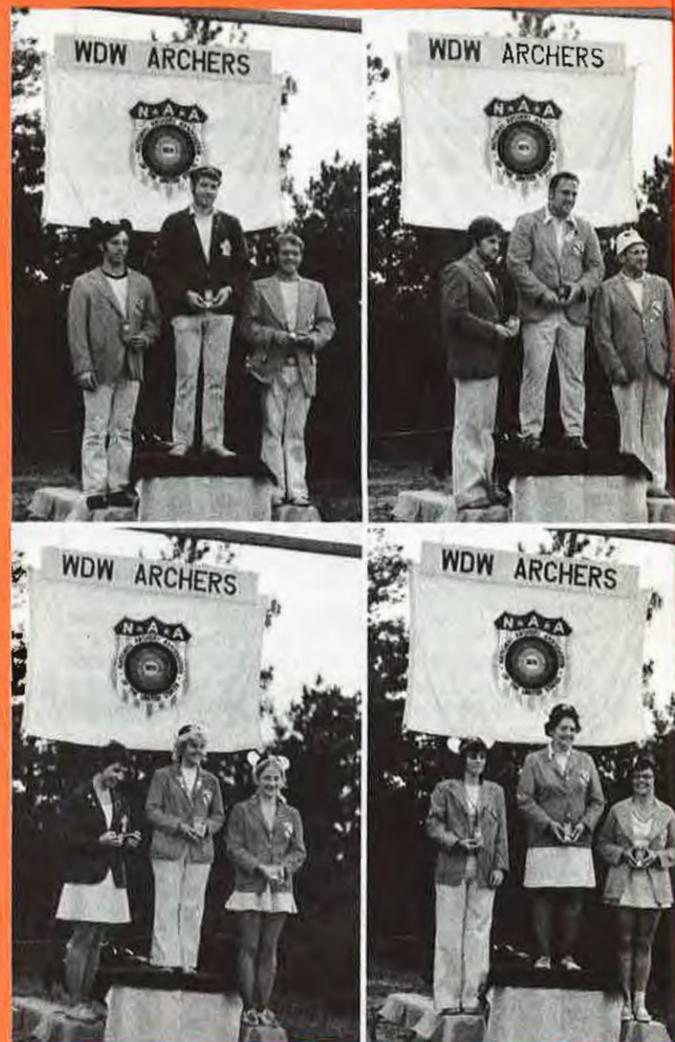


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FIRST FIELD CHAMPIONSHIP OF AMERICAS

Seventeen archers from the U.S., Canada and Puerto Rico assembled at Lake Buena Vista, Florida, for the first Field Championship of the Americas in late October.

Wayne Pullen of Saskatchewan shot a fine 266-274/540 Hunter and a 276-272/548 Field for a top men's freestyle score of 1088. He was followed by Les Anderson of Ontario with a 511-550/1061 and Doug Brothers of Ohio with a 512-548/1060. Anderson dropped only one arrow — at the 30-meter stake on the 45-meter walk-up target — to record a 278 on his first 14 targets of the Field Round.

Ruth Wallace of Pennsylvania topped women's freestyle with a 228-247/475 Hunter and 253-266/519 Field for a 994 total. Rod Hoover of Pennsylvania won the men's barebow division with a 246-241/487 Hunter and 210-219/429 Field for 916. Eunice Schewe of Illinois topped women's barebow with a 195-219/414 Hunter and 180-189/369 Field for 783.

The entire tourney was shot under Florida bragging weather conditions, so everyone stayed loose. The only hitch came from the airlines; they didn't deliver Lucille Lessard's bow until the second day of the event. So she borrowed a bow from Southeastern Archery Sales in Orlando and registered a 403-459/862.

The tournament was organized by the Walt Disney World Archers and ran smoothly.

The 1974 field championship, to be hosted by Puerto Rico, will hopefully attract more countries. There are eight FITA members in the Western Hemisphere — Canada, the United States, Puerto Rico, Mexico, Cuba, Venezuela, Brazil and Argentina.

