

BOW & ARROW ^{ICD}

The World's Leading Archery Publication

JULY-AUGUST, 1968 50 CENTS

LONE STAR VARMINT CALLING

Bob Swinehart:

TREED WITH A BAD BRUIN

Bow Test:

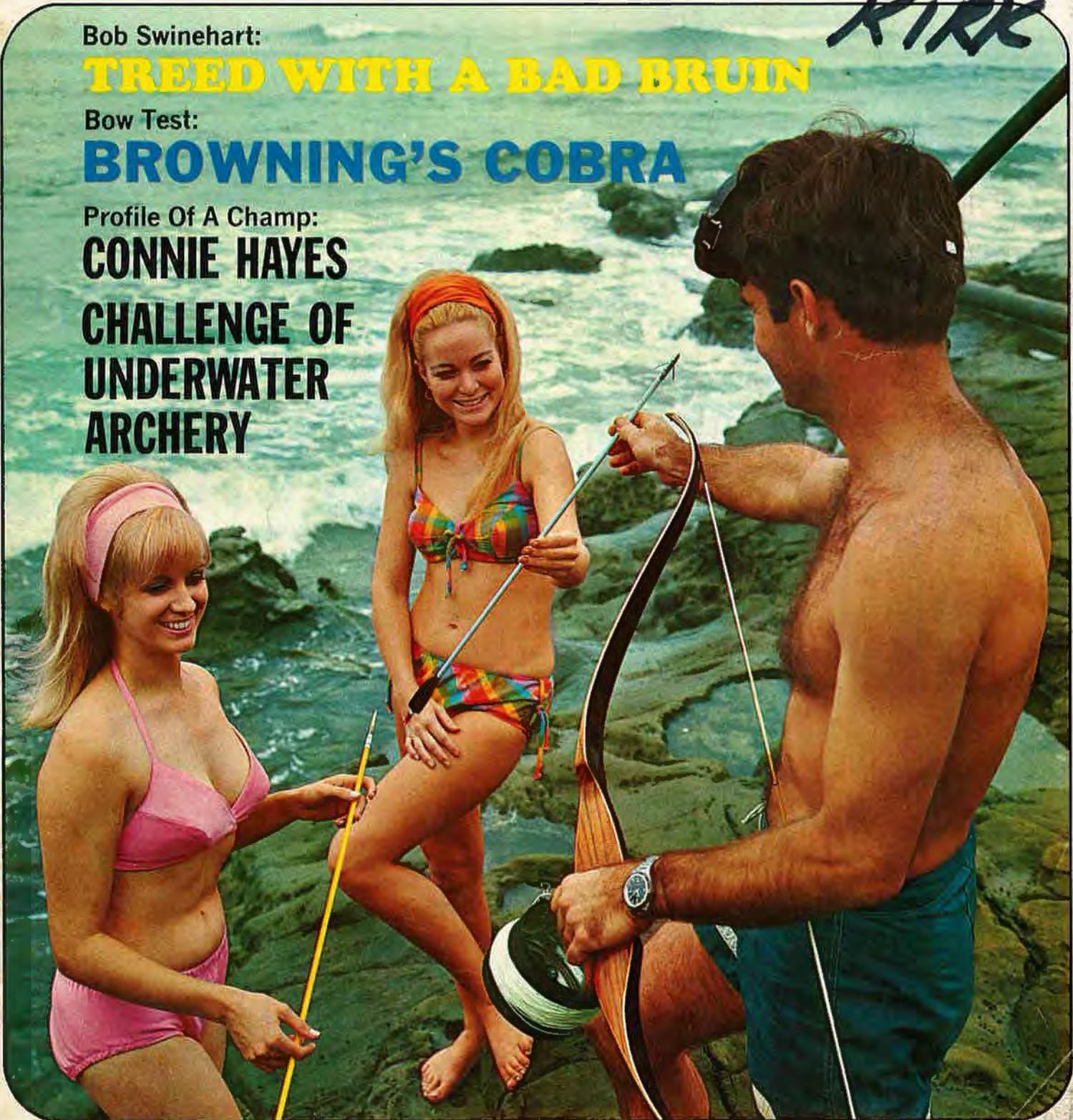
BROWNING'S COBRA

Profile Of A Champ:

CONNIE HAYES

**CHALLENGE OF
UNDERWATER
ARCHERY**

KIRK



WHAT'S NEW FROM BEN PEARSON?

INDOOR OPEN SETS RECORD



Jim Dougherty shot twelve big game animals



Stan Warner, new NFAA Free-Style champion

OUTDOOR AND INDOOR

Within twelve months, Stan Warner became Free-Style Champion, National Hunter Round record holder... Ed Rohde emerged as National Animal Round record holder (perfect 560)... Margaret Tillberry won the International Indoor Women's Open... and Marjorie Lammers won the International Outdoor Women's Open. All were shooting Ben Pearson's Lord Mercury bows from the Sovereign professional performance line.

During the same year, Jim Dougherty, Ben Pearson Hunting Promotions Manager, shot twelve big game animals plus coyotes and other smaller game... all with the new Mercury Hunter bow. Jim says it's the hottest bow he's ever held. Other hunters, also, are making enthusiastic reports about the Mercury Hunter's performance.

It is being demonstrated rather convincingly that the patented mercury built-in capsules are the key for these archers. 800 grains of pure liquid mercury in steel capsules are built into upper and lower riser sections. Besides reducing limb recoil and shooter fatigue, they create a flow of forward power that greatly aids in a Mercury bow's cast, reducing or eliminating bow traits that usually interfere with the shooter.

The Lord Mercury tournament bows also have an optional stabilizer rod containing a third mercury capsule in the tip. New champions have proved that this little barrel of mercury reduces lefts and rights caused by bow torque, brings further stability to the bow, and adds points to the scores. **6**

PERFORMANCE GUARANTEE CONTINUES

All Ben Pearson Sovereign bows with the built-in mercury-cushioned power capsules continue to be covered by a performance-satisfaction 30 day guarantee... strongest in the archery business. **7**

10th ANNUAL CHAMPIONSHIP DRAWS 1634!

Ben Pearson's International Indoor Championship has become the largest archery tournament in the world. This year's Open saw a record 1634 shooters, including 132 Jr. Olympic contenders, jam Cobo Hall, Detroit for the \$15,000 event. A souvenir booklet, complete with every score and many winner's photos, is now available upon request. **8**

ARCHERY EQUIPMENT CHARTS ARE BIG HELP

Large, illustrated charts, "How To Select Bow Hunting Equipment," and "How To Select Target and Field Archery Equipment," are one of Ben Pearson's most useful sales aids available to dealers. Especially helpful to beginners, the charts give valuable tips on selection of bows, arrows, leather goods, and accessories. **9**

FREE INFORMATION SERVICE CONTINUES

For details and literature on any news item above, check the box number, write your name and address on the margin, and mail-in this page. Or list the item numbers in your letter or card.



Leisure Group Marketing Headquarters
2251 E. Seventh St. (Dept. BA), Los Angeles, Calif. 90023

Write for BEN PEARSON and SOVEREIGN 1968 CATALOGS



Trophy Takers

Browning hunting bows are carefully engineered and crafted for the archer who demands exacting performance from his equipment. Each of these Browning designs draws smoothly without stacking, casts a heavy hunting shaft with exceptional speed, packs the power for deep penetration and delivers with target accuracy.

Which model is best for you? For fast, easy handling in thick cover, consider the sinewy, compact 50 inch *Cobra* or 52 inch *Nomad Stalker*. When maneuverability is not quite so essential, you can benefit from a mite extra smoothness and precision with the matchless *Safari* or flat shooting *Nomad*; both available in either 54 or 60 inch models. If you desire the ultimate combination of power and tournament like performance, then the dynamic *Explorer*, with torque reducing forward mass stabilizers, should be considered. The *Explorer* is offered in 56 and 62 inch models.

Complete your "Trophy Taking" ensemble by mating your Browning Bow with Browning's meticulously weight matched Micro-Flite or select Port Orford Cedar arrows. They compliment each other to give you maximum effectiveness with every shot.

America's Finest Archery Equipment by

BROWNING

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Write for
Full Color
Catalog

The complete Browning Archery Catalog covers all Browning bows, arrows and accessories, and includes interesting facts on archery equipment and shooting.

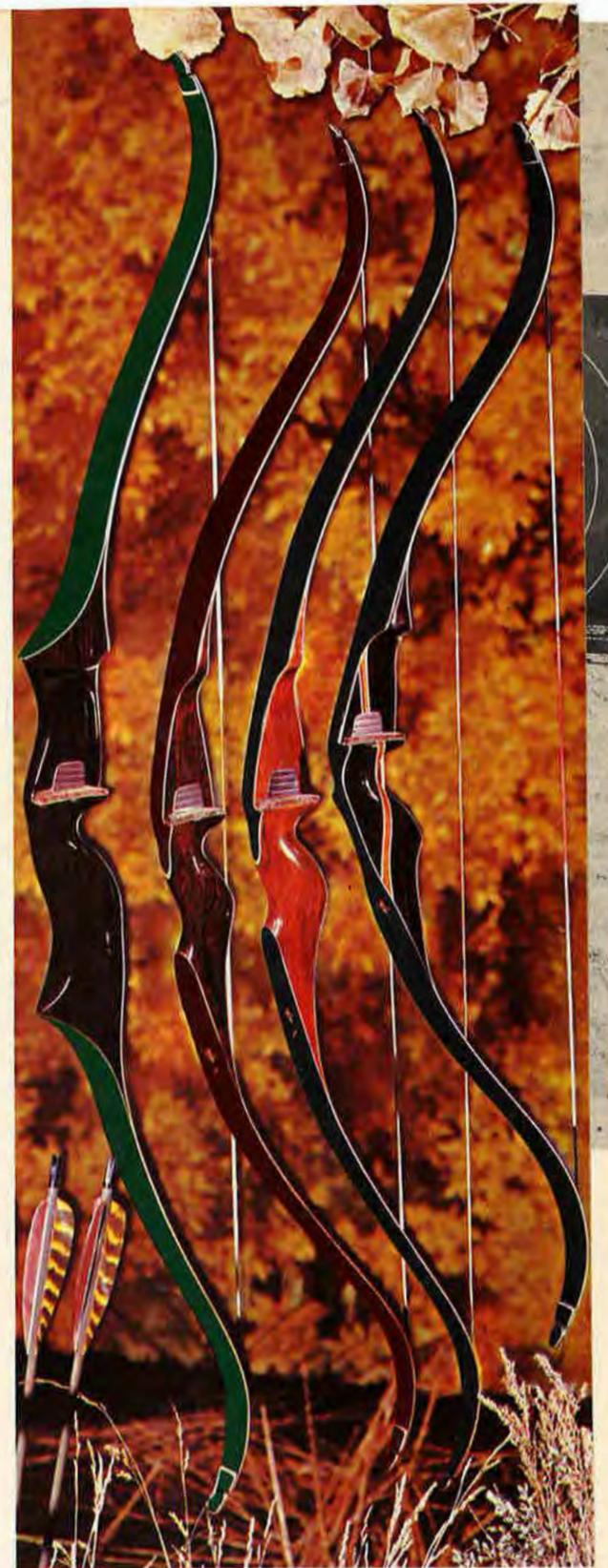
Browning Arms Company, Dept. S43, P. O. Box 500, Morgan, Utah 84050



Explorer		Safari		Nomad		Cobra
56"	62"	54"	60"	52"	54"	50"
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Also available through Browning Dealers in Canada at slightly higher prices.



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TRUESPOT

Nocking Points

Spot your arrow exactly — every shot.

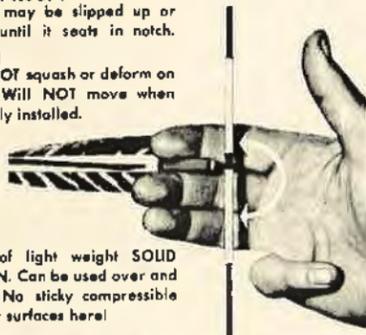
SMOOTH!
Will NOT roll string. Gives extremely accurate "Hair trigger" release.

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Per Pair
At your Dealers

FOOL-PROOF!
Arrow may be slipped up or down until it seats in notch.

FIRMI!
Will NOT squash or deform on draw. Will NOT move when properly installed.



Mfg. of light weight **SOLID NYLON**. Can be used over and over. No sticky compressible rubber surfaces here!

STRING SILENCERS



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Kills String
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No flip flop ears to flutter — Nothing to hang up. Convert high frequency noise into a whisper instantly.

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Dampen String
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Full Working Recurve

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Standard - 60¢ Per Pr.

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SAMPLE

Lowest Price, Highest Quality,
Fastest Service — Full Length or Die Cut



BOW & ARROW

CONTENTS

BOW TEST:
BROWNING'S COBRA.....C. R. Learn 30

FEATURES:
LIQUID ARCHERY.....Ross McKay 14
LONE STAR VARMINTS.....Jim Dougherty 20
STABILIZING INFLUENCE (Part II).....Steve Barde 24
THE PERFECT YOUNGSTER28
PROFILE OF A CHAMP: CONNIE HAYES....Donna Meadors 34
BEWARE OF BEAR.....Bob Swinehart 38
TRAIL OF THE FLORIDA SWAMP BOAR.....Bob Zwirz 56
A DREAM COME TRUE.....64

DEPARTMENTS:
MAIL POUCH 6
TECH TALK 8
HUNTING WITH KITTREDGE10
TACKLE TIPS12
BOW BITS50
CLUB CALL70
BOOKS FOR BOWMEN74

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ON THE COVER: Sea-going archery may never replace the more conventional types of shooting, but the beach company is great and, in the interest of science, there are plenty of volunteers to help one with the necessary gear. Photo by Bob Learn.

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"Vic is the PAA member. I'm the one in the suit."

We asked Roger Erlander and Vic Leach of Frontier Archery in Sacramento, California, to pose for an ad and say a few words about themselves.

But Roger and Vic are archery people — not advertising people. So they left it to us to tell the story.

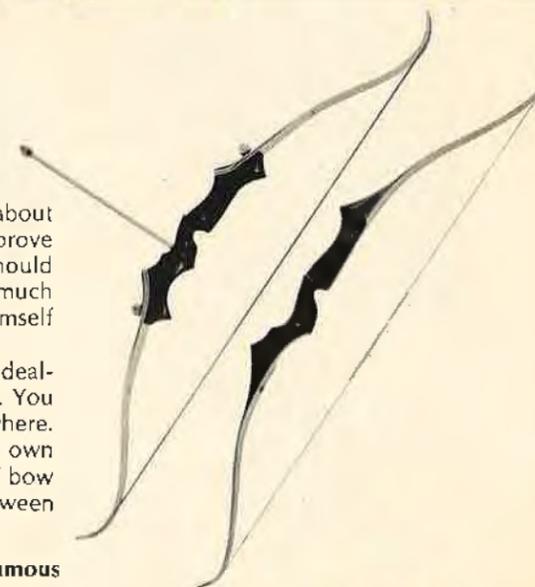
Roger and Vic are the caliber of people we seek out as Wing dealers. They live and breathe archery. When they have something to say, you can bet it comes from experience.

Roger counsels his customers about equipment, tells them how to improve ... even shows them how it should be done. Vic Leach doesn't need much publicity, he's done it all by himself in the big tournaments.

Roger and Vic are our kind of dealers. We make their kind of bows. You can't buy a Wing bow just anywhere. We're fussy about that. When you own a Wing bow, you own the kind of bow the experts talk about ... just between experts.

Roger Erlander is shown holding the famous Wing Presentation II.

Presentation II complete.....\$150.00
Extra set of limbs..... 64.95
Custom carrying case..... 29.95
Stabilizer set (1 rod and 1 weight)..... 12.90
Presentation I\$115.00
(Comes with padded carrying case)



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Mail Pouch

PRO INSTRUCTION

We seem to be receiving more inquiries as to where beginning archers may receive professional instruction. These inquiries tend to come from professional people such as physicians and persons who have been successful in another sport where they received professional coaching such as track and baseball, so they desire professional instruction when they take up archery either as a sport or as a business.

We know that an archer who succeeds well at the start is most likely to remain interested in archery. The longer he is interested, the longer he is likely to be a subscriber.

Karl E. Palmatier,
Executive Secretary,
Professional Archers Association,
Hickory Corners, Michigan
(Limited space precludes our publishing the list of professional in-

structors, but Palmatier can direct you to one, if you care to write to him at Route 1, Box 32, Hickory Corners, Michigan.)

CHIPPED FINISH

In your January/February '68 issue, in the *Tech Talk* column, Randy Hawthorne asked about repair to chipped finish of his bow. I may be able to help him and other readers of your fine magazine.

I have repaired chipped finishes on my bow, gun stock and golf clubs. With a product of fast drying genuine oil, under the label of "stock finish" put out by Birchwood Chemical Company, Incorporated, Minneapolis 24, Minnesota.

It produces a finish of beauty and durability and penetrates deeply without rubbing. I finished a rifle stock with this product and could not have been more pleased. It is simple to apply with nothing more than your finger.

W. E. Yow,
Pascagoula, Mississippi

HAPPY TO HELP

I am an archery clinician for the District Life Time Sports Program. We hope to offer a clinic at the West-erly Parkway Junior High School.

I'm writing with the hopes that

BOW & ARROW would send us a few back issues of their magazine for use in our clinic. I feel that your magazine has done much good for our school archery club and I would like for the members attending the clinic to have an opportunity to get acquainted with your magazine.

William H. Grove,
State College, Pennsylvania
(The magazines are on the way. We'd like to have them become acquainted, too.)

DOUBLE EXPOSURE

About a year ago, you ran an article on Hardy Ward, then NAA champion. In that article, you had a complete analysis of his form in photographs. One was especially good, that being the double exposure of his release; that and the sketched picture of him at full draw, with lines drawn in showing his perfection of form, gave an almost complete analysis of his style. You had used this sketch-line form of analysis many times before, which made it easy to compare each of these excellent archers, but you have stopped that practice in recent issues.