● Upper left, from left, Doug Brothers, Wayne Pullen, Les Anderson, men's freestyle.

● Lower left, from left, Sheila Brown, Ruth Wallace, Vonda Kemmerer, women's freestyle.

● Upper right, from left, Tom Bezusko, Rod Hoover, Frank Kitzler, men's barebow.

● Lower right, from left, Margaret Bennett, Eunice Schewe, Cecily Coles, women's barebow.

Men's Freestyle

Wayne Pullen, Canada
Les Anderson, Canada
Doug Brothers, USA
Lothar Jaeckel, Canada
Terry Wallace, USA
Fred Vega, Puerto Rico

Women's freestyle

Ruth Wallace, USA
Vonda Fisk Kemmerer, USA
Sheila Brown, Canada
Lucille Lessard, Canada
Wanda Allan, Canada

Men's barebow

Rod Hoover, USA
Frank Ditzler, USA
Tom Bezusko, Canada

Women's barebow

Eunice Schewe, USA
Cecily Coles, Canada
Margaret Bennett, USA

H/F Total

540-548/1088
511-550/1061
512-548/1060
495-536/1031
476-491/967
358-345/703

H/F Total

475-519/994
457-493/950
441-448/889
403-459/862
395-453/848

H/F Total

487-429/916
499-402/901
412-411/823

H/F Total

414-369/783
306-270/576
312-247/559

NAA BOARD ACTION

At its last meeting, the NAA Board of Governors:

Passed a resolution indicating that pass-through or rebound arrows will be recorded as hits provided all previous holes on the target face have been marked. They did provide an option for unmarked targets — when the scoring system is 10-9-8-etc, the value of the pass-through or rebound will be 7 for distances 60 yards and closer and 5 for distances beyond 60 yards, and when the scoring system is 5-4-3-2-1, the value will be 4.

Passed a resolution agreeing there will be only one official practice end at the beginning of each official round of competition.

Gave unanimous approval and official recognition to the new International Indoor Rounds — 18 meters scored on a 40-centimeter face with 10 scoring rings, and 25 meters scored on a 60-centimeter face with 10 scoring rings. An official round at each distance will be two rounds of 30 arrows each.

Approved making available the NAA "54" pin, provided the score is made on an International Indoor Round. To win this pin, six arrows in succession must be placed in the 9 or 10 scoring ring. The Chicago Round will no longer be used as a "54" pin qualifier.

Unanimously supported the dissenting vote cast at the AAC meeting by the NAA representative, Ed Marten, against approving the use of the compound bow in any sanctioned tournaments.

The annual winter meeting of the Board of Governors will be February 1-3 in St. Louis.

IOWA STATE FITA FIELD CHAMPS

Gary Riley, Cedar Rapids, set a new state record for the FITA Field round with a 522 at the Fifth Annual Iowa State Archery Association Field Championship in Mason City. The old record of 512 was held by Vance Patrilla. Donna Kramer, Mason City, won the women's championship with a 321.

Following Riley were Bob Lane, 499; R. E. "Ed" Marten, 494; Jim Curtis, 456; Chuck Wise, 381; Roger Anhalt, 323; Dick Hoff, 314; Ray Kramer, 308; John Wise, 248. Rose Allen finished second in the women's division with a 313.

PENN STATE WORKSHOP

The 1974 Pennsylvania State Archery Workshop will be held June 16-26 at Stone Valley State College. Satisfactory completion of the workshop is worth academic credit, and will also get you a certified instructor's certificate from the NAA. For full information, write to the National Archery Association, 1951 Geraldson Dr., Lancaster, Pa. 17601.

TOURNAMENTS, TOURNAMENTS

East Stroudsburg State College is organizing a tournament for February 10 using the 18-meter International Round. It will be shot in the fieldhouse at the college. For full info, write to Maryann Schumm, Physical Education Department, East Stroudsburg State College, East Stroudsburg, Pa. 18301.

The annual Atlantic YMCA Open Indoor Championship for youth under 18 is set for Manheim Township High School near Lancaster, Pa., Saturday, March 16. The Lancaster Archery Club will hold their annual invitational team championship at the same location on Sunday, March 17. Competition for the Lancaster event is based on the 18-meter International Indoor Round, and will be shot under NAA rules.

The U.S. Indoor Championships will be held Saturday, March 30, at the Farm Show Building, Harrisburg, Pa. The contest will be based on the NAA 900 round and scored under current rules. The annual Pennsylvania Indoor State Team Championship will be held in the same place the following day. For full info about both events, write to the NAA at 1951 Geraldson Dr., Lancaster, Pa. 17601.

The University of Minnesota will sponsor a tournament April 6-7 at the fieldhouse on the campus. An indoor FITA round will be shot the first day, and a "900" Round the second day. For full info, write to Roy Hakala, Apt. 6, 550 12th Ave. N., South St. Paul, Minn. 55075.

The 4th World Field Archery Championship will be held the last full week in July, 1974, in Yugoslavia. It will be shot under rules promulgated by FITA.

TOP IOWA AMATEURS

Based on five tourneys held by the Iowa State Archery Association the past year, here are the ratings of Iowa amateur archers:

Ladies freestyle: Doreen Wilber, Jefferson; Rose Allen, Mason City; Colleen Yonda, Dubuque; Iris Clough, Dubuque; Donna Kramer, Mason City; Jerry Wells, Bettendorf; Carol Green, Des Moines; Gae Steuri, Monticello; Lois Bennett, Knoxville;

Mens freestyle: Bob Lane, Altoona; Gary Riley, Cedar Rapids; R. E. "Ed" Marten, Des Moines; Ron Meyer, Dubuque; Ken Woody, Des Moines; Gene Geissinger, West Des Moines; Al Walkner, Cedar Rapids; Jim Curtis, Des Moines; Steve Allen, Fort Dodge; Charlie Wise, Mason City;

Ladies barebow: Patti Henson, Ames; Karen Ramsey, Davenport; Rhonda Plemmons, Davenport; Lee Richardson, Cedar Rapids; Ruth Nowadzky, Cedar Rapids; Bev Marcia, Davenport; Diane Kralik, Creston; Helen Wright, Ames; Betty Cerny, Bettendorf; Rose Sanders, Cedar Rapids;

Mens barebow: Charles Hawkins, Blue Grass; Tony Henson, Ames; Gary Salberg, Hawarden; A. "Red" Ramsey, Davenport; Roger Plemmons, Davenport; Ron Wells, Bettendorf; Terence Tobin, Charles City; Roger Dolling, Ames; Fred Timmermans, Dubuque; Frank Seufferer, Des Moines.

PHYLLIS BIGEL NAMED N.Y. STATE COLLEGIATE DIRECTOR

Phyllis Bigel, assistant professor of health and physical education at Brooklyn College, has been appointed collegiate archery director of the New York State Archery Association. She is in her eighth year as archery coach at Brooklyn.

NATIONAL FLIGHT RESULTS

Here's how the arrows flew and flew at the 1973 NAA National Flight Tournament at Ivanpah Dry Lake on the California-Nevada border in early October:

Men's amateur, 50-pound class — Vern Godsey, 604 yards, 2 feet, 8 inches; Charles Grayson, 595-0-4; Morton Mendels, 572-1-6; William Mendels, 519-2-7; 65-pound class — Charles Grayson, 698-0-6; Vern Godsey, 689-1-3; William Mendels, 501-2-10; Morton Mendels, 456-2-0; 80-pound class — Vern Godsey, 693-0-8; Charles Grayson, 545-2-9; Morton Mendels, 536-1-8; unlimited class — Vern Godsey, 786-0-9; Charles Grayson, 615-2-11; William Mendels, 511-1-8; Morton Mendels, 473-2-2.