It is my feeling that these are invaluable to the aspiring archer who
Continued on page 47



WHY

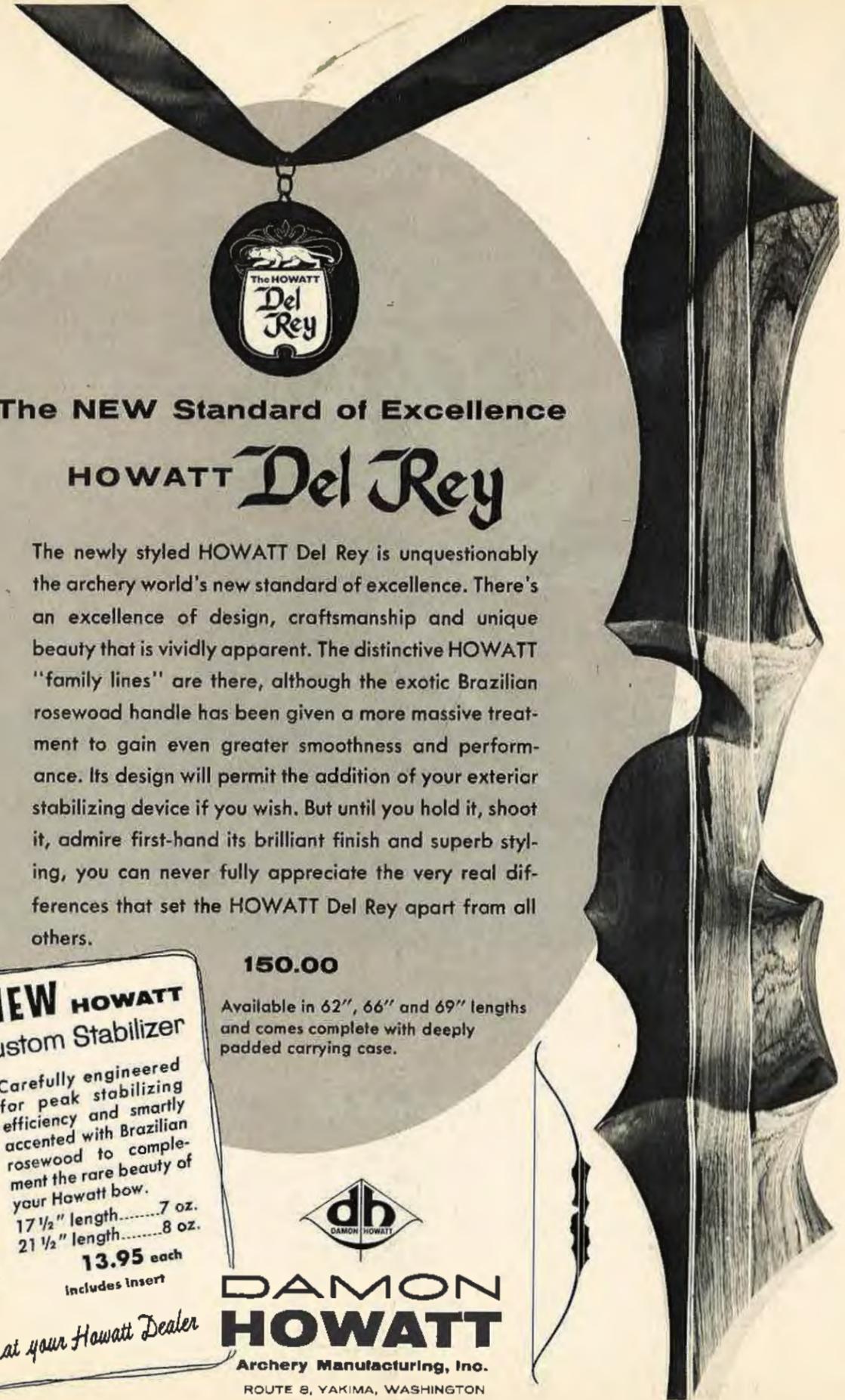
DO OVER 6000 LEADING: DEALERS ARROW MAKERS BOW MANUFACTURERS Buy Here?

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Colored Wholesale
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FREE

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If It's For Archery, We Have It



The NEW Standard of Excellence

HOWATT Del Rey

The newly styled HOWATT Del Rey is unquestionably the archery world's new standard of excellence. There's an excellence of design, craftsmanship and unique beauty that is vividly apparent. The distinctive HOWATT "family lines" are there, although the exotic Brazilian rosewood handle has been given a more massive treatment to gain even greater smoothness and performance. Its design will permit the addition of your exterior stabilizing device if you wish. But until you hold it, shoot it, admire first-hand its brilliant finish and superb styling, you can never fully appreciate the very real differences that set the HOWATT Del Rey apart from all others.

150.00

Available in 62", 66" and 69" lengths and comes complete with deeply padded carrying case.

NEW HOWATT
Custom Stabilizer

Carefully engineered for peak stabilizing efficiency and smartly accented with Brazilian rosewood to complement the rare beauty of your Howatt bow.

17 1/2" length.....	7 oz.
21 1/2" length.....	8 oz.

13.95 each
Includes Insert

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Archery Manufacturing, Inc.
ROUTE 8, YAKIMA, WASHINGTON

Shakespeare Rifled Shaft fiberglass arrows... straighter, stronger, lighter!

Straighter—Rifled Shaft arrows fly where you send them



Stronger—patented strength, rugged enough for big-game hunting



Lighter—lightest fiberglass arrows you can buy

Here's an arrow that's spin-test straight when you buy it—and stays that way! Shakespeare Rifled Shaft arrows are literally oblivious to weather—won't warp or change weight. Unlike any other arrow, the Rifled Shaft will never shatter or take a permanent set.

Even nock-serts are one-piece, break-resistant nylon. And each arrow has the correct spine weight printed right on it. All these plus-points add up to more fun for you, whether your game is in the field or on the target range. See your dealer today for the patented Shakespeare Rifled Shaft fiberglass arrow that shoots straighter and lasts longer than any arrow you've ever used!



Shakespeare
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For FREE illustrated 1968 Shakespeare Archery catalog, send coupon to Shakespeare Company, Archery Division, Dept. BA-80702, Kalamazoo, Michigan 49001.

Name _____
Address _____
City _____
State _____ Zip _____

TECH TALK

CUT-UP

I have a hunting bow with an arrow rest made of DuPont fishing leader, which I put on myself. Now the line is being cut as the arrow passes over it. What kind of arrow rest would you recommend?

Steve Hamilton,
Milwaukee, Wisconsin

(In such a situation, one probably would do best with a normal vertical feather rest made of four or five feathers cut in a parabolic shape. Cost is about fifty cents.)

FROM AUSTRALIA

I am writing in the hope you may be able to help with my shooting. I am the Australian agent for Bear equipment and have for a few years used a Tamerlane. My present bow is a 1965 model of sixty-six inches, which weighs forty-two pounds at my draw of twenty-eight inches. I use 1916 XX75 and 1914 X7 Eastons with it.

My first question regards fletching: I use 2-3/4 by 3/8-inch three-fletch helicals and would like advice as to whether the rear end of the feather should be positioned in the center of the shaft and spiralled from there, or should it go over slightly to the left of center, when viewed from the nock? At the moment, mine are over to the left and spiral to the right across the shaft.

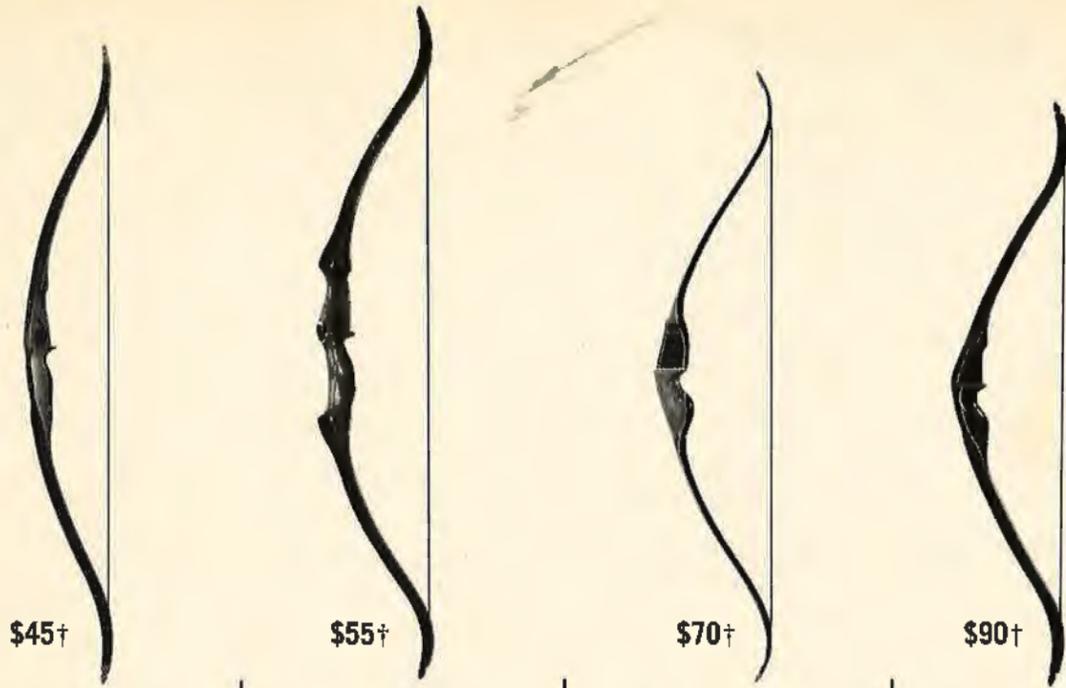
How much importance do you place in the degree of center-shot of a bow? My Tamerlane -- it is not an HC30 -- is cut center, of course, but not sufficiently to allow the center of the arrow to line up directly down the center of the bow. This is being talked about a lot here, but I am not sure just which way to go. I have my rest on the bow screwed out approximately one-eighth of an inch.

John C. Dabovich,
Highland Archery Suppliers,
Bellevue Heights, Australia

(Have the rear of your fletching to the left of center so the feather spirals across the axis of the shaft. It sounds like you are okay as is. We do think, though, perhaps a four-fletch in the same feather size would give more consistency, particularly out of doors, when there is a breeze.)

(The advantage of a bow cut beyond center is to make it fully adjustable, but it is extremely rare to have

Continued on page 62



\$45†

\$55†

\$70†

\$90†

SAVAGE (263)

58". Killed the world's No. 2 moose (Pope-Young measurements), in the hands of Chester W. Schardt, Shawano, Wis.



DEERSLAYER (274)

60". George Gardner used it to kill both this fast-moving wild goat and the giant Russian wild boar.



MONAWK (261)

52". In Buddy Watson's hands, killed this Pope-Young record-making 12-foot Kodiak bear.



STALKER (270)

48". Its speed enabled Buddy Watson to kill this mountain lion.

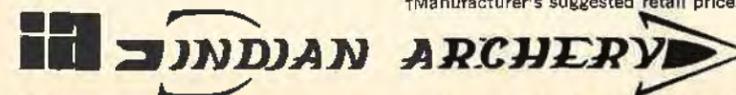


Shoot the Four That KILL BIG GAME—

Guaranteed* for LIFE by INDIAN

Compare these four Indian hunting bows with any others for arrow speed, smooth draw, distance and piercing power. Extra punch from two tapered hard-rock maple laminations combined with epoxy fiberglass. Recurved limb design assures optimum accuracy and freedom from stacking and recoil. Built-in stabilizers; unrivalled balance and sure grip; no torque or vibration. So perfectly made they carry a LIFETIME* guarantee. See them now.

†Manufacturer's suggested retail prices.



Indian Industries, Inc.,

Evansville, Indiana 47717

*Indian LIFETIME Guarantee:

Every Indian bow is guaranteed for its LIFETIME against defects in materials and workmanship. Guarantee does not cover normal wear, accidents or results of misuse or abuse. Void if bow is altered or worked on by any other than the manufacturer.

THE SHAFT SPIDER

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TRACKING ARROW

- EASY TO USE
- FIELD-TESTED FOR THREE SEASONS
- ENDORSED BY LEADING BOWHUNTERS

The new Shaft Spider hunting arrow spins a continuous web trail for you to follow with confidence. Now you can relax during that recommended wait before recovering your trophy. The trail will start at your fingertips and be obvious regardless of weather, time, or terrain.

And what if you missed? The Shaft Spider solves your lost-arrow problem, too. Simply follow the trail, retrieve your arrow, and be ready for another shot.

At last you can stop gambling on losing game (or arrows). For successful tracking this hunting season, follow the Shaft Spider.



The lightweight, precisely-wound bobbin is attached to the broadhead insert and contains 3,000 feet of trail.

The fine web is drawn freely through a small hole near the nock. The Shaft Spider trail is laid, not dragged, and therefore will not break while unraveling through even the heaviest brush, will not impede game, and will not affect arrow flight.

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SHAFT SPIDER ARROWS (Shaft Spiders assembled in Micro-Flite shafts), set of 3 for \$8.95

SHAFT SPIDER KIT (Shaft Spider parts to fit 3 of your own hollow shafts or to use as refills), \$3.75

AMOUNT ENCLOSED \$ _____ Pennsylvania residents, please add 6% sales tax

BOW WEIGHT	lb.
ARROW LENGTH	in.

NAME _____

STREET _____

CITY _____ STATE _____ ZIP _____



HUNTING WITH Doug Kittredge

As it arrives from the little old bowmaker, a bow is noisy, is covered with a beautiful light reflecting finish and needs adjustment to shoot the way you want it. As it comes, an untuned bow is much like shooting a gun that is still in the crate.

The bow tune-up list starts off first with camouflage. Even if the colors used on your bow are dark in tone, the slick mirror finish will reflect light for an unbelievable distance, often making the bowhunter visible many hundreds of yards away; a situation guaranteed to advertise your sneaky presence. But even more of a setback comes when you take that all important shot and the light reflecting from the rapidly moving bow limbs flashes worse than waving a flag. With the quick reflexes of a wild animal, the game is often long gone before the arrow hardly has passed the bow!

Rubbing a bit of dirt or mud over the limbs is an emergency measure that can cut the shine temporarily, but this goes against the grain of most bow owners — what with prices as high as they are today. A far better solution is to equip the bow with a camouflage bowsock, or to paint it with a dull, flat-colored finish.

There are two basic types of bowsock. One is a stretchy knit material much like a gal's stocking. Fragile when used in snagging brush, it has the advantage of being light in physical weight and thus does not reduce your bow speed by having to use the bow energy to propel it along with the normal weight of bow limbs and arrow weight. The other style is made of more durable cloth, costs a bit more and is about double the physical weight; however, it will last at least a season or two. Both types of bowsocks simply slip over the bow limbs. Care must be taken not to stretch a bowsock tight on the bow limbs, but to leave it loosely bunched up so as not to restrict the bending of the limbs when the bow is drawn. If the bow is not used entirely for hunting and beauty is of importance to the owner, the bowsock method of camouflage is no doubt the best choice . . . it can easily be removed at the close of the hunting season and has a definite value as protection from bumps, nicks and scratches.

On the other hand, a permanent camouflage paint job does not affect shooting speed or quality in the slightest. It is there to stay — rain or shine, whether you hunt through brush or on open ground. It lasts season after season. Automotive primer is packaged in small spray cans at most paint stores. Flat gray or brown make a good color for a hunting bow. The more artistic-minded can add splotches of greens, yellows or dark browns, put on with a brush using the flat model railroad paints from your local hobby shop. Or one can just paint the entire bow in gray primer, then splotch shots of the brown primer over it to give a shadowy appearance.

Most bows do not have leather handle grips, but are designed for careful shooting with a high wrist anchor or use of a sling. The bowhunter often can benefit by fitting his bow grip with a leather covering to afford a dependable non-slip surface, usable in hot or cold weather, rain or shine. If a leather grip is to be installed, now is the time. Pads of leather with adhesive on one side are sold at most archery shops, or you can fashion your own from a piece of any soft leather, glued in place with Plio-Bond cement.

Next on the agenda is your hunting arrow rest. Most hunting bows come equipped with only a rug-type pad on

Continued on page 48

How to join the exclusive 300 club . . .

The secret's out! Until this year there was never a 300 score posted in top archery competition! No old style bow (of any make, no matter who was standing behind it) had ever come up to this elusive mark.

Then, the barrier was broken . . . by three archers . . . all shooting the sensationally revolutionary GOLDEN EAGLE bow.

How's this for a success story? One of this trail blazing trio had never topped 282 in competition. But, with a GOLDEN EAGLE up front, he pulled off the hat trick with a 300 at the '67 International Open.

Increase your score — no matter what you now shoot! GOLDEN EAGLE 300 shooters agree that this record-shattering bow can help every good archer. It's got so many things working for you that old style bows do not have.

Join the club. You owe it to yourself to back up your investment in practice . . . your technical skill . . . with the bow with the "King Midas" touch . . . the GOLDEN EAGLE . . . the incomparable tournament bow.

PRICE: Bow complete: Sight, String, Adjustable Arrow Rest, Padded Case, Ready to shoot. Limbs available for 69", 25 lbs. to 50 lbs. @ 28" **\$200.00** Right Hand

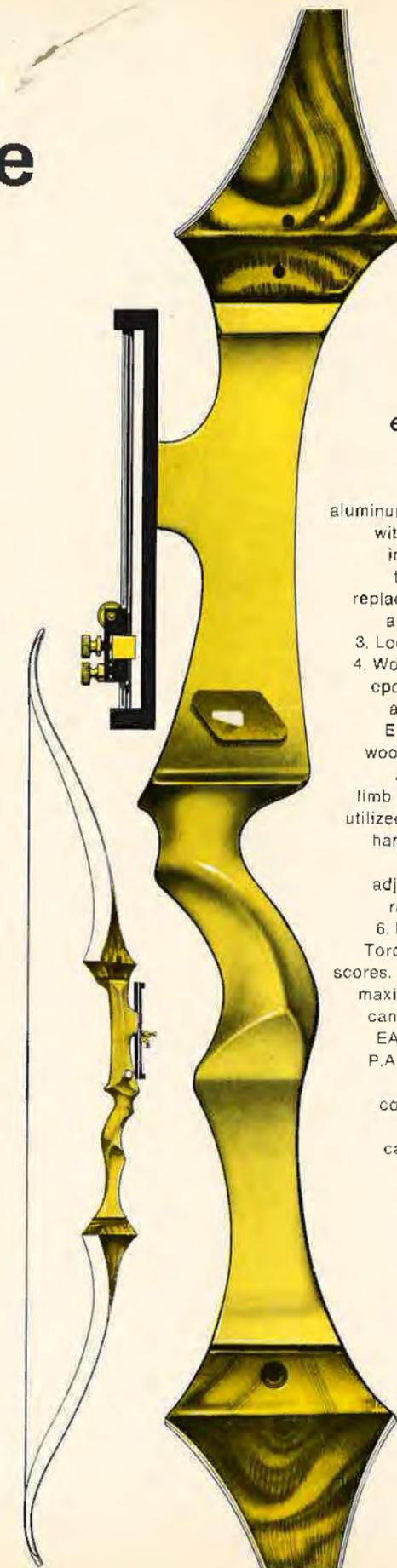
Left Hand or special right hand grips **\$275.00**

Extra Limbs, pair, in padded case \$100.00
Stabilizer, optional \$ 12.95
Sight Extensions \$ 5.95
French Fitted Custom Case \$100.00

Write for free brochure today — and name of dealer nearest you.