Women non-amateur — Monica Wildenburg topped 35-pound class with 443-2-7, 50-pound class with 522-1-6 and unlimited class with 501-2-4.

Men non-amateur, 50-pound class — Harry Drake, 616-0-6; Chris Wildenberg, 580-1-4; 65-pound class — Harry Drake, 673-1-11; Chris Wildenberg, 621-1-9; 80-pound class — Chris Wildenberg, 599-2-3; unlimited class — Harry Drake, 710-2-9; Chris Wildenberg, 633-2-1.

LIEBERMAN, LORENSEN TOP ASU OLYMPIC QUALIFIERS

Steve Lieberman, shooting a great 1255 Single FITA, topped the men's division at the Arizona State Olympic Qualifier at Tempe in early October. Irene Lorensen, with a strong 285-270-281-320/1156 topped her division by 32 points.

Lieberman shot a 295 at 90 meters, only one point off the world record, and added scores of 305, 316 and 339 for his 1255 total, which is only 13 points off the world record.

Trailing Lieberman were Mark Vancas, 247-286-260-318/1111; Dave Wroblewski, 257-227-288-332/1102; Phil Trafton, 206-271-271-312/1060, and Steve Allen, 230-218-284-308/1040. Trailing Lorensen were Kay Sarver with 264-278-276-306/1124; Diane Tone, 257-256-275-317/1105; Carol Jum, 247-262-272-323/1104.

In the intermediate girl's division, Chris Pugh shot a 232-245-244-299/1020 to take top honors. Carole Chevront was next with 198-228-239-314/979; Jocelyn Wendorf, 223-247-229-263/962.

EASTERN REGIONAL COLLEGIATE RESULTS

Richard Stonebraker, Penn State, and Janet Kemmerer, East Stroudsburg State, won their respective divisions at the Eastern Regional Intercollegiate Championships at Glassboro State College in late October. Stonebraker shot a 712 American, 290 NAA "300" for a 1,002 total. Miss Kemmerer registered a 578 Columbia and 266 NAA "300" for her 844 winning total.

In the men's division, Charles Bockhorn, Atlantic Com-

munity College, was second with 712-274/986; third went to Ray Stone, Madison College, with 704-273/977. Runners-up in women's shooting were Kathy Osinga, Ramapo College, with 540-236/776, Nancy McCullough, Millersville State College, 536-235/771, and Karen Kosinuk, Penn State, 528-243/771.

Top men's team was the Atlantic Community College group of Charles Bockhorn, Bruce Affrunti and Rich Wehran with 2784. Top women's team was the East Stroudsburg team of Janet Kemmerer, Darlene Sedlock and Nancy Schmidt with 2301. Top co-ed team was the Penn State group of Richard Stonebraker, John Voigt, Karen Kosinuk and Janet Hamilton with 3428.

Cold winds held down opening round scores.

The 1972-73 Eastern All-Regional teams were announced. Girl's team members are Linda Gelok, Janet Kemmerer, Karen Light, Jean Schmalzer, all of East Stroudsburg, and Joanne Nelson and Barbara Ryshavy of Glassboro State. Men's team is composed of Bruce Affrunti, Charles Bockhorn, Douglas Hamer, Glenn Pennycock of Atlantic Community College, Robert Ryder of Madison College and John Voigt of Penn State.

28TH ANNUAL PENNSYLVANIA FIELD CHAMPIONSHIPS

Barry Boyer and Vonda Fisk Kemmerer took top honors in men's and women's freestyle class A shooting at the 28th annual Pennsylvania State Field Archery Championships. Boyer won with a 1599 total and Kemmerer with a 1455. Trailing Boyer were Richard Stonebraker, 1584, and Wayne Foul, 1579. Trailing Kemmerer were Janet Ashbaugh, 1417, and Diana Doden, 1415.

Champion pros were John Preston, 589, and Diane Miller, 485.

Richard Learn won men's freestyle class B with 1502; Kenneth Daley took class C with 1341, and Raymond Hauch won class D with 1027. Women's class B champ was Charlene McCullough with 1273; class C champ was Jane Beale with 1006 and class D champ was Dianne Mayle with 771. In boy's freestyle, class A champ was Larry Murdock with 1475; Charles Hickey topped class B with 1209. Roberta Oswald topped freestyle girls with a 903. Ron Snyder won the freestyle bowhunter division with 985; barebow bowhunter champ was Robert Carney with 885.

Rod Hoover won men's barebow class A with 1478; Matt Ryzynski topped class B with 1304; John Wright won class C with 1148; William Walfender won class D with 747.

Women's barebow class A champ was Rebecca Wallace with 1179; class C was won by Leona Davis with 817.

Dale Waltman won boy's barebow with 1059.

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The Questions Archery Clubs Want Answered

In the August/September issue, we asked several questions that seem to crop up most often when archers discuss their club problems. Your response was excellent, indicating to us that clubs do, indeed, have problems they aren't sure how to solve. Here are some of the responses. Some contain suggestions; others tell how they run their shoots; others ask a few more questions.

HOW BRUNSWICK, MAINE, OPERATES

The Brunswick Junior Olympic Archers (formerly Boy Scout Target Archers) was set up to provide Boy Scouts in the area with a safe and complete system in which to learn, practice and earn the archery merit badge. We are affiliated with the NAA through the Junior Olympic Archery Development Program (JOAD). We shoot JOAD and NAA rounds. We have found, with all the different official rounds, there is no need for modifications.

We shoot every Saturday morning from 9 a.m. to noon. The older and better shots shoot an American or Junior American round according to their age. The younger and beginning archers shoot one, two or three JOAD 30-arrow rounds according to their ability and stamina.

Unfortunately, there are no state NAA tournaments in Maine. The state NFAA has an indoor tournament in the spring and an outdoor tournament in the fall. We always try to attend their indoor tournament as guests.

Our club championships are determined by the 10 highest scores during the outdoor season (April to October). Cadets shoot the 60-arrow JOAD tournament round, juniors shoot the Junior American round and intermediates shoot the American round. Since we are the only JOAD club in the state and the only target club in the state, we have no competition for an NAA state tournament.

We use standard NAA classifications (age groups) for our championships and JOAD classifications (skill groups) for achievement awards. In the NFAA state shoot, they separate the finger and release shooters. We have watched the release shooters closely and strongly agree with the separation. We all use a finger release, and teach it with a chin anchor.

We are reasonably satisfied with the standard NAA rounds, but feel that the third rating of the JOAD outdoor qualification is excessively difficult. The second rating of a junior bowman is 100 on a 48-inch target at 20 yards. The third rating of junior archer jumps to 170 points on a 48-inch target at 30 yards. We feel that 150 points would be a more reasonable step, with all others remaining the same.

Intermediates usually have trouble making weekly shoots because of their many social and work commitments. Juniors and cadets run 50 to 75 percent attendance.

We give small trophies for our club championships, and the regular JOAD patches for achievement of skill.

This May we were able to secure permission from the high school principal to form an archery team for the NAA Interscholastic Mail-In Tournament.

We have an associate membership for all non-Boy Scouts (male and female) under 18 years of age, and recently changed our club name to try to attract more young people into our program.

James R. Davis
President, BJOA
Richard A. Bryant
Adult Advisor, BJOA
Brunswick, Maine

MISUNDERSTANDING ALIENATES YOUNG CLUB

Just organized in 1970, the Cherryland Archers, Inc., is still immature and unfamiliar with details on all the rules and regulations in the different classes of archery. The only round that we shoot is the indoor PAA.

In 1972 we joined the Wisconsin Archers Association to shoot in the Mail Match. We were given very little information on rules and regulations except that we must shoot in the non-amateur division if we were using string peep sights. None of the members wanted to change their shooting method by removing string peep sights, so we were all classified as non-amateur.