ARCHERY RESEARCH, INC.

Route 3, Box A — Big Rapids, Michigan 49307
Dept. BA-78



Check these bow engineering firsts:

1. A close-grain die cast aluminum handle section designed with the archer and the future in mind.
2. Precision metal-to-metal take apart for limb replacement (.001" tolerance on all holes, bolts and mill fits).
3. Locked cell neoprene gasket.
4. Wood buffer and feather zone epoxied to concealed internal aluminum mounting wedge. Epoxy bond is stronger than wood and glass being bonded.
5. Full cut 5/16" past center sight window with adjustable arrow plate for full range arrow spine tailoring.
6. Large or small, grip fits all. Torque-free — a must for high scores.
7. Integral sight mount for maximum rigidity. Even allows canted mounting.
8. DOUBLE EAGLE bowsight. Three time P.A.A. champion.
9. GOLDEN EAGLE tournament bows come completely assembled in padded vinyl zipper case with zipper side pouch and allen wrench set.



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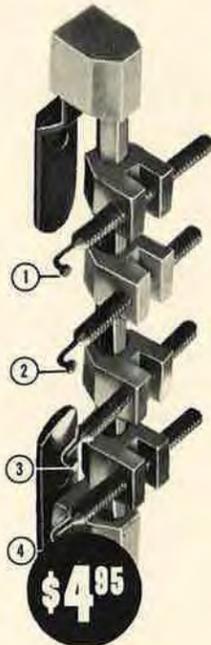


THE HUNT MATE SIGHT

IMPROVE THE ODDS YOU'LL GET YOUR BUCK 4 WAYS

An accurately aimed, clean killing shot can save miles of walking and hours of looking. Pre-set each Hunt-mate head for a different distance—15, 25, 35, 45 yards. Color-coded dots help you pick the right head and get off a quicker shot.

- Special mount bracket is quickly shaped to any bow.
- Threaded in-and-out adjustments.
- Nuts won't work off—a real headache saver!
- Lightweight aluminum slide bar. Heads dull brown finish won't glare.



FOR A CLOSE SHOT... BE INVISIBLE!

SAUNDERS CAMOUFLAGE Bow Covering

Eliminate those reflections that can spook your game.

Simply presses on. Stays neat, snug to bow for the season, then peels off. Won't harm bow finish.

Remember! A buck's worth of Camouflage Bow Covering could save you a buck!



6' x 2 1/4"

\$1.00



SAUNDERS ARCHERY CO.
Columbus, Nebraska 68601

TACKLE TIPS by Emery J. Loiselle

VARIOUS types of hunting sights are available to the bowhunter to aid him in arcing a shaft to the boiler room of a deer. The actual need is a device superior to the range-finding ability of a two-eyed human which will measure the distance from hunter to target and furnish means of elevating the departure angle of the arrow to the degree necessary to compensate for trajectory, or amount of arrow drop due to gravity during flight time.

To use or not to use a sight is the first controversial question, and there are two schools of thought on this generally attended on the one hand by target archers and on the other hand by field archers.

A target archer who shoots with a sight year around has little trouble converting to a hunting sight when deer season rolls around. His anchor point is low, keeping the arrow literally out of the picture at ordinary hunting distances. He is not apt to relate arrow tip to target in his sight picture and a sight is almost a necessity for accurate shooting.

During practice and tournament play, he shoots at known distances and does not have to develop range-finding ability. Through constant use of a target sight he has become accustomed to disregarding the arrow in the picture and aiming with the sight only. Conversion to a hunting sight comes naturally to him, presents few problems and is truly a must, unless he has the inclination to use the instinctive method during this exciting season.

The barebow archer, on the other hand, finds an entirely different set of conditions when he adds a hunting sight to his bow. He may be used to shooting with a canted bow to bring the nock directly below his eye. The sight requires him to hold the bow in a vertical position. He generally uses a high anchor point and may find, because the lower end of the sight must terminate an inch or so above the arrow rest, that he has to lower his anchor slightly. Perhaps he holds first finger at the corner of the mouth instead of second finger in order to take advantage of the range possibilities of the sight, and even this change will give him a range of only fifty yards or so using the sight.

The instinctive archer is accustomed to shooting with both eyes open giving him a wide and clear field of view, with the stereoscopic vision giving range-finding ability as well. Everything is definitely related in the picture—the target, the arrow tip, the line of the shaft and the environment of the area. For him, the method of shooting required with the bow sight is alien and the ambient sensations peculiar to the method are entirely unnatural to him. Unless he works at it, he might rather forego the sight than switch.

As a devotee of the barebow method, I decided to give the hunting sight a noble try the past season and my experiences may help the decision of an archer who is on the fence. For a couple of months before deer season I practiced diligently with a V-type sight on my hunting bow. The strain was terrific and discouraging at first. I had to make a conscientious effort to keep the bow vertical. Aiming with one eye was restrictive and unnatural, with improper sense of distance and awareness. The sight seemed a hindrance rather than an aid to accurate shooting and confidence took a long time in coming. By the time hunting season rolled around I felt a lot better about the sight, even though I had also practiced with the instinctive method as something to fall back on if conditions warranted.

I found the best practice setup is to use a piece of cardboard one foot high by three or four feet as a target. A round twelve-inch face just doesn't give you the experience you need in judging a one-foot square. A life-size deer target would be good, but most of these are skimpy on size and don't measure up to deer dimensions. I must confess, however, that during the actual hunt a deer fell to my first arrow sans benefit of a sight.

Continued on page 73

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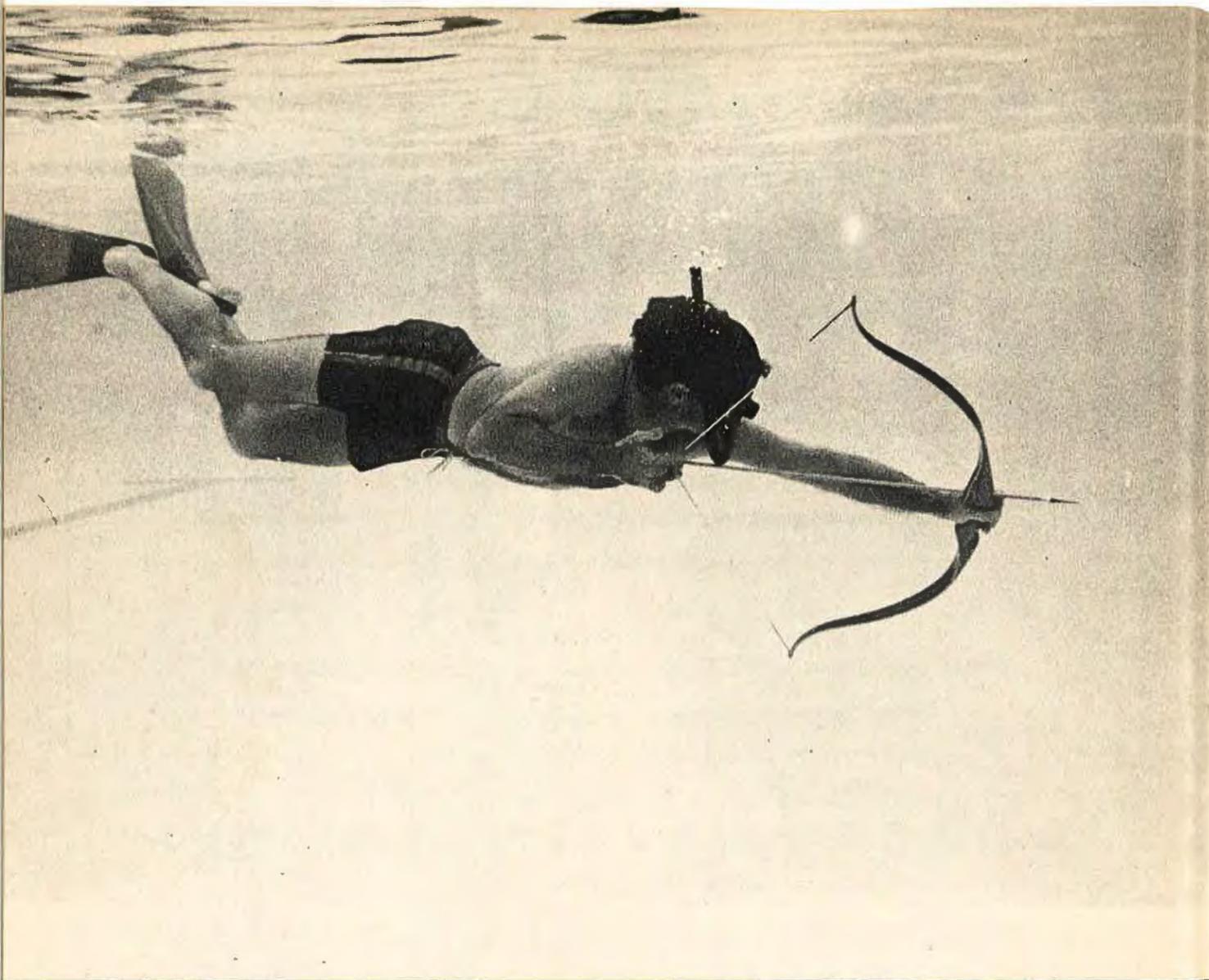
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Taking A Bow Underwater May Seem Strange, But This Was In The Interest Of Science!

Left: Moorhead comes to full draw with bow, while using fins to swim downward toward target. Since this was in a pool, he needed no scuba gear. (Below) Anchor is low to avoid pulling off face mask with string when released.



The styrofoam target was held down with the aid of horseshoes, taking twenty of them to hold it under.



by Ross McKay

LIQUID ARCHERY



HE moved slowly over the top of the rock. There it was, right in front of him just waiting for the arrow. He drew his bow, increased his down angle a bit and let the shaft fly at the deadly range of eight feet. The shaft flew straight at the target and the fish squirmed as the barbed head impaled it on the Forgewood shaft. The underwater hunter moved through his liquid medium to the black sea bass.

Nothing new, you say? You've shot fish with arrows before. Did you ever try it underwater with the fish? The idea intrigued myself and Jack Moorhead and we set out to see what could be done with the bow underwater.

Skindivers have been taking fish with their rubber-banded slings for many years and some have tried the bow underwater.

I remembered a picture of Howard Hill underwater with one of his bows. This idea stayed with me but whether he succeeded I could never determine.

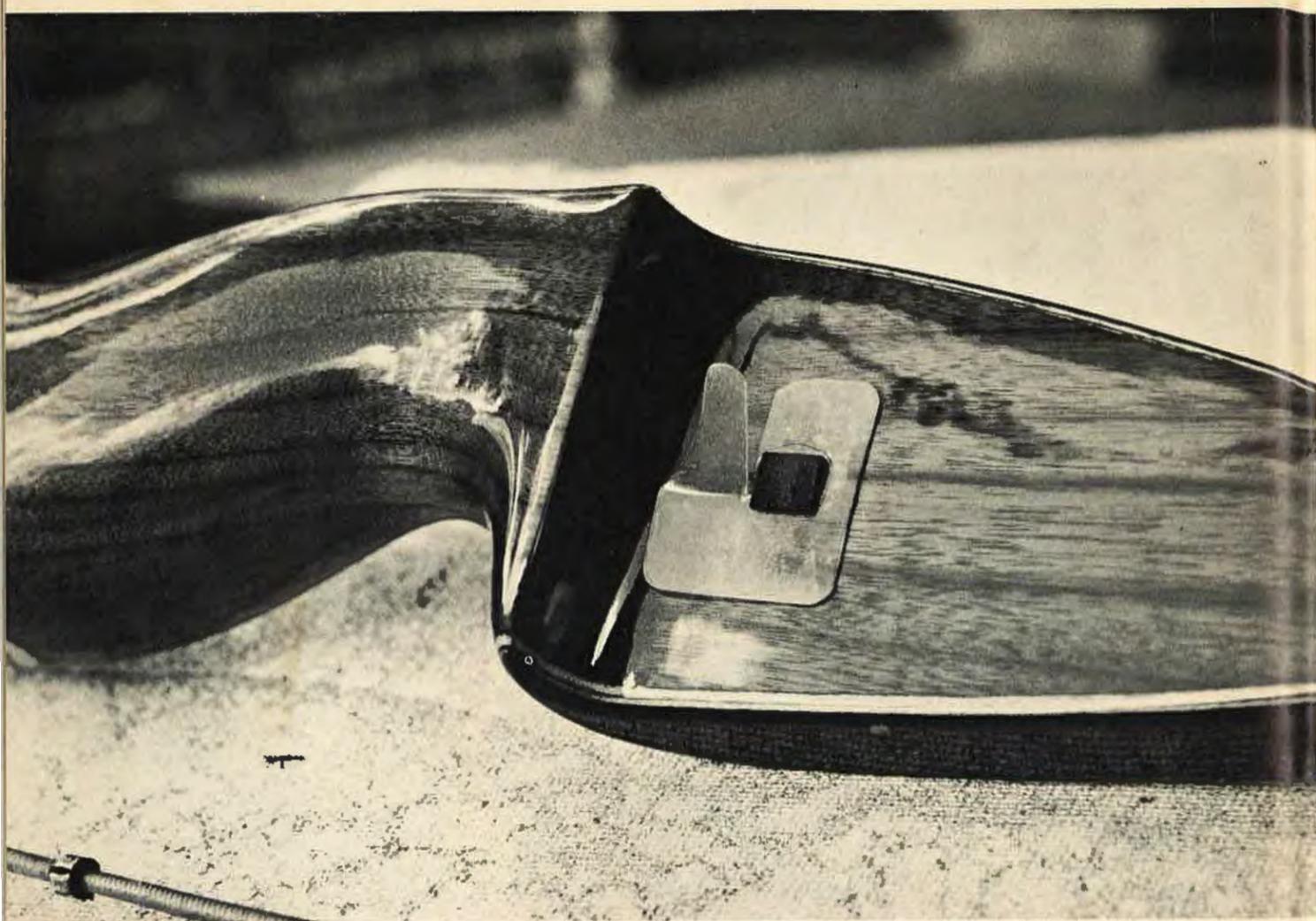
The ideal bow would be one of small diameter such as a solid fiberglass, since water won't compress. You can squeeze it as hard as you like and it will stay just the same. You can freeze it, boil it and put it into a vapor but you can't compress water in its liquid state. This meant that we would have to move through the water with the shaft and the limbs of the bow.

I asked Jack Byce at Browning Arms' archery division if he had a bow that might work in this way down test. He brought out a *Nomad* fifty-four-inch bow that drew seventy pounds. It was a bit heavy for underwater pulling but Byce offered to trim a

bit of the weight off the limbs and taper the tips of the limbs. He was a bit skeptical but was willing to help us in our test.

The trimmed bow had a draw of fifty-seven pounds. The limbs were about half as wide as they had been when I first had seen the bow, and this should be of help to move through the water. We had the bow and I had some Forgewood compressed cedar fish arrows. All we needed now was the medium to work in.

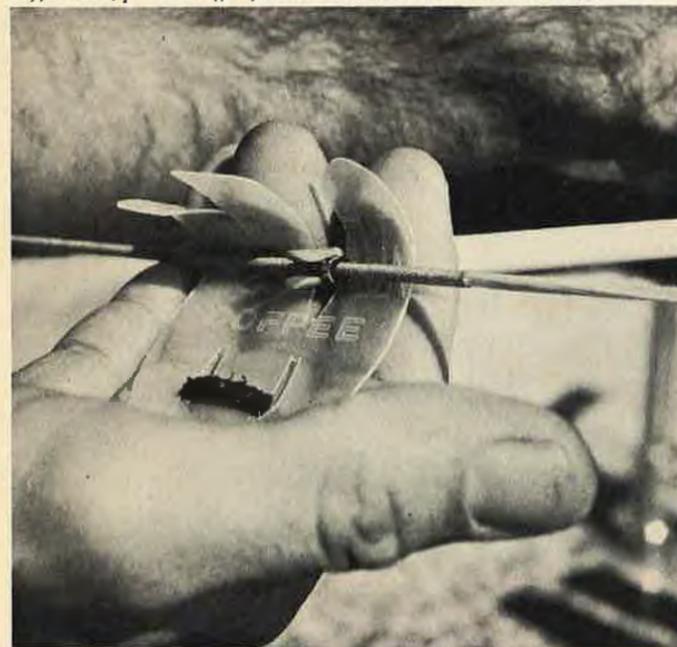
This sounds simple when you live close to the Pacific Ocean but the ocean is a bit cold and not as clear as we needed for pictures. The next idea was to find a salt water tank and use it. The one I had in mind at Sea World was occupied by a killer whale and our bow and arrow was a bit light to go swimming around a tank filled with over a ton of killer whale. We finally settled on the Olympic-size swimming pool at the University of San Diego. The coach looked at me out of



Left: The Browning Nomad bow, made up especially for the damp experiment, was equipped with plastic arrow plate.

Right: The plastic homemade tab worked fine underwater and was tried out on the surface, while dry also. It was found to be adequate, although not likely to set a trend.

Below: Realizing that leather would make a poor tab, the author finally settled on plastic from the covering of a coffee can, patterning it from a standard tab which he had.



On left is standard limb of the 52-pound bow. Right is 70-pounder that was trimmed to 57 for experiments.

the corner of his eye when I approached him with the idea, but he chuckled and agreed if we would come on a day when the pool wasn't occupied.