We have no professionals in our small club of under 50 members. In eight months of indoor league shooting, only one member broke 290, and no more than three hit in the 280's. We have records for three years to prove we are not professional archers.

In 1973 the rules were changed by the WAA which legalized string peeps in the amateur division. Being amateurs, we naturally joined the 1973 mail match in the amateur division. After shooting the full season mail match, ending in March, 1973, we were disqualified in June with the reason that, once shooting as a non-amateur, you could never be reclassified as an amateur.

Our club did not understand this. And it seemed to us that only poor organization would cause such changes in the rules from one year to the next.

Furthermore, the WAA sent newsletters on June 1 to all its membership, stating, "Discussion of protests concerning Cherryland Archers. A motion was made . . . stating the present WAA rules governing amateur competition were violated, and those people who previously shot as non-amateurs must be disqualified from the 1973 mail match tournament, where protests were lodged." None of the officers or directors contacted us previous to sending the newsletter to clarify the violation.

None of our members will be joining the WAA in 1974, and nothing short of an apology and an oral discussion with the directors will ever straighten out this misunderstanding. Instead of making archery stronger, misunderstanding, lack of standard rules and poor organization is ruining archery.

Douglas Cochenet
Cherryland Archers, Inc.
Sturgeon Bay, Wis.



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● Family get-togethers for steak, brats or chicken highlight activities at the Chippewa range several times each year. "Keep the youth and families active, then you'll have a good club," members say. *Chippewa Herald-Telegram photo.*

● The huge stone fireplace forms one wall of the range pavilion. The Chippewa Valley Archers have held down their costs by not building a fancy clubhouse. *Chippewa Herald-Telegram photo.*



● The Chippewa Archers outshot a local pistol team this year in their annual competition. Here they check a fine set of groups. *Chippewa Herald-Telegram photo.*

Chippewa Valley Archers...

DOING SOMETHING FOR CONSERVATION

by Donel Johnson

WATERFOWL FLOWAGES and fishing ponds. Grouse habitat and a snowmobile trail. A fishing dock for handicapped anglers.

What do those things have in common? Each owes its existence to an uncommon crew of archers in west-central Wisconsin. The Chippewa Valley Field Archery League has been doing big things for conservation for more than a dozen years. Since 1960, it's donated \$17,500 for such projects on public lands, with no strings attached.

But maybe bowmen have been the biggest beneficiaries after all, for you'll travel far to find archers who are having more fun, or who are more highly esteemed in their communities.

"There weren't many bowhunters in the Rod and Gun Club when we started these projects," recalls Vic Frye, charter member of the Chippewa Falls Bowhunters and longtime president of the Chippewa Valley league. These days, notes Vic (a dedicated gun hunter, too), there's a friendly spirit of cooperation and competition between archers and gunners in the area.

Further, those bowmen have bagged the benefits of making archery a real family affair.

But first, about those conservation

projects.

They're financed with proceeds from sales of \$1 tickets for a "Conservation Shoot" held each spring, hosted by one of the league clubs. Ticket sales have far exceeded the actual number of entrants in recent years, for the league's efforts have won wide support from citizens who've never drawn a bow.

"We were just sitting around the fire talking one night, and Ken Polden of Eau Claire had this idea," Vic recalls.

The five or six clubs then belonging to the league were asked to contribute prizes — such modest inducements as rings of bologna — and the first shoot was held in Eau Claire in 1960. It yielded \$450, which was donated to the state to help build a flowage on Hay Meadow in Chippewa County. The next year the league was able to double its donation, which went for another flowage and access road.

Eventually, donated prizes were abandoned, with league members deciding to retain some of the proceeds from the annual event to provide things like color television sets and merchandise certificates worth up to \$300. As the profits grew, so did the list of accomplishments. Like this:

1962 — Forty-two potholes blasted for waterfowl habitat in Dunn County (\$1,200).