It took some time to get all the necessary items together to make the test. For example, what do you use for a tab for underwater archery? Leather, of course, was out as was the idea of shooting bare-fingered. Water softens the skin and would make a sore hand pulling fifty-seven pounds. I kicked this around for some time and then one night the wife was making a pot of coffee, I jumped up and shouted, "That's it!" I grabbed the plastic can cover and rushed to the workshop. I took my tab and quickly drew a pattern on the plastic, cut it with a pair of scissors and an underwater shooting tab was born.

The next day I took the tab and shot several rounds with it to see if it would function. It works great. It is very slick and the shafts flew smooth on release.

Moorhead had been asking how my side of the test was progressing. Finally I gave him a call and told him the day was finally set and to be at the pool for the freshwater test. Moorhead is a movie cameraman for the local television station and, when he showed up, he brought along his co-worker, Lee Louis. They planned to film the episode and put it on the tube

when they had a chance. Louis had his underwater gear, a full scuba outfit and a borrowed underwater housing and camera from the Diving Locker in Pacific Beach. Moorhead had brought his Nikons for me to record the underwater shooting on film as he shot the bow.

The one problem that really had me worried was how far the 800-grain shaft would move from the bow. If it went anything like it did on the surface I might have a costly repair job to a pool side. For target material, I had brought along the styrofoam box that is used to ship typewriters. This had a wall thickness of about one inch and would stop the shaft on the surface so I knew it wouldn't let the arrow pass through to the pool wall. With a batch of horseshoes and much line, we managed to get the target submerged about five feet.

While we were getting the bow strung, the target weighted and the camera equipment ready, three young misses from the college came over to see what kind of nonsense we were engaged in. We immediately decided to use them as assistants.

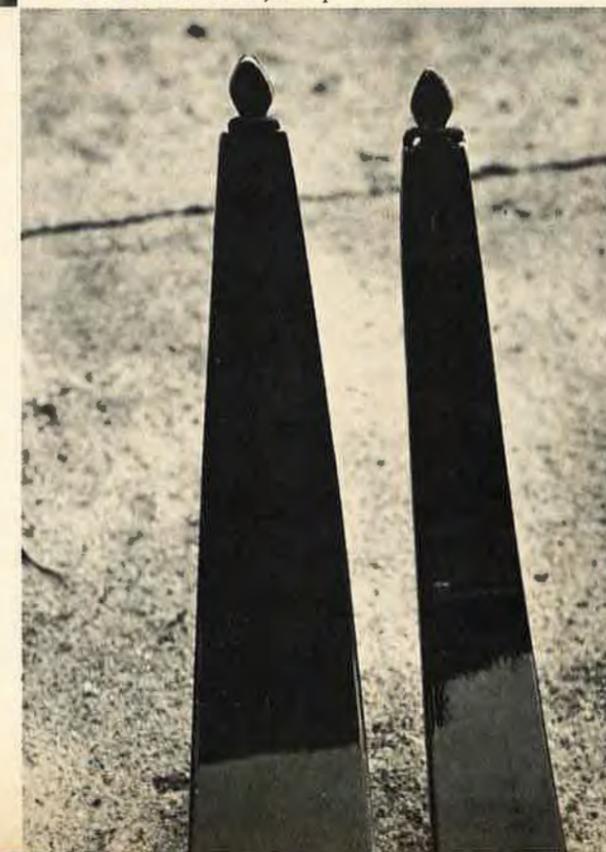
After we had the target submerged and ready, Helen Antoniak offered to tow it into position in the center of the pool. This gave us fourteen feet of water

in which to work and we had the target down about five feet to give us enough depth to keep the bow fully submerged.

While Helen towed, Anne Shelly and Susan Barnhart helped Moorhead with his tackle. Moorhead donned his fins, mask and snorkel and jumped in. Louis had his regalia strapped on to stay underwater and film it in living underwater color for the studio.

I donned a mask and took the bow, homemade reel and the plastic tab over the side to see how far the arrow was going to move in the water. The shaft was attached to a piece of fifty-foot seventy-pound test braided nylon. I didn't have a weight belt, and between trying to keep the bow vertical, the shaft on the shelf, the line unsnarled and holding my breath, it took me three tries before I could get an arrow off. I shot the first shaft was a partial draw and watched the arrow move out about three feet in front of me and drop to the bottom of the pool.

I surfaced, pulled in the shaft using the line and got ready for another go at it. I upended, got to the bottom and then came to full draw and let fly. Three things happened. First the bow string pulled off my face mask so I couldn't see where the shaft went or how far, the line became snarled and broke and I



Right: Moorhead had plenty of help in launching. Susan Barnhart holds the bow and a Sweetland compressed cedar fish arrow, while Anne Shelly hands him his face mask. Helen Antoniak is ready to help him with his swim fins.

Moorhead explains the idea for the experiment in watery archery to his fans during a breather between deep dips.



shipped a bit of pool water. I did find out that the idea would work; the shaft would move out and the tab was perfect. Since I couldn't see the shaft, I didn't know how far it had gone, but when I surfaced Moorhead said it went about ten feet before dropping to the bottom. Since there seemed to be no problem with the shaft digging into the side of the pool we dispensed with the reel and just used the shaft.

The girls had helped Louis into his gear and he was ready for his filming. Moorhead had his gear on and had made a few trials draws with the bow. We were ready. Louis went in first to film Moorhead entering the pool. Moorhead and I had gone over the problems I had encountered and he felt he could offset them a bit, since he had more underwater experience. Louis agreed to stay on the bottom out of the arrow path and shoot as Moorhead made the test.

He made a few trial-draws underwater, then moved in to about twelve feet from his target, came to full draw and let fly. The shaft just about reached the square, then did a nosedive to the bottom of the pool. He retrieved it, went to the surface for air and back down again. The next shot he pulled his mask the same as I had but the shaft hit and penetrated the target. After many attempts we came to the conclusion that the how and arrow was good at ten feet and extremely

deadly at six or eight.

To most of us this would be very discouraging since we feel a close shot at game is about twenty or thirty yards. This was putting us ten feet or less from the fish. A good day will give a diver underwater visibility of about twenty feet or more. They usually don't swim after fish but let the fish swim by them, then zap them. Six feet is a good range underwater.

The Browning bow performed well and would take a fish if it got the chance. The Forgewood fish arrow and fish point would definitely do the job. There is no reason to believe this type of underwater hunting ever will replace the arbolet but it will give the archer-diver a change of pace and it certainly is no problem to shoot a shaft again after it is retrieved. Some of the arbolets in use are hard to reload underwater and this bow-arrow combination is certainly a challenge. The diver would have to watch the face mask, since it projects a bit to the side and is caught easily by the bowstring. The plastic tab worked well and as a further experiment I took a bowlock underwater and took several shots with it to prove that this technique of release also would work.

I told Moorhead that we should really give this the acid test by having him take it into the ocean and try a bit of fishing with it. The first thing we did was to

check the Fish and Game to see if we were legal. The game laws in California specify shark, rays and trash fish, no game fish from the surface. We did find out that once you go underwater you are legal to take a game fish.

The closer I got to the beach, the worse the fog became. The sky was down to the surface of the water. As I drove up, Moorhead was on the rocks checking the water. We pulled the gear out of the wagon and strung the bow. He took his gear and headed for the beach to put it on. When I joined him a few minutes later he once again had two young lovelies around him and was explaining the test he was conducting.

The bow withstood the fresh water dunking and the salt water too with no problems. Salt water had no effect on the fine finish of the bow.

Underwater archery won't panic the people who make other underwater fishing tackle but it did prove to be a great deal of fun and even though it might be considered a bit way down, is practical if you have a mind to venture into the deep with your favorite hunter. The film Louis exposed turned out great and the people in and around San Diego had a bit of a surprise as they found out that all kooks don't wear long hair and beards. Some of them go swimming with bow and arrow. ●

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SOUTH of San Antonio, the Lone Star country flattens out and makes a long hard run for the Gulf of Mexico. Broken slightly, it is a long strip of adjoining land empires, prickly pear flats and brush-filled thickets opened occasionally for small rural farming communities. The wind can blow here and the rains fall with such force that it's sometimes hard to imagine. It can be dry, harsh land or soft and green, depending on the seasons and the will-o-the-wisp elements, and as you drive south, you enter what perhaps is the finest coyote country in the world.

The pear flats, seemingly without end, are bordered by heavy thickets of scrub brush and mesquite that provide cover for a variety of game. Whitetail deer run in herds of fifty, testimony to the factual claim that Texas has the largest deer herd of any state. The vast flats are a coyote hunter's dream, providing food and cover for the varmints and a natural series of blind locations for the man who wants to bring the

critters to him with the aid of a call.

Murray Burnham eased the Big Ford pickup to a halt in front of an old cowboy line shack announcing that this would be our headquarters for the next couple of days. Rain had fallen in a steady pattern through the season with a resulting green hue to the countryside. Ankle-high grass provided a carpet and the peeking heads of purple, blue and yellow flowers added a gay note enhanced by the peeping of hundreds of tiny shiny green frogs that sang from the grass of the little spring by the front door.

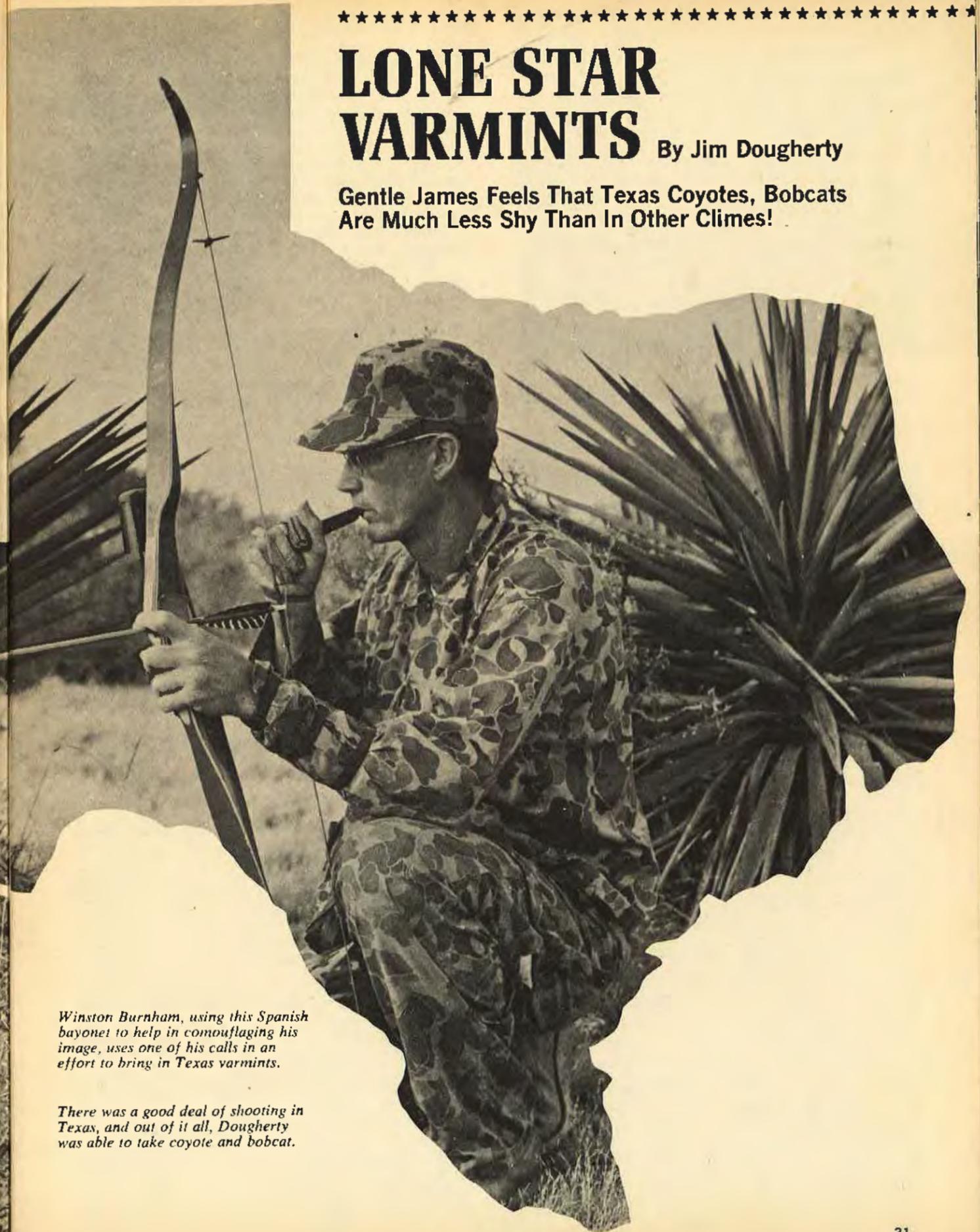
Five hours earlier, I had been sipping my morning coffee in California, while I ran a mental check list and a visual confirmation that all the gear required to visit the Burnham Brothers in Texas was indeed standing by the door. Murray and Winston Burnham are legendary among the growing army of game calling fanatics that stretch from coast to coast, a pair of pioneers in the sport that has had results in lands as far away as Africa, Australia, New Zealand and South America.

Over the years, I have hunted with almost all of the varmint calling greats, which has helped me immeasurably in learning about one of my favorite pastimes. The Brothers Burnham had communicated often

LONE STAR VARMINTS

By Jim Dougherty

Gentle James Feels That Texas Coyotes, Bobcats Are Much Less Shy Than In Other Climes!



Winston Burnham, using this Spanish bayonet to help in comouflaging his image, uses one of his calls in an effort to bring in Texas varmints.

There was a good deal of shooting in Texas, and out of it all, Dougherty was able to take coyote and bobcat.

through the years and made many a tempting invitation that I reluctantly had to shake off for one reason or another. Now they were waiting in San Antonio for this big 727 Astrojet to roll to a stop.

Paying slight attention to establishing a proper camp with several hours of daylight before us, we hurriedly slipped into camouflage hunting clothes. Winston and Murray Burnham reloaded the pickup with calling necessities, while I looked to the condition of my arrows and other gear that had survived another jet age transition that puts one in another realm in a matter of hours.

Texas hunting is almost totally confined to private lands. Coming from a part of the nation where public lands are available to all, it seems strange to realize that, as you drive for hundreds of miles across the surface of Texas, you are passing through private property. Hunting here is done on a lease basis or by virtue of permission granted for a special purpose such as we had in mind. We had been given access to 50,000 acres of prime hunting ground; land that abounded in varmints such as coyotes and bobcats. Roads and flats were torn up with deer tracks and each wash revealed the tiny pointed indentations left by the dainty passing of javalina. Quail erupted at our passing through their afternoon dusting areas. Mixed bunches of blues and bobwhites filled the air with their calls, as they gathered up after our bouncing interruption.

It was a clear, bright afternoon. The wind was blowing lazily to the south just enough to help us in selecting the best calling locations to take advantage of this drift.

Murray and Winston Burnham are perhaps the best varmint photographers in the country. Their films have been highly instrumental in the growth of their call business and, by doing it for years, they have learned what it takes to get good pictures and bring critters up close. In a nutshell it was nothing new — camouflage, head to toe, and they do it just that way.

Having hunted varmints with just about everything but a spear, I felt I had a good background in varmint calling education. When hunting varmint

with a rifle, camouflage is essential but not to the nitty-gritty degree that a handgun shooter or an archer requires. With a rifle, I don't particularly care what a coyote will do once he's inside of a hundred yards. With a handgun he has to be closer but one still has a greater degree of mobility with a handgun than with a bow. Bows and arrows can be downright awkward and even the fastest archer cannot recover and move with anything near the speed and performance of a handgunner or rifleman. In the time it takes a man to draw and shoot with a bow, requiring a great deal more body motion than with any sort of gun, a coyote that is as close as thirty feet when you start to draw is going to be a tough mark to tag.

Settling under a mesquite tree out in front of the Burnhams, I assumed a position on the balls of my feet and adjusted the camouflage head net with the rims of glass sewn in and signaled that I was ready. The glasses keep the head net snug against the face and prevent the net from slipping over the eyes.

My selection of a spot to sit put me in the shadows of the tree making my outline and movement harder for an animal to spot. The position was the best for shooting a bow and when calling you have to be one hundred percent ready at the first of the call through completion.

Murray began calling from a similar position, while Winston was off a bit further, movie camera at the ready to record any action.

A minute passed. Doves winged by one right after another heading for an afternoon feeding ground, while a brilliant red cardinal played from twig to twig in my tree inches from my nose. At two minutes, my legs were beginning to tingle and a thorn from my mesquite was exploring the area of my lower right rib. Then here came two coyotes.

Our stand was selected to bring the coyotes out of the thicket and into the open for both movie and arrow shooting. Back in the thicket we could catch an occasional glimpse of the bounding tawny shapes as they coursed along together, coming on a line that would bring them in to the left.

At the edge of the thicket, the coyotes slid to a stop

to look things over. Everything was in our favor to bring them closer than their seventy-yard position. Murray began to squeak soft, coaxing noises through his mouth without the use of a call. The coyotes hesitated, seeming almost shy. One would venture forward a step or two and look intently in our direction, while the other carefully studied the area for 180 degrees.

Standing in the sun they made a pretty picture but the thorn had by now located an extremely tender spot and seemed to be driving deeper into my epidermis. Something had to give.

After a careful look, the coyotes decided that this was less than a good deal. Wheeling about, they loped off to disappear in the heavy mesquite thicket.

Our second stand took place in a small clearing right in the middle of a thicket. Murray's heart-rending notes cut the air, bringing a coyote bouncing through the trees within minutes. The coyote's path was straight at me and, as he passed from sight behind a clump of prickly pear cactus, I rose and drew, swinging with him as he passed at twenty yards. My lead was not enough, the arrow passing through the fleshy part of his flank and driving on through the cactus. Unconcerned the coyote continued to lope on around as I fumbled for another shaft.

A second coyote came on, following the same course, but as he rounded the cactus, he skidded to a halt, looked and spun to leave. The arrow out of the sixty-pound *Mercury Hunter* caught him on the left shoulder and drove out of sight. His driving plunge through the thicket was fairly easy to follow to where he had piled up in full stride. It was a pretty darn good start: four up on two stands and one down in two shots. A coyote is about as tough to come by with a bow as any game animal, so I felt the trip was already a complete success.

Driving to the location of the next and last stand of the day, we crossed country that was coming to life as the sun began to set. Whitetails were peeking from the heavy cover and a small group of javalina scurried off, looking like bouncing bristle brushes.

Winston and I slipped quietly into the edge of a large flat. Cover was scarce, so I scrunched down on my knees in front of Winston, who sat in the center of a small bush. Light was fading fast, and from twenty yards, I could not see much of my calling partner as he let go.

Four coyotes and eight whitetail ran right over me. At my hastily flung shot, the intended coyote growled audibly. Winston growled, the other coyotes growled, one howled and the deer started snorting and pawing the ground. In the fading light, I dared not shoot at the coyote matching Winston growl for growl, as I wasn't sure of Burnham's location, although the coyote wasn't ten yards from me.

A churning of gravel behind me raised the hair on my neck to full attention. A late coming coyote was digging a trench in retreat about four feet away. By now I was so confused I wasn't sure what to do, but I resolved to save the last arrow for myself.

I've seen a lot of crazy things in the woods and deserts of this country, but this beat all. I was quite relieved when Winston finally stood up as a signal to call it quits. The coyotes still barked and yipped defiantly from fifty yards away as we left. I might have been walking a little faster than usual.

The glow in the east roused us in our sleeping bags inside the line shack and sent assorted rats, mice and other fauna scurrying for cover, ending the night-



Above: Murray Burnham and Texas game warden Buster Vickers inspect the bow used by Dougherty in Texas hunt. (Below) Texas coyotes are less shy than western species, will growl at the caller to indicate their anger.



Clutching his bow, Dougherty awaits the arrival of the charging coyotes, while Burnham calls them in for him.



long party among our groceries. Outside, the dawn was greeted by what sounded to be a million coyotes a hundred yards from the cabin. We pulled on Levis and boots, after I first looked inside mine to make sure nothing lethal had taken up residence. While the Burnhams began to stir up breakfast, I walked away from the cabin and made a stand.

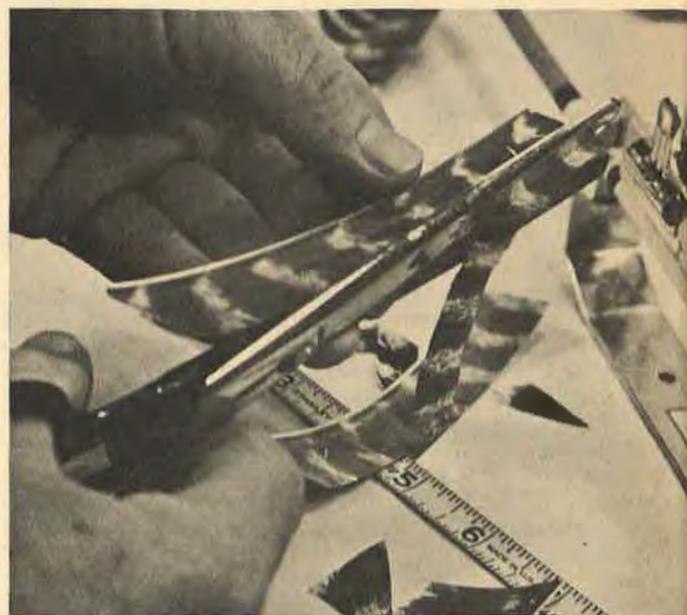
Coyotes in Texas must be downright ornery. One came loping in, giving me a fair shot through some branches. The arrow clattered off all of them and missed him by a foot. Rather than run off like any ordinary Arizona or California dog, this boy began growling and barking, while scratching emphatically with his back feet. I missed him two more times through the brush that allowed me to see him but prevented a clean shot. I left him there, still carrying on, and went to have my breakfast, somewhat confused by the behavior of Texas coyotes.

That day we called up twenty-seven coyotes and one very large bobcat that came across a wide open flat in a way that no bobcat in his right mind should

Continued on page 44

Part II
By Steve Barde

STABILIZING THAT INFLUENCE



Type of cement depends upon material of the shaft used. (Right) Scissors remove much of the excess from feather.

OUR first fletch will be with a graybar feather and for the hunter. We will use a left wing feather and have three choices of mounting it on the shaft. We can make it a straight fletch down the middle of the shaft with no angle of any kind or a spiral, which still uses the straight clamp. We angle the clamp holding the fletch to the left a little bit.

Using the Simplex fletcher made by Eastern Sports, we can move the nock end to the right and lock it in position with the set screw. We now move the front end adjustment to the left and check to see where the clamp will be on the shaft. If we go too far, the fletch will not have any shaft to adhere to and will dangle over the edge, making a sloppy finished fletch. About one degree will give a good angle to the fletch with the appearance, when finished, that it moves around the shaft, but it doesn't. This will give more stability to the arrow especially when using broadheads which may have a tendency to plane if there isn't enough feather in back to hold it.

Our other choice is to make a helical fletch. The Simplex does have a helical clamp either right or left wing. The helical actually curls the fletch around the shaft and really puts a twist in the arrow when you send it down the line. Some hunters use the spiral fletch, while others prefer the helical type. You can experiment yourself or check your local shop as to which you should buy or better yet, buy one or two finished ar-

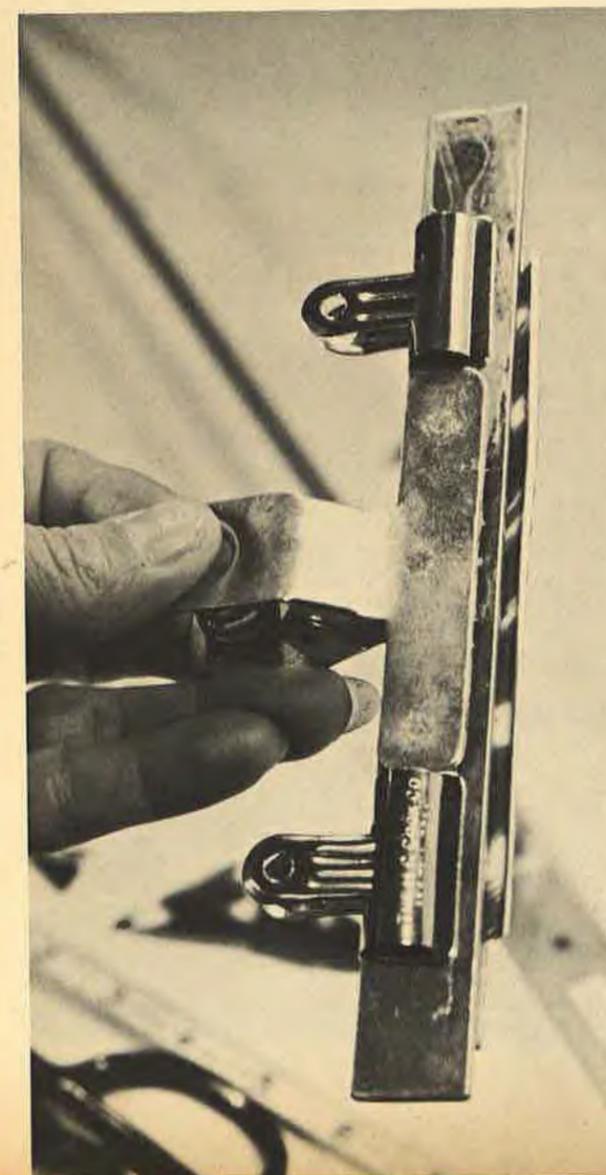
rows in each style and shoot them before buying your fletching jig. Most jigs on the market are available in the straight or helical clamp and one can buy either or both for the same jig. It is important, however, to determine whether you desire right or left wing in the helical clamp, since it can't be adjusted.

Which is the best, right or left fletch? Most archers agree there is no appreciable difference between the two types. One thing to make sure, however, is not to mix a right and left wing shaft in the same quiver. I have always shot left wing and I'm right-handed. Some archers say a right-handed archer should shoot right wing feathers, left-handed archers shoot left wing, but this is a matter for personal experimentation.

To fletch the cedar shaft material it first must be dipped in lacquer. After the lacquer has dried and the nock has been placed on the shaft in the proper position, the shaft is placed in the jig.

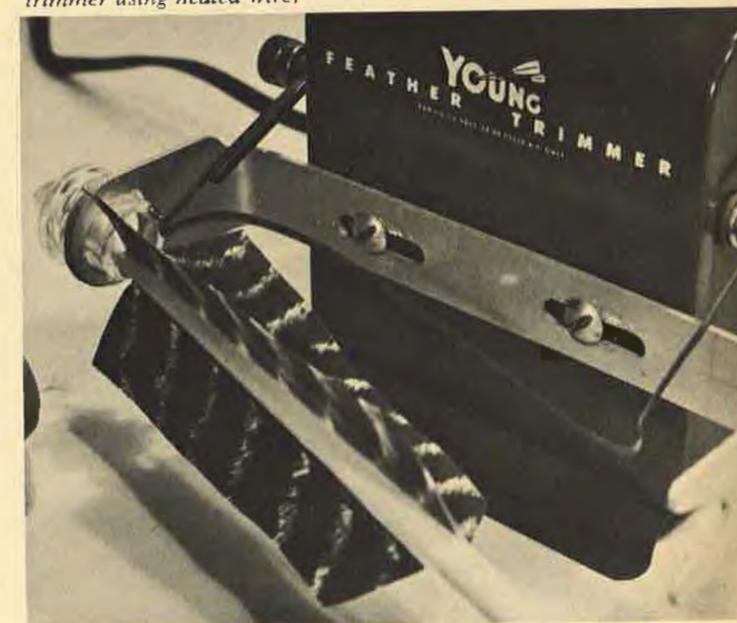
Placement of the nock on a cedar shaft is important. If you look closely at an undipped shaft, you will see how the grain of the wood is close in two places on opposite sides and wide in the other two. Place the nock of the arrow so the narrow bands of the grain will bear against the side of the bow. This gives the stiffest section of the arrow against the bow and will give you the best flight for your arrow.

If you place the nock on the shaft with no attention to this little detail, no two shafts will fly the same,



Here's The Nitty-Gritty Of How
To Get More Out Of Your Arrows,
Regardless Of Type!

Left: Precut feather, cut to length and trimmed, is now ready to go into the clamp. (Lower left) Scissor-cut fletch is placed in clamp of the Simplex jig and is now ready for application of cement on the ground base. (Below) After three feathers are set and cement is dry, the shaft and rough fletch can be cut to desired shape by burning the feathers on a trimmer using heated wire.

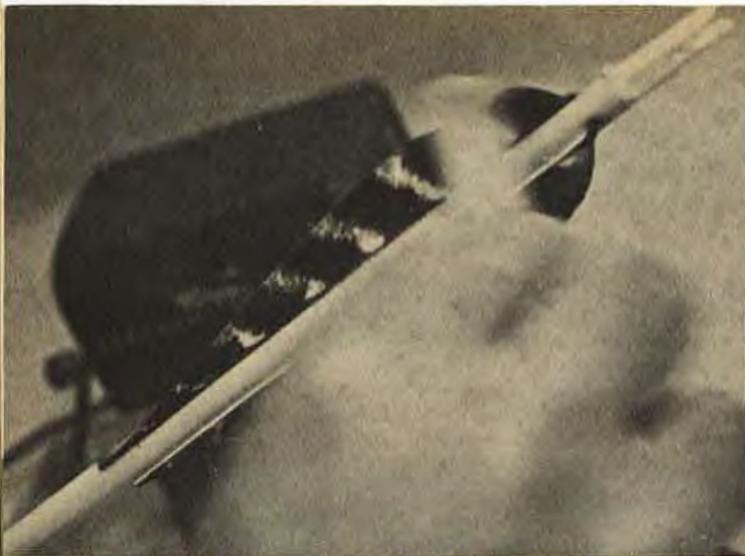


since they will bend in a different manner when shot. If you are using speed nocks, place the index on the narrow grained section.

Turn the nock index on the jig to the first position. This usually is indicated by a dot, a flat section or may be determined by the pin in some jigs being aligned so the index on the nock points up. Place the shaft in the nock receiver and lay the rest of the shaft in the follower of the jig. Take a clamp and make a mark on the side to tell where you should put the back of the fletch. The Bitzenburger jig is graduated at the back of the clamp in one-eighth-inch increments to help in this procedure.

The back of the fletch is placed so that the finished fletch will be at least one inch from the string when the shaft is placed in the string to shoot. This allows the fingers to close on the shaft without having the fletch in the way. If you get them too far forward they will be in the way of the bow on a five-inch hunting fletch. Make a mark on the clamp and check before you set the fletch to the shaft.

After the proper distance has been determined, take a full length feather for a five-inch hunting fletch. Remember there is only one good cut to each feather. If you are making rabbit arrows or ones that don't have to be exact, you can move toward the bottom of the feather and cut from there. Using this method you can get one five-inch cut and perhaps one four-inch cut from each feather for plinking arrows but when you are out



After fletch is burned, it has a rough brown edge. An emory board works well to remove this and clean it up.



After the fletch has been burned to shape and this burn sanded, the forward point is cut on a slant to make it pass the hand and sight window easier. Knife can be used.



for the best, make only one cut from each feather regardless of how long it may be and how much the temptation may be to try for two.

With a pair of scissors clip off the heavy base of the feather about one or two inches back from the end, depending upon the quality of the feather. Use a ruler or make a simple template to mark the distance on the feather to make your other cut. Make it five inches from the cut end. Now you will have a feather cut from the heart of the long pointer about two inches high and with an angle on the top. For ease in fletching I cut the top of the feather square with the top of the quill. To make it easier for the feather to go into the clamp and to prevent the feather from becoming curled in the clamp, I cut the side of the feather along the outside about three-quarters to one inch from the quill. This gives a neat looking feather to go into the jig and it handles nicely.

Place the trimmed fletch in the clamp and have the base of the quill or the heavy end facing toward the point of the shaft. The back of the quill or the top part of the fletch will be toward the nock. Slide the fletch downward and forward into the jig to insure that the fletch will go in smoothly and hold the clamp wide to prevent the feather from getting jammed in the clamp. When the top part of the quill reaches the mark made on your clamp, close the clamp on the feather. Leave about one-eighth-inch of the feather away from the clamp. You may vary this, but you should leave a small distance between the clamp edge and the quill of the fletch.

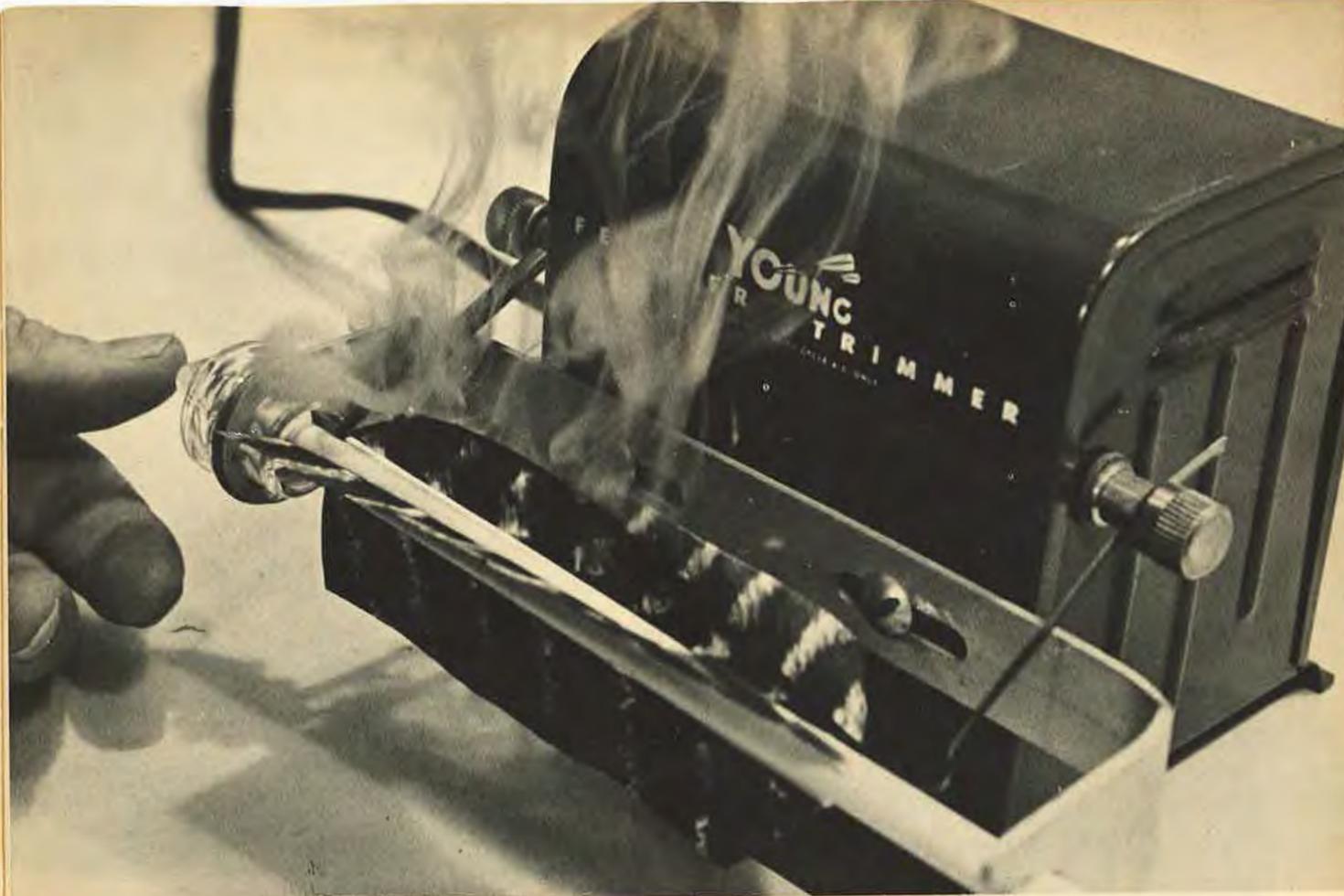
Take your cement and run a small amount down the ground base of the feather. If your ground base is wide it is best to trim it with a pair of scissors before applying the cement, but most feathers won't require this extra step. As you squeeze the cement from the tube, move the tube down the ground base slowly, leaving a long even flow of cement on the quill. The long applicator such as that on the Fletch-tite tube is a great aid in applying cement.

When you have the long even line of cement on the quill base, place the clamp containing the fletch in the jig. Start from the back and lower the feather and clamp slowly onto the shaft. Make sure the base of the clamp is in its proper slot or position so you won't have to make an adjustment and end up with a sloppy finish on your shaft. Most cements are lacquer solvents and they will make the lacquer softer. Then when they dry they bond with it with added strength.