1963 — Four and one-half miles of

forest trails created, seeded and gated for ruffed grouse habitat in Clark County (\$1,200).

1964 — Construction of a flowage on O'Neil Creek, Chippewa County, with access road (\$1,200).

1965 — A game trail system in Clark County (\$1,200).

1966 — Game trail connecting the Hay Meadow and O'Neil Creek projects (\$1,200).

1967 — Gated game trails built in the Sherwood-Washburn area of Clark County (\$1,300).

1968 — Gated game trail construction in Eau Claire County (\$1,000); eight forest openings created in Chippewa County (\$500).

1969 — More game trail construction in Eau Claire County and renovation work on Chippewa County trails (\$1,500).

1970 — Dike and water control system for waterfowl nesting habitat in Pershing Wildlife Area of Taylor County (\$1,500).

1971 — Water control structures for New Auburn Wildlife Area in Chippewa County (\$1,000), and renovation of Eau Claire County game trails (\$500).

1972 — A \$500 contribution was made toward construction of a fishing dock for elderly and handicapped persons on Chequamegon Lake in Chippewa County, and \$500 each was spent

In 12 years, this northern Wisconsin club has donated time, effort and \$16,500 to improve game and fish habitat in five counties



● Trails sponsored and built by the club are for all types of outdoor recreation. No amount of money could buy the excellent public relations this type of effort gives.



● Vic Frye, mentor of the Chippewa Valley Archery League, examines the credit sign at one of the league's waterfowl and general resource projects built in cooperation with the state. Photo by the author.

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CHIPPEWA ARCHERS

continued from page 35

for construction of gated game trails in Eau Claire County and acquisition of public hunting grounds along Paint Creek in Chippewa County.

1973 - Game trail renovation and construction in Eau Claire, Chippewa and Clark Counties (\$1,500). The total now, 65 miles!

The total benefits resulting from the foregoing list of accomplishments are hard to assess. The clover seeded walking trails are not only attractive to grouse (and grouse hunters) but to deer and many songbirds. In some cases, the gates are opened after snowfall, to link those trails with other snowmobile routes in the region.

The forest clearings also provide more of the "edge" cover which such forest game as grouse and deer favor. The flowages have furnished not only waterfowl hunting, but fishing. Furbearers live there, too.

Money donated by the league was used to match state and federal aids, so these dollars went far, much farther than if they'd been spent on work undertaken by the league alone.

Such cooperative efforts have also done much to cement relationships with state and county agencies and other groups of sportsmen.

"Some of this work may be of more direct benefit to birdwatchers than to archers," Vic observes. "That has never been a problem in picking projects where it was felt the money would do the most good."

The donations have never been used as a lever, either, to persuade officials to act for the special benefit of archers in any matter, Vic stresses.

"We invite the state game managers in our area to a December league meeting to discuss possible projects," Vic explains. "After the selection is made, the information on how the proceeds will be spent is printed on the shoot tickets. The shoot is in late April or early May."

Except for confining the expenditures to a five-county area which encompasses some of Wisconsin's finest recreation lands, the location of a project has never been a consideration either, Vic says.

The Chippewa Valley Field Archery League has had a score of member clubs over the years, but not all at the same time. Some of the clubs have come and gone; some to return again. The Chippewa Bowhunters and the Eau Claire Archers have maintained especially active memberships, however, and Vic Frye has some definite ideas about how to keep a club alive:

"Turn things over to the young people. Meet regularly and make archery a family affair. And don't wind up using all the club's resources to build and maintain a clubhouse."

He speaks from considerable experience - and success.

"I got interested in archery in Chippewa Falls shortly after I got out of the Army at the end of World War II," Vic relates. "I enjoyed it, and I enjoyed the people who did it."

And so Vic Frye became an ambassador for archery, in his travels in his auto parts business, and as a long time Chippewa County delegate to the Wisconsin Conservation Congress - a citizen's advisory group to the state's natural resources board. Things were busy back home, too.