After the clamp is in place with the fletch on the shaft, you can take a needle or similar small pointed object and run this down the quill base to make sure the feather seats properly on the shaft. Then gently apply downward pressure on the clamp and let it come to rest on the shaft with the fletch held firmly on the shaft with no gaps. It takes a minimum of twenty minutes for the cement to set. Make sure the cement has set and dried before removing the clamp. If the clamp is removed before the cement has dried, the feather will have a tendency to curl on the shaft both at the top and bottom. This gives an odd looking and poorly performing arrow. Make sure it is dry.

While you are waiting for the fletch to set you can cut the other feathers in preparation to fletching. From now on it is merely a repetition of the first step to finish each arrow. When the second fletch is ready to be placed, the nock receiver will be rotated one turn for the 120-degree fletch and the second fletch applied in the same manner. Likewise with the third. When the final fletch has dried and you remove the finished job, it will look rather crude compared to the finished product. It will resemble a flu-flu arrow in some respects but you have more work to do.

Since we have used a full length feather and only made the length cut for the fletch we still must cut the



The Young feather trimmer is one of several that will make a clean accurate cut on the feathers.

shape we want on the feather itself. This may be the shield cut that many prefer or the parabolic. Some hunters prefer the parabolic, since it makes a neat finished arrow and they say the shield cut has a tendency to whistle a bit as it wears down.

You need a feather burner now to make the finish cut on the feather. These range from a few dollars in kit form to the Young Feather Trimmer at about \$20. The principle is to use a nichrome wire, bent to the desired shape. Rotate the shaft in a block to allow the hot wire to burn the feathers to shape. You may have a little trouble bending the first wire or two but it is easy once you practice a few times. The wires last a long time and you can make any style or shape with them. You can make one for your target fletch and another for your hunting fletch. They are easy to change and adjust.

The height to burn your fletch will depend on your shooting. If you have trouble getting a clean release and want a forgiving arrow cut your fletch about five-eighths of an inch high and it will hold a bad release. If you shoot a big broadhead it might pay to test the high fletch to see if it will hold it better. The average height for a hunting fletch is about one-half-inch.

If you like, you could make a high fletch, then shoot it, burning it down as you test to determine the proper height for your style and type of equipment. It is easy to do by just moving the burning wire in a bit at a time and you can really fine-tune your equipment this way.

Turn the burner on or plug it in and when the wire is glowing, place the shaft in the guides, being careful

not to jam the feather into the wire. Then slowly rotate the shaft burning the feathers to the desired shape. It is a neat cut and fast after you have done it a few times.

You now have the finished shaft with the burned fletch but we're not through yet. Take an emory board and use this to remove the charred edge on the feather. A piece of sandpaper will work just as well.

You will notice that the front edge of the fletch is a bit high, and when you run your hand over this edge, it grabs. This can cut your hand when shooting or even pull the fletch off the shaft if this rough area catches on the bow or rest.

There are two ways of removing this edge: with a sharp knife or a rotating sander. A sharp knife is perhaps the easiest and it merely requires making a slanting cut forward down the edge of the quill cutting the edge to a taper where it meets the shaft. Do it carefully or you may peel some of the dip off the shaft if you slip.

The grinder method is great and it is equally simple. If you have a small craftsman's sander wheel, use this to taper the quill. I purchased a small two-inch sanding wheel that attaches to my drill and with the drill in a vise I move the quill base to the sanding disc. It removes the edge and tapers the cut at the same time, giving it a professional finish.

We sand the fletch to remove the charred burn, ground or cut to remove the roughness so all that remains is a little dab of cement on the forward end of the fletch where it joins the shaft at the taper and another drop at the top of the fletch. This is to prevent the feather from lifting up. When it dries it gives the leading edge a smooth finish. ●

THE PERFECT YOUNGSTER



The 132 junior archers taking part in the Olympic development program took their competition seriously.



Dave Wilson, shooting in the junior category, made even the veteran pros take note of his perfect shooting.



Steve Wilson (right) congratulates his younger brother, Dave, upon the latter's perfect score of 540 points.

Dave Wilson Is All Boy, Except In Archery, Where He Gives The Pros A Tough Time!

THERE were some 1600 contestants, when Ben Pearson opened the doors of the tenth annual International Indoor Archery Championships at Detroit's spacious Cobo Hall; who won the big money has been pretty well documented.

But the surprise event — and possibly the one showing the most significance, when one considers the future of archery — was the Junior Olympic Archery Development Tournament, held as an offshot of the big money events, the latter drawing the pros from all over the nation.

Of the total, 132 boys and girls were on hand for this junior tournament, which served as the preliminary for the big one. Each of the contestants shot one Junior Olympic round of ten ends, six arrows each. These were shot from twenty yards at a twenty-four-inch colored target.

The Olympic hopefuls — boys and girls — shot separately in each of three classes. The cadets were under twelve years of age, while juniors

ranged from 12 to 15, and the intermediates were ages 15 to 18. Trophies were awarded to the first three places in each class.

But the wonder of the meet was twelve-year-old Dave Wilson of Olney, Illinois. Competing in the junior class, he shot a perfect 540 to top all other youngsters in the tourney. His brother, Steve, was close behind with a 534.

Then in the open tournament, young Dave had the pros scratching their heads. Jim Ploen, an old pro from way back, won the men's money by shooting a 595, but not far behind him, although shooting strictly amateur, was Dave Wilson, with his shy Dennis the Menace smile, stacking up 593. The youngster dropped one point in the first round for a 299, then scored 294 in the second round.

In the Junior Olympics competition, Barbara Ann Brown, shooting in the intermediate class, topped all other girls with 534. Dropping only two points in this same segment on the male side was Stephen Lie-

berman of Reading, Pennsylvania, with 538.

As indicated in the junior class Dave Wilson's 540 was perfect and couldn't be topped. His brother, Steve, was six points behind him with 534. In the girl's competition in this category, Betsy Sue Harvey of Knightstown, Indiana, topped the competition with 510.

In the cadet class, Charles Carson of Caledonia, New York, was the top boy shooter with 494, while Julie Coay of Battle Creek, Michigan, shot 409 to become the leading girl cadet.

But of the greatest interest — and perhaps frustration to the pros that he outshot — was Dave Wilson's showing. After leading Jim Ploen in the scoring in the first round of the open, he became a subject of interest and the old-timers gathered about to watch his style and score.

"Wait'll he's old enough to drink," opined one champ of past years on a note of jealousy. "Maybe then he won't shoot so good!" — Jack Lewis.

Jack Witt, tournament director of the International Indoor Archery tourney, presents trophy to Barbara Ann Brown, who was the top junior girl shooter.



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By C. R. Learn

Browning's New Short Hunter Proves Its Cramped Quarters Potential In Brush!

Handle riser of Cobra is laminated of rosewood, zebra and white maple; phenolic material is on front of bow.



THE cobra is deadly. You have ninety seconds until death. The Browning namesake is just as deadly. We sat beneath the palo verde, arrows handy, bow with arrow nocked and Marshall let a blast on the call that would bring anything in for miles.

The high desert out of Wickenburg, Arizona, was green, the weather beautiful with just a bit of wind; not too much to carry off the call but enough to give us some protection from the sharp noses of the varmints we were attempting to draw in.

My attempts at calling haven't been too successful, so when Marion Marshall invited me over for a calling session, I accepted.

We hunkered down to allow our silhouettes to merge with the foliage and Marshall continued to blast with his varmint call. I had my eye peeled on a draw that came down from the hills, just the place to bring one out, I thought.

As the gray fox came trotting briskly to the simulated wounded rabbit, he never hesitated or changed course, coming straight on with his radar nose and ears tuned for the waiting meal. Marshall switched to the squealer.

The gray continued across the little wash in front



Backed into the palo verde bush, author shot from a sitting position; he found the shortness of the bow handy in such a situation.

of us, stopped, then came on again. He had stopped at about thirty yards and I almost let fly then, but he hadn't seen us and the wind was in our favor.

The *Cobra* is a new hunting bow from Browning Arms' archery division. I had picked it up several weeks earlier and had been doing some shooting to get tuned to it. But this was the acid test.

Short bows in the past few years have become more popular in the archery field and the *Cobra* is Browning's offering in the short hunter style. Prior to this, their shortest model has been the *Nomad* at fifty-four inches. Several months were devoted to design, trying for a bow that would have all the facets of the longer bows with the added advantages of the short bows.

The limbs are short with jet black fiberglass facing and backing with hard rock maple parallel laminates in the limbs. They didn't taper the laminates as some do, since the how seemingly gives more cast with the parallel lamination in this particular style.

The short handle riser section is of composite laminations of East Indian rosewood at the face of the handle, a white spacer of maple, a quarter-inch strip of Brazilian zebra wood, another white maple spacer

and the final composite material of black phenolic. The phenolic gives added weight in the handle section and, due to its great strength and high density, it allows the handle to be carved down to a small grip.

When one grips the *Cobra*, his hand moves in under the arrow shelf and the thumb fits snugly along the carved thumb rest. The fingers wrap around the back of the bow for a solid grip on the short hunter. If you prefer a looser grip, the handle allows versatility for this.

The deflex in the *Cobra* is more pronounced than in the other bows made by Browning, but the sweep of the working limbs gives the short bow a good cast for its size. One thing automatically assumed with short bows, usually true, is that they have less cast than their longer brothers. To determine speed and cast, I conducted a poor man's speed test: flight shooting.

I took the *Cobra*, at fifty-two pounds and fifty inches, out to a big field and tested it with the same arrows against a bow of the same weight but measuring fifty-four inches and another fifty-six inches. All three were within one pound in draw weight.

The *Cobra* spit the 500-grain broadhead-tipped

Easton aluminum shafts an average of 180 yards. The fifty-four inch reached out to 197 and the fifty-sixer went 196. This was with a quartering wind from the right but only about five miles in speed. A lighter hunting shaft will, of course, go faster and farther.

The sight window on the Cobra is a short four inches. It might be a problem for sight shooters to mount a sight in this small area but no doubt it could be done.

The limbs were wide on the test bow and it came with a standard length AMO string. This is something new with the Browning line this year and the first time I had seen it on any bow.

On the right side of the Cobra is its serial number for registration purposes, its poundage, the length and below that, *A.M.O.*, meaning Archery Manufacturers Organization. It also means that this bow will take any string made to the AMO specifications.

The wide Cobra limbs are tipped with fiberglass nocks to add strength. The finish on the Cobra is of high luster and many who purchase them will hate to put camo cover on this finish.

One further factor concerning the AMO designation: the brace height now is taken from the center of the handle or grip section to the braced string. This eliminates the question of whether to measure from the face of the arrow shelf, the back of the shelf or to the arrow tip. You can know the brace height from the center of the handle grip section should be 11-3/4 to eight inches. You may want to adjust the brace height for your particular style, but now you have a point from which to start.

The Cobra had a rug arrow rest on the shelf with a leather back-up plate on the side of the window. I

put on a Saunders Nok-Set and took it to the short thirty-yard bale on the side of the house. It shot higher than I had anticipated. It put them in the bale with authority, but how would it react on game?

Ground squirrels are one of my favorite small game pests. They offer a good tight target, one that isn't easy to hit, and they never react the same. Sometimes you can stand and throw your whole quiver at a colony, then go pick up the shafts. Other times it may be one shot and they are gone for the day.

Gene Sisler and I headed to a private ranch. I was curious to see how the Cobra would handle at longer distances and how it would throw the shafts. I tipped the Port Orfords with field tips, plus a few .38 blunts and let them fly. If I hit a squirrel, he didn't stay above ground to let me retrieve him. They were more than spooky that Saturday and it became a challenge. I like shots when the squirrel is on a rock or peering around a rock with just his head showing. This offers a small target and you either hit or miss. My quiver was bulging when I started and I managed to splinter shafts and leave them all over the rocks and in the field. I came so close several times it must have been a hit but with no squirrel on the stick to prove it.

I eased up over a ridge, spotted three on rocks gazing across the valley and eased up. They heard me and dodged into their protective rocks. I was about fifteen yards away, after three hours of squirrelless hunting, so I was getting a bit miffed. Some days I can't miss and other days it is easier. This was an easy miss day.

A slight movement caught my eye. Ten feet away a jackrabbit was sitting at the base of an oak. With a .38 blunt on the string, I swung slowly and brought the Cobra into line. He was so close I was having an argument with myself, but maybe a hit would break my bad luck with the squirrels.

I held for the shoulder, came to a smooth draw with the fifty-inch hunter and let her bite. It was right through the shoulder for one jack in hand.

I met Sisler and we compared kills. He had one squirrel, I had one rabbit. We moved off together and did some long range potting at the varmints. We took shots that were far too long and a hit would be more luck than skill.

Two squirrels were playing beneath an oak, a dead limb on the ground behind them. I came to draw, elevated for the eighty-yard-plus shot and made a direct hit on the oak limb. It was three feet beyond the squirrels but I nailed it dead center.

I kept thinking to myself: this is a short bow; not as much cast, so elevate. I elevated and continually went over the targets. After some time at this I lowered the Cobra for some closer misses.

Marion Marshall is a licensed Arizona guide who specializes in archery javelina guiding and hunting. An archer himself, he knows the problems confronting his clients. I had met him several years ago, when he had been in Southern California and had brought along some movies made by the callers in the Phoenix area. When I mentioned that I wanted to try the Cobra on varmints, he offered an assist.

We met at the cafe in Avondale, piled his sleeping bag and a few pots in the wagon and took off for the Castle Hot Springs area northeast of Wickenburg. He warned me that it was the wrong time of year. The coyotes were whelping and weren't too interested in the calls. Since game was plentiful we might draw a blank.

Marshall tried his long thirty-inch draw to the little Cobra and remarked that the finger pinch wasn't

Continued on page 46

Marshall also tried out the bow on this safari into the Arizona hills, where the test was to be conducted.



A deadly combination for this fox was the new Cobra model by Browning and Catquiver loaded with broadheads.



Although she uses slightly different styles of shooting between indoor and outdoor, Connie Hayes likes the kisser button and low type of anchor.

Californian Constance Hayes packed her green boots, mini-skirt, Golden Eagle bow, her husband and fractured them at the Pearson. She didn't win, but she sure showed.

No profile can be written on champion Constance without dragging in the other half of archer's beautiful young people team. He beguiled her into archery in 1963 and his insistence on practice stormed her out of it a year later. Steve Hayes nudged her back into the sport in 1966 and has played Professor Higgins to her already outstanding tournament career.

She had been shooting three and one-half months when she placed fifth in the national amateur standings in 1963. She started shooting because her husband shot, but in no time at all she shot down his theory that practice makes perfect.

"I always enjoyed shooting. I just didn't want to practice five hours each night," she emphasizes.

Her former actor-husband felt she had real talent and wanted her to exploit it. It drove him slightly dingo to spend eight hours practicing, get bloody hands in the process, then watch her warm up for five minutes and out-shoot him.

"For three years she outshot me. Only in the past year have I been shooting better than Constance, but I have never been envious. I would have willingly given up my shooting to back her entirely," he enthuses.

Steven Hayes is single-minded about success and what it takes to make a world champion. He is out to see his wife capture the title.

When she began shooting, Constance used a twenty-four pound Wing and the same 24 srt X1518 Eastern arrows she uses now, with Pacific Archery doing the fletching. For all outdoor shooting she and her husband use P.22 vanes — three-fletch, three inches long and one-half inch high. They do not believe in the do-it yourself side of the sport.

"I've never shot badly," she adds. Her husband feels that, along with a natural ability, she didn't have any bad habits to correct. They both stress over and over that proper training is vital from the beginning, although they had a few personal rounds over her

Profile By Donna Meadors Of a Champ: CONNIE HAYES

This Comely Contender Doesn't Know How She Wins, But It Has Something To Do With Motivation By Her Mate

husband's efforts to train her.

"She would be out shooting and, when I would try to point something out, I could see her hair stand up on end. Some twelve-year-old kid would wander up and tell her she was holding her wrist too high and she would fall down thanking him and change immediately," he says.

"My downfall was lack of consistent tension," Constance adds. So her bow carries a double clicker. "This allows me to know exactly when the arrow is ready to go off, and I can maintain tremendous tension."

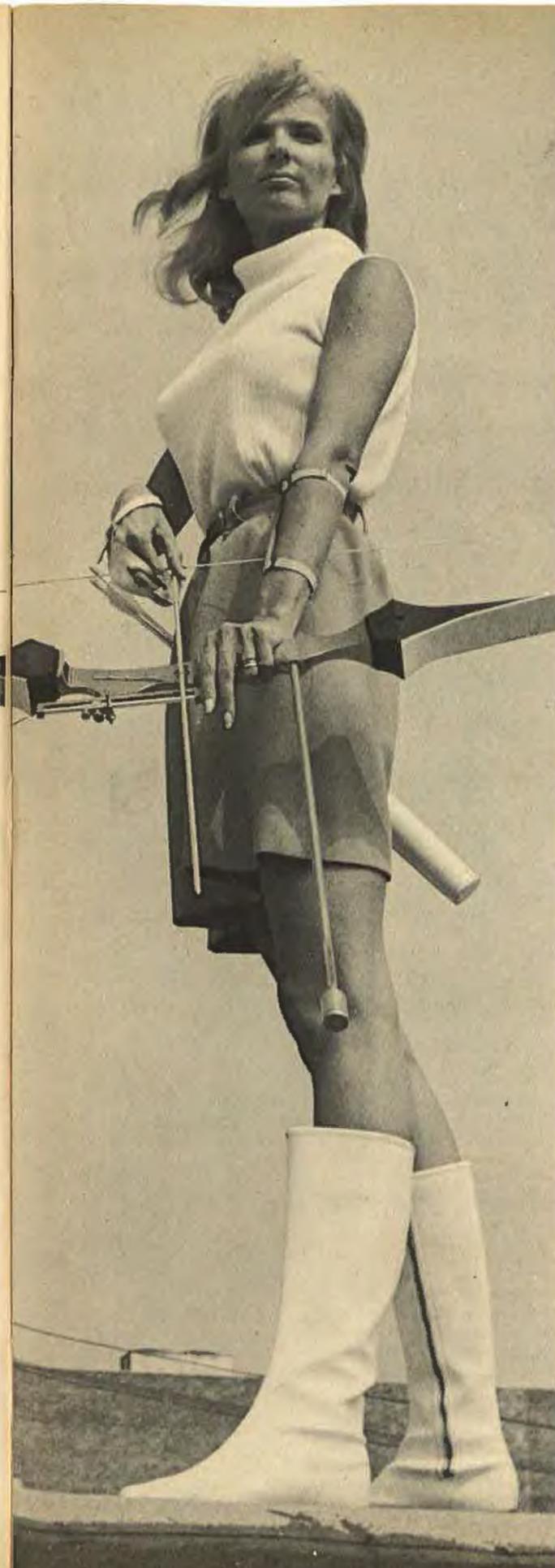
The other tension problem Constance battles is nervousness. In the Pearson last year she had to stand on one leg to keep her knees from knocking together. "I concentrate on aiming and keeping tension. I'm very good at blocking things out," she says.

She uses a Golden Eagle sight with a circle, "because pins make me nervous. I am firmly convinced that pins cause problems. It almost makes me seasick to use a pin. I think it upsets you to see the pin moving around."

Along with a preference for shooting barefoot, which has become the ex-model's trademark, Constance has a loathing for tabs. "I use gloves, because tabs give me callouses and hurt my fingers. I can't get a good feel of the string with tabs and it causes me to have a bad release," she suggests. She feels that she gets a lot of strength from her legs and her barefoot stance.

When it is freezing, five-foot, ten-inch Constance sports boots, but avers she does not feel comfortable in shoes at any time. "There is no glamour in archery and we'd like to bring some," she and her husband chorus. Constance prefers high fashion clothing which she and Steven select. "We want to get younger people into archery and beautify the sport," she says.

Constance's Golden Eagle bow has a special handle riser section. The bow was designed by Phil Grable of Archery Research for low wristing or heeling. She graduated to this bow from the Black Widow. The bow has a fluorescent orange point on the string for string alignment. She uses a below-the-chin anchor, a dead release and has a draw length of twenty-six



Mrs. Hayes uses a shooting glove to avoid callouses, but due to her long nails, she cuts out ends of fingers.

Connie Hayes feels archery should have more glamour and she does her part to raise that standard, although she prefers to compete in her bare feet.

inches. Her bow draws twenty-six pounds at twenty-seven inches. She and her husband feel their especially designed bows increase their strength. Root Archery carries the Golden Eagle bows thus far in existence.

Constance practices two or three hours every other day and usually both Saturday and Sunday. While she and Steven were preparing for the 1968 indoor Pearson, they drove eighty-seven miles round trip three times a week for three months after work to practice at an indoor range in Covina.

Basically an outdoor shooter, Constance has two different styles of shooting: one for indoor and one for outdoor. But neither Hayes can explain the difference or why.

"My ambition is to be world champion or on the Olympic team. I have the drive and I'm shooting better all the time. I personally don't think there is another woman in the United States who shoots as well as I do. There is no competition in California. The eastern contenders shoot against each other all the time," says Constance, who remembers her surprise at coming up against some rugged eastern archers.

The Hayes say they are the only pair in California seriously interested in target archery, and they would like to be the top man and wife team. Both are interested in self-competition or bettering their own scores to shoot a perfect round. They have a hefty collection of trophies, all tucked away in boxes. With them, the game is the thing. What they say they want to do is improve the image of archery and get more people into competition.

Both recall cases of people quitting after running into a mental quirk over some aspect of shooting. "If the incentive were greater, if the professional money was better, more people would be interested in competing and staying in the sport," she says.

Constance likes the challenge but can't stand the technical side of the sport. She tries to encourage shooting by demonstrations, exhibitions, television appearances and bustling the girls at her office.

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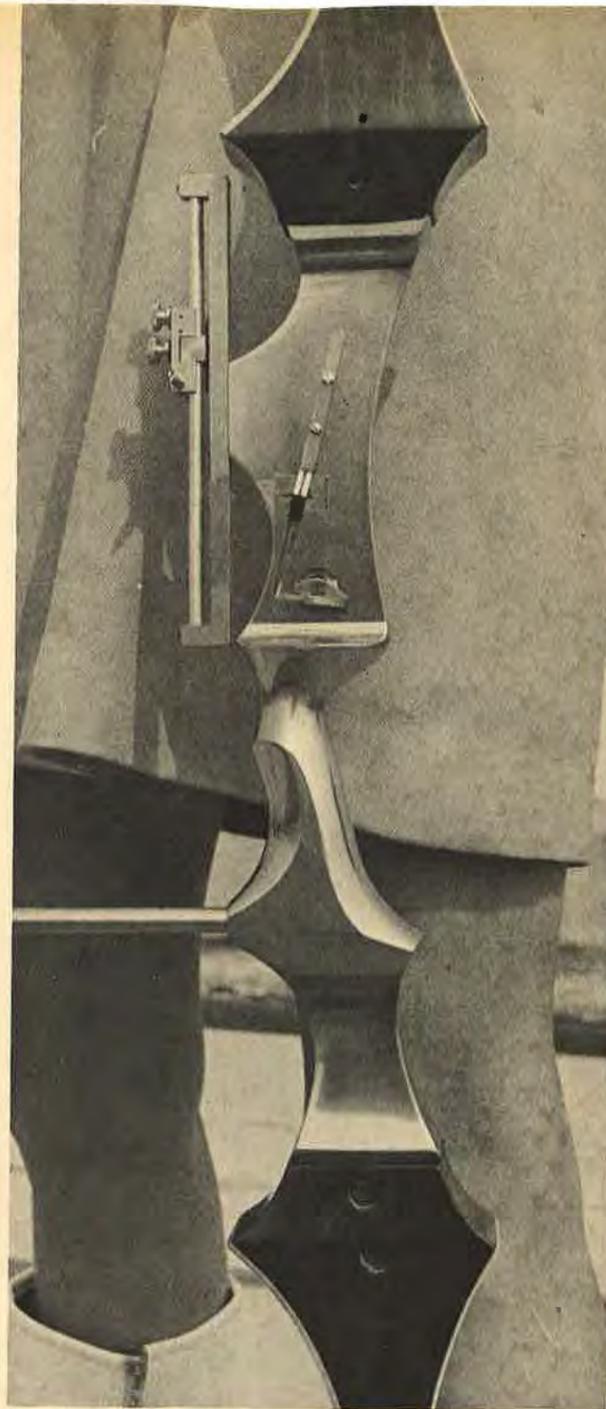
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archery is the next coming sport, Constance and Steven Hayes spend their weekends helping to train young archers. Their home club is the Pasadena Target Archers, but they do most of their shooting at Easton's range or a local spot in Van Nuys, where they are on the prowl for talented contenders.

Constance has competed in over ten big tournaments. She thinks she ranks about eighth nationally; shoots in class AA; has placed second and fourth in state shoots; won the southwest regional in Phoenix and the International Outdoor Archery Championship in 1967. On the FITA she has shot 1166; 756 on the American, and 298 on the PAA.

Her worst experience in archery was last year at the

Pearson. She forgot to pack her nightgown and her cool. She was offered quite a few pajama tops, but no one had a paisley print cure for stringy nerves.

Constance has said, "Archery is not a matter of strength. Men often overbow themselves. The main thing is mental control — you have to be like a rock to shoot well. And you have to compete against the course, not other archers." Now all she has to learn is to remember her own advice in competition.

What frosts Constance is the emphasis the press places on her figure — a trim 130 pounds -- long fingernails, hobby of gourmet cooking and overall appearance. She waved a booklet issued on the southwest regional championship matches in which a picture of her was captioned *beautiful contender*.

"Why couldn't they have said I won it, for heaven's sake?" she wonders.

And she won it with scores of 734, 726 and 700 out of a possible 800. She and Steven think they were the last to win the NAA husband and wife trophy before the award was discontinued.

"We are trying to create a few waves in archery. Somehow or other, we have to get it in front of the public," she says. While the public eye is on her, Constance is sighting on the world championships at Valley Forge, Pennsylvania in 1969 and the next Olympic Games in 1972, where archery is scheduled to be included for the first time in recent decades.

The Hayes weren't too happy about their performance at the Detroit show this year. She shot 271 and 275 and he shot 280 and 283. Still, for Constance that was a big improvement over last year's shoot where she ranked around the half-century mark.

"Mainly," says Constance, "you have to keep your muscles in tone." The Hayes purchased a Great Pyrenees dog, which they optimistically named Trouble, as an incentive to romp and get leg exercise on the beach. Trouble travels with them to many of the matches and almost succeeded in breaking up the Los Vegas shoot last year, when he decided to lope across the range. Great for the howhunters, but disconcerting for the die-hard target sports.

Constance Hayes had a parting shot for the women in the audience. If the thrill of the sport itself is not enticing, if the money is not yet stupendous, if you don't have your sights set on becoming an Olympic champion, there is still good to be accrued from working out with the bow, she reports. Her bust measurement increased two inches. Enough said. ●



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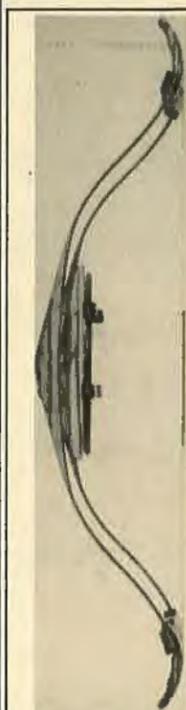
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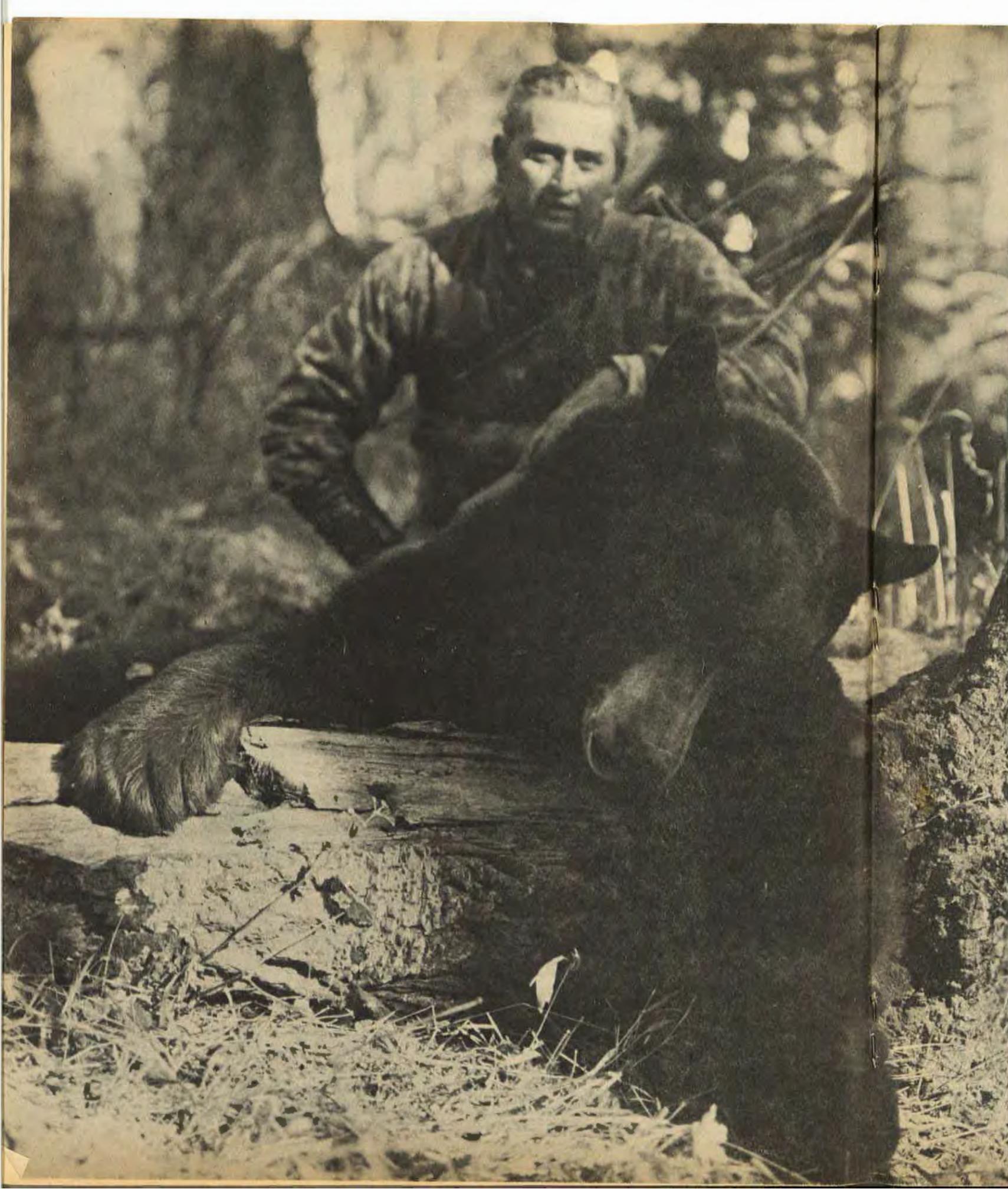
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Up The Same Tree With An Angry Bruin Can Make A Strong Man Wilt!

By Bob Swinehart

BEWARE OF BEAR!

I flew to Grand Junction, Colorado, for what was supposed to be a routine mule deer hunt with bow and arrow. Instead, I tangled with an angry bear, both of us high up a dense fir tree.

What an odd turn of events that, after four African bowhunting safaris and numerous encounters with dangerous game, I should nearly meet my Maker by a black bear in the so-called tamed lands of our western United States.

When I left home with my regular hunting companion, Bill Necker, my baggage was as light as I can recall for a hunting trip. I took few arrows, little film for still cameras and no movie camera, because all I expected to bag was a buck mulie, respectably racked.

Naturally, I'd like to nail a world record deer head — one of those old boys whose antlers look more like a Christmas tree — but the odds are slim indeed. Consequently, I couldn't imagine too much to be photographed, nor anything particularly exciting. Just a pleasant, relaxing-type trip. I always thoroughly enjoy deer hunting and was looking forward to meeting the outfitter and roaming his land, rated to be one of the best mule deer areas anywhere.

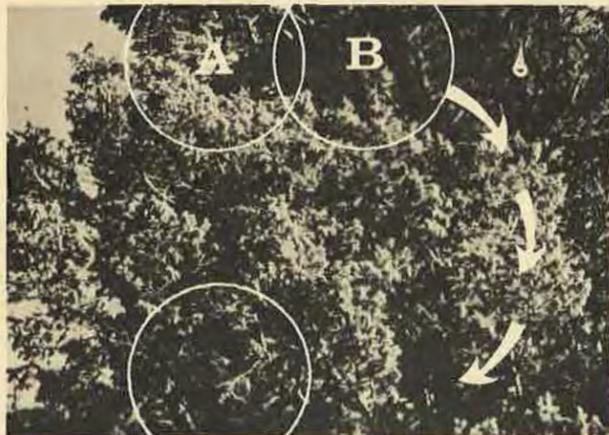
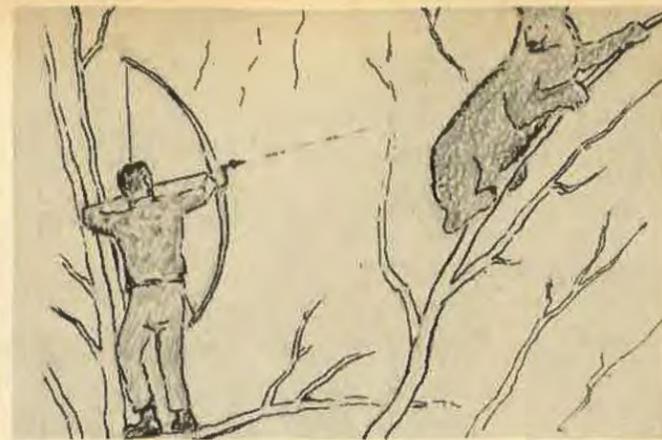
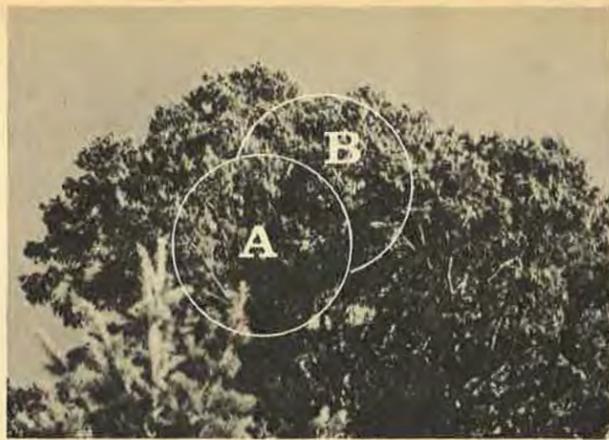
The outfitter was Jack Peters, a well known guide, then living in Fruita, Colorado. Now his year around home and hunting operation is located in Meeker, Colorado, by a lake which offers fine fishing in addition to top hunting of deer, bear, elk and cougar.

Our base camp was in a large valley in the Roan Cliff Mountain range, on vast ranch lands leased by Peters. I climbed the hillside facing camp and managed to stand on a jutting boulder with camera, which enabled me to get good panoramic pictures. About a half dozen trailers were parked at camp. Many of the bowhunters had driven all the way from the East Coast. A number of other Pennsylvanians were present, including a group from near my hometown of Emmaus. The large clientele kept Jack Peters busy passing out hunting licenses and getting the archers settled for opening day.



At many places along the trail were sheer drops of several thousand feet; (below) four-wheel drive vehicle is a must to negotiate rough terrain.





In upper left-hand photo, Swinehart is approximately 60 feet above the ground and ten feet from the bear. The author's position is indicated by circle A, that of the bear by circle B. Drawings indicate action in the tree.

Peter's personable assistant, Dave Byrd, had picked us up at the airport and filled us in during the couple of hours' drive to camp.

Soon after getting unpacked I leaned back against one of the shade trees outside my quarters and learned that a bear or several bears had been killing cattle on the ranch's high country and the owner none too happy about it.

"Would you like to give it a try, Bob? There's one big-footed fellow that we think is doing most of the killing," Dave Byrd explained.