"Locally, we were sharing grounds with the rod and gun club for awhile. It didn't work out very well. We needed a better place to shoot," he relates.

And so the club purchased a 40-acre tract, constructed a range and eventually added other facilities.

CLUB MEETS REGULARLY

There is a shelter, 20-by-30 feet, with a giant fireplace built of fieldstone picked up in the area. ("But it's not a clubhouse," Vic stresses.) There are state-approved toilet facilities, a well and a playground for children.

"We hold a club meeting every Wednesday, rain or shine, and we hold three family nights a year," Vic says.

"There's a bratwurst feed, a steak feed and a chicken feed - all you can eat for a dollar, and subteens free. Family participation is encouraged in all the club's activities."

How big is the Chippewa club?

"Rather than total number of members, I think of it as 200 households," answers Vic, who no longer holds office in the club, but is a senior advisor.

An interchange, such as joint meetings or events with the local rod and gun club, is also encouraged, and at one such annual affair the Chippewa Bowhunters have pitted skills against those of the Eau Claire Pistol Club.

"We beat them this year, for the first time," says Vic, smiling around his pipe. The score was 1235 to 1231!

The event is shot at 20 yards with the same size bulls-eye for both weapons. The handgunners must use .38's or .45's.

"We couldn't come close when they shot .22's," Vic admits.

Such a list of activity and accomplishment adds up to far more than a sum of the parts, and the benefits have reached far beyond the Chippewa Valley.

Here and there, other bowmen have picked up the idea of holding a conservation shoot, or getting involved in community projects, or making club activities more attractive to the younger shooters and their families upon whom the future of the sport depends.

There in the Chippewa Valley they've put it all together. And the future looks as bright and enduring as that big stone fireplace at the Chippewa range.

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For even though Bear sold the stock in his successful archery manufacturing company in 1968, he by no means was of the temperament or inclination to retire or sit back and take it easy. He remained on, as he does to this day, president of Bear Archery. If the fifties and sixties were jammed full of his globe-trotting adventures with bow and arrow, then the seventies would be the years of perfecting and refining the inventions that he had field tested and proved from the frozen wastes of the Polar Ice Cap 40 miles north of Point Barrow, Alaska, to the steaming Amazon jungles of South America.

The proof of his mental and physical prowess of the fifties is evident in the



● After 40 years, Fred Bear took a nostalgic trip back to the birthplace of Bear Archery in Detroit, Michigan.

six World Record trophy plaques he has in his office. Just one, his World Record Alaskan brown bear, was taken in the sixties, the other five World Records were all taken in the fifties. They include barren ground caribou, mountain caribou, Canada moose, elk and the very difficult stone sheep.

To note his 40 years in the business, Fred took a nostalgic trip back to his first plant in Detroit, Michigan, for a quick look around. Then he hurried back to Grayling, where the air is cleaner and the pines are greener.

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● Dick Shanahan of CRS Productions discusses last-minute shooting angles with Fred.

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This one-half hour film was shot this past summer on location in Grayling, Michigan. It follows the manufacture of a Bear Kodiak Magnum bow through every step in the handcrafting process from working with the raw materials through the final buffing and polishing.

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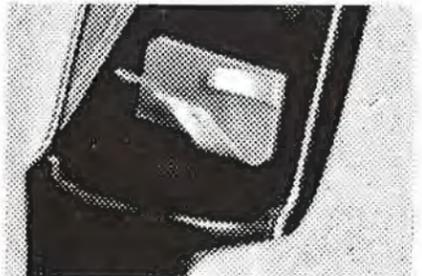
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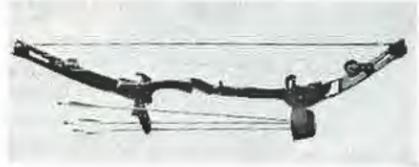
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