I nodded, thinking it would be a nice change of pace, hunting with hounds. Besides, a black bear rug of mine was stolen from a sports show display a number of years ago and I hadn't yet replaced it. I was concerned whether the hide would be okay this time of year, but Jack said with any luck it would be; that he had gotten some with full thick hair. The color of most is brown, but occasionally they get a real black one like those in the East.

Jack Peters is a rugged individual of long experience hunting and trapping professionally, and spending many years in predator control for the government.

Horses browsed daily near our base camp. They are used only when Peters takes hunters into the remote back country of this mountain wilderness region. Jeeps transported the deer hunters up and down the mountains every day, over narrow steep loose shale roads that are treacherous, with sheer drops of several thousand feet. Those rides frequently would bring the lump up in a number of throats. You really have to see it and do it to appreciate the feeling. And the dust was terrific. Seeing and breathing was a chore and the dryness and sun

soon had my nose and lips parched and face weather-beaten.

A number of days I slept out alone atop the mountain, among the evergreens. My bed was a bunch of evergreen boughs and my roof, the thick overhanging limbs of a big fir tree, with stars peeking through. At this 9,000 feet elevation, the rarified air, which makes going difficult, made for an exceptionally clear, beautiful sky at night. In contrast to a Pennsylvania woods after dark, which is noisy due to many chirping birds and insects, the Roan Cliffs were as quiet as a graveyard. But there were two big disadvantages of this living alone — foul water or no water and cold lunches. However, my meager diet was supplemented with a knapsack of pretzels. The gang at camp — around fifty people — were eating like kings on steak, pies and the like.

Someone asked whether I might sometimes worry about a bear attacking me while sleeping. This was during the period several girls were killed by grizzly bear in another western state, so the subject was on many peoples' minds. I answered, "Not in this area. Nearly all the bear, although mostly brown in color, are the black species and relatively harmless. It's seldom that grizzly drift into this region anymore. And besides, a wild animal rarely attacks a human unless provoked. Provoking can mean many things."

During those first few days I stalked many bucks, two of which were fabulous with spreads of around thirty-six inches and high tines. Both probably would make the top ten in any book, but the dry open country made it impossible to get closer than a hundred yards. Duck soup with a rifle; hopeless with a bow. Although



Swinehart (left) and Dave Byrd hold the hounds used to run down, tree the black bear after its calf kill.



Above: The base camp from which the author operated is in a large valley at foot of the Roan Cliffs. (Below) Many of the bowhunters coming to the Colorado location bring own campers.

I sometimes score on sixty and seventy-yard shots, really effective bow range is thirty-five yards or less. I passed up numerous close opportunities at lesser buck.

Don't underestimate a mule deer. He has the reputation as being dumb and a snap to take. I've hunted the wary whitetail with pretty fair success, yet these old mule deer bucks are as challenging to stalk as any mature whitetail buck. The eyesight and hearing of the mule deer is exceptionally keen. It must be to survive in an area where they are preyed upon regularly by cougars. The most productive method of hunting the mulie, particularly the wise old bucks, is to post in a tree platform early morning and evening. The mule deer's habit of stopping to look back when jumped doesn't help the archer, because the deer are usually far out of bow range.

Suddenly at daybreak one morning, Peters barreled out in the jeep and notified me that the big-footed bear had left fresh tracks at a recently killed calf. The hounds were in the truck, and he, Dave Byrd and the dogs were ready to go. I grabbed my sixty-pound Howard Hill bamboo longbow and quiver full of arrows, with two-bladed Hill broadheads on Micro-flite fiberglass shafts. Soon we were trying to keep track of six howling blue-tick hounds, hot on the trail of that bear. The tracks were larger than a man's hand.

Because of so many free meals, the old bear wouldn't travel far. Within a couple miles he treed — actually in Utah, just over the state line, in a canyon appropriately known as Bear Canyon. As long as the dogs were barking below, the bear would remain in the tree.

The hruin was a big boar, had quite a large head and occasionally showed his teeth as he glared at us from the



The guide's horse herd browses near the camp and is used to pack into back country, where vehicles can't go.





Actor Hugh O'Brien was on hand to congratulate Swinehart (right) upon his successful hunt for the killer.

Swinehart and Peters were both happy over the way the hunt turned out.

tree. Though only about twenty feet up, not any of the bear's body was exposed for a shot — only his head and throat.

Byrd commented that this fellow was different than most. "None too friendly. Just look at those fangs and that big head!" he reminded.

Meanwhile I had nocked an arrow and was hoping to get it through the branches and into the bear's vitals, dropping him out of the tree.

I let go with an arrow which found the mark, the middle of the bear's throat.

"Good hit," shouted Peters. But our optimism was short-lived. Unfortunately the broadhead passed by the spine and jugular vein without severing either. The arrow only tended to make the old board angrier. He bit off the shaft and went to the top of the tree.

The Douglas fir is normally dense and this one was particularly thick. It was impossible for me to get a fatal arrow into the dark mass of fur. In fact, the animal was scarcely visible, only a bit of black showing here



When measured, the skull of the black bear taken by the author in this adventure was admitted to the record book.

and there. Several more shots were attempted, but the shafts were deflected by the limbs.

Finally I mumbled, "How about if I climb up the tree and try to work my way in for a clear shot? That's the only way to finish that bear."

Peters said nothing. Whether he thought I was kidding or didn't hear me fully, I don't know.

"Jack, how about if I go up after the bear?" I repeated. Reluctantly, he agreed, none too favorable toward the idea.

I was suddenly half way up the seventy-foot tree, breaking off dead limbs and hanging bow and quiver on them as I continued up. Not until I got within ten feet of the animal could I get a clear shot. The tree trunk formed a Y at the top about sixty feet up. The bear was perched on the right limb; I leaned against the left limb at slightly lower elevation, and drew the sixty-pound bow.

Zing. An arrow sliced into the bear's chest cavity. Another along side. Both fatal lung hits. The bear lurched, almost falling from the treetop, weakly holding on with his claws. He appeared finished and I began descending.

Meanwhile, the bear unbelievably came to life with an amazing display of strength, sprang to the main trunk and started down toward me!

Realizing the danger, I quickly went out on a side limb approximately fifty feet off the ground. The bear's rear feet barely missed landing on my shoulders. Stopping at eye level and gnashing its teeth with only three feet between us, several seconds of eternity passed. I balanced by holding to a thin limb waist high, as the one I was standing on sagged toward the breaking point. My bow and quiver of arrows were hanging near the bear's feet, but would not have done me any good anyway at this stage of the game — I wasn't in any position to shoot, nor was it the proper time.

It seemed that the bear was going to continue out after me. I knew my only chance was to bluff him, or as a last resort, jump rather than get knocked off the limb and likely land on my head or get ripped open by the sharp claws, an easy matter with those powerful forearms. In jumping I might only end up with broken legs and back, if the dogs didn't tear me apart thinking the

bear had fallen. And if I landed on one of the dogs breaking its back, Peters would likely skin me alive. His top dog, Bullet, is worth a thousand dollars.

The fellows below were concerned. Peters had no gun along and had to watch, helpless to assist. Although bullets would have spoiled my bow kill, I wouldn't have minded in the least while that staring contest lasted.

The bear must not have realized my helpless position out on that limb. Luckily he decided to continue down the trunk and out the branch below me. Then he dropped to the ground, fought the dogs, slashing several badly, and made it up another tree from which he fell moments later, quite dead.

None of us could imagine what had kept the bear alive. I'd dropped dangerous Cape buffalo with single shafts; even a seven-ton elephant with a single arrow, and they succumbed more quickly than this bear.

Peters just shook his head slowly, speaking with a bit of typical western twang in his voice. "Never saw anything like that in my life, and I've killed over three hundred bear and as many mountain lion! I'm sure glad there are witnesses, 'cause nobody would believe it."

More important, I was glad to get my feet on solid soil again. But I certainly looked like the loser. Quick movement in the thick tree among jagged limbs had my body pretty well scratched up and bleeding at places and the seat of my pants was torn clear down along my thigh to the knee. I feel sure that my torn clothes was all the result of sharp limbs, but the others had some doubts. At one point as the bear descended above me, it appeared to them as though the bear touched me. It was possible, but I never felt anything. But then I didn't feel the branches jabbing me either!

The bear weighed three hundred pounds and had a beautiful hide of black fur. Even though the hound dogs, as a reward, always are permitted to bite and tug on the side of a bear or mountain lion for a few moments, no harm was done to the skin.

An unexpected bonus: the bear skull makes the Pope and Young record book! And when this bear rug stretches out in my trophy room along with the heads of African game, including the Big Five, it will be looked upon with as much respect. The memory of those few moments in a fir tree will be long-lasting. ●



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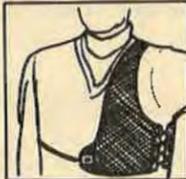
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LONE STAR VARMINTS

Continued from page 23

act. I failed to connect, but I came close. Two in particular gave me fine chances and, even though they moved, I never should have missed. The big cat sat at thirty yards and looked us over for several minutes. Thinking he would come in closer, I waited. He left all at once in overdrive and still may be running.

The Burnhams call a lot differently than Far Western callers; not in style or pattern but in less volume or aggressiveness. They take it easy and Winston summed it up as we broke for lunch.

"Blowing a call is hard work. We go sometimes for a week, calling all day, maybe all night. You can't call hard and keep it up, so we take a nice slow pace and get the same results. The animals don't come in quite as fast with our style of calling, but it fits us just right."

The Burnhams are excellent woodsmen whose skills are not limited to superiority in varmint hunting. Their knowledge of range conditions, the wildlife, plants and cattle ranching is deep and vast. About Texas, they are walking information centers.

Through the days that followed we made our stands with a couple of different styles of electronic callers the Burnhams are marketing. The one that really got results was a tape recorder that played a twenty-minute rendition of a woodpecker in a peck of trouble. If there ever was any doubt about the hearing ability of coyotes or the virtues of soft calling as opposed to the violent style of the west, these suspicions were proved groundless.

During the second day, we had an increasing wind and by late afternoon it had reached a pretty good clip. Using the recorder, which had a volume range down about squeaker level, we called coyotes out of thickets where we could watch them come for over half a mile. We also called a bobcat that Buster Vickers, a Texas game ranger who had joined us for a day, got a pretty fair crack at. Both of us got some shots at coyotes, too. In fact, I was beginning to talk to myself in increasing tempo, kicking myself for not shooting at the big bobcat of the day before. Since killing the coyote, I had missed ten and was becoming convinced that the first was a mistake.

Late in the afternoon of the last full day, we pulled into a heavily covered draw to make our last stand. The wind blew with fresh strength as we settled in the heavy cover of the wash. There was good visibility for about twenty yards. After several minutes of calling, a chorus of coyotes began howling all around us about a half mile out. It was then that I heard Vickers shoot. The sound of his arrow clunking into something solid caused me to grip my bow, nock more tightly and peer intently all about. Another arrow twanged nearby, then, evenly spaced, two more. Mentally I noted that Vickers, with his four-arrow bow quiver, was out of ammo.

Turning slowly, I stood and looked in his direction. Winston, who was coaxing with a squeaker, motioned me to move slightly toward Vickers. I was sure that the subject of all the action had to be a bobcat, so I watched the wash in front of me and the opposite bank some twenty yards away.

He was on my side of the bank, slipping straight into Winston and no more than ten yards away. A long-legged beautifully marked cat that even at that close range was virtually invisible, he had no idea I was present, so intent was he on the calling.

I damn near blew it. At such a range it is easy to snap shoot. I almost drew and shot in one motion, but caught myself and picked a spot on his left front shoulder.

One might have thought I had shot an African lion. As the shaft passed through his shoulders, he came off the ground a full three feet in the air snarling, spitting and leaping straight in my direction. I grabbed my bow by the lower limb and prepared to give him a Mickey Mantle smash with the whole apparatus, bow, quiver and arrow. His plunge changed in mid-air, going straight towards Winston.

Another long leap was his last and he landed in a pile, snarling his last ten yards from where he was hit. Through it all I could hear Vickers yelling, "Beautiful! Beautiful! Nice shot!" I was yelling at Winston, "Watch him! Stop him! Look out!"

As they say in California, it was "groovy." It was also confusing.

Vickers had shot at the cat four times as it slipped in through the trees, each arrow neatly centering a tree trunk. The cat didn't pay any attention other than to jump back into the wash and continue his stalk of the caller.

That night we celebrated with thick steaks and a lot of varmint hunting talk. The shooting had been kind of tough, but this was good practice for the second half of our adventure, which would be a few days devoted to the pursuit of mouflon sheep in the hill country north of San Antonio. We decided to hunt for a few hours in the morning, then pull out for the sheep country. This was fine, as I wanted one more chance to shoot a coyote. My jubilation resulting from the bobcat scare gave me new confidence.

The morning was gray with a promise of rain. For the first time the coyotes had remained quiet all night. Nevertheless we struck off for the express purpose of getting Dougherty one more chance. It was four stands in coming, although one stand produced some more of those aggressive growlers that still have me wondering.

Our last stand was along the edge of one of those big beautiful prickly pear flats flanked by a carpet of green grass. Hunched behind a pear clump, my position was ideal to cover any avenue of frontal approach to Murray's call. Two minutes later, one came trotting intently in and out of the pear flat on a line toward my position.

At twenty yards, he saw me and knew I was not a cactus clump; therefore I required closer inspection. He peered intently over the top of a pear pad and just barely had time to start turning his head. The arrow clunked solidly, and without so much as a wiggle, he was down.

It was a rather grand finale. We had begun and ended on a successful note and the big bobcat was a bonus.

In Murray and Winston Burnham I had found two real hunters and learned things in hunting that will be of immeasurable value in the years to come. We had several days of sheep hunting ahead of us and we already were planning another varmint hunt, while there was talk of rattling up whitetail bucks.

Reluctantly we left the green glory of South Texas at her best and headed north. Hot and dry or green and sweet, that part of Texas is game country deluxe. There are javalina and whitetail there that require some serious attention; yet, when the coyotes gang up to greet the dawn, it would be hard to think of anything else. ●

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Benedict Crossbows mfg. under U.S. Patent #3,242,917 (others pending).

BROWNING COBRA

Continued from page 32

bad. The factory test draws each Cobra to thirty-two inches before it leaves the plant. I use a bow lock on these short bows and it works great for me, since I never have sore fingers, regardless of the string angle or the amount of shooting.

We stopped the car and checked the area for sign. There was some in the wash, so we switched to camo shirts and unloaded our tackle. I loaded my Catquiver with Ace-tipped Glashafts, slung it on my back and we headed for a knoll to make our first call. Marshall had his bow and elected to carry a bow quiver, laying it on the ground instead of mounting it on his bow.

We found the palo verde below the crest, cleared the cactus from beneath it and sat down. The one thing that didn't enter my mind was the shooting position I had assumed. I made sure the area was clear for me to see and shoot from my side, not thinking that I would have to shoot from the bottom.

The time had come for the acid test. The gray fox was right in front of Marshall and me. He stopped, looking left and Marshall continued to squeal on his call. I came to full draw with the Cobra from a sitting position. I hadn't thought of the shooting as much as of breaking the outline and had scooted under the palo verde. I had limbs all around me, except in front. We had on camo, of course, but I knew the gray must see us this close.

I brought the Cobra to draw, my right leg beneath me, my left stretched along the ground. I canted to clear any limbs, checked my alignment and let fly. The razor-sharp Ace broadhead bit into the hard Arizona

dirt about twenty feet beyond the fox. I had been thinking left as he looked left, assuming he might break left when he started. I neatly placed my shaft one foot to his left. I reached over to get another shaft from my Catquiver, never taking my eye from the fox. He had just skittered around a sage and was still trying to find that pseudo wounded rabbit. I nocked another shaft, came to draw and nailed him in the spine. He was down.

Marshall said the fox would have come right into our laps, had I waited. I paced off the distance and it came out about eighteen yards.

Our first eager varmint was the gray fox I now held in my hand, as I walked up to where Marshall stood. It had been exactly ten minutes from the time Marshall had started his call going.

We moved to other areas, picking likely sights and making several stands. We hunted the rest of the day till the light was dim, then made camp.

The next morning, we made some early stands and brought nothing in but three curious does. They came out of a draw and within easy bow range but they knew they weren't in season.

The bow was so short I couldn't use my bow quiver. One might, if he bolted or screwed it on the side but the quick detachable type won't work. I selected my Catquiver and it was a happy choice. The arrows are open on the sides, covered on top and when I took it off, it lay right alongside and the second shaft was easy to reach.

It isn't the size that counts, it is the way the bow spits and the bite from the little Cobra can be just as deadly as that from any longer hunter. ●

LETTERS

Continued from page 6

wants to improve his form and thereby his score. I hope you can revive this practice in future issues.

Ray Nelson,
Yuba City, California

(This is the first opinion we have heard on this matter. Any others?)



BIG ONE

Here is a picture that appeared in our papers. I thought maybe Doug Kittredge would like to see it. You see, he has an invite to go hunting with me in Oregon some of these days. I hope he can make it, as one of these big boys has his name on it. We saw some with about forty-inch spread that would weigh in at over three hundred pounds.

This deer was 28½ inches and dressed out at 225 pounds.

Bill Chahon,
Grants Pass, Oregon

(We understand that Kittredge already is honing his broadheads with a gleam in his eye.)

TECH POINT

I enjoyed *Tackle Tips* by Emery J. Loisselle in your March/April BOW & ARROW, but I think I should bring up one point: the paragraph, "Broadheads should be at right angles to the bow..."

Emery seems to suggest that the picture of an American Indian, with the head of his arrow in a vertical position, is all for show and no effect; quite a different view from the Indians. Their theory was that hunting arrows should be vertical to allow it to pass more easily through the rib cage, the ribs being vertical.

But their war arrows to be used

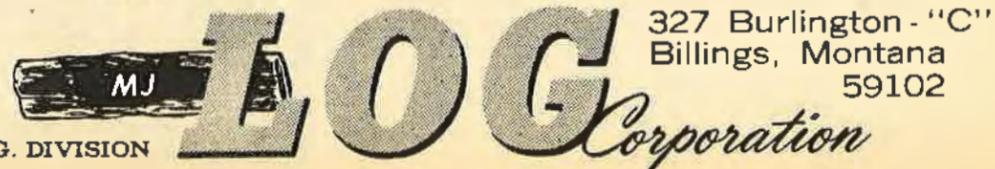
Continued on page 55

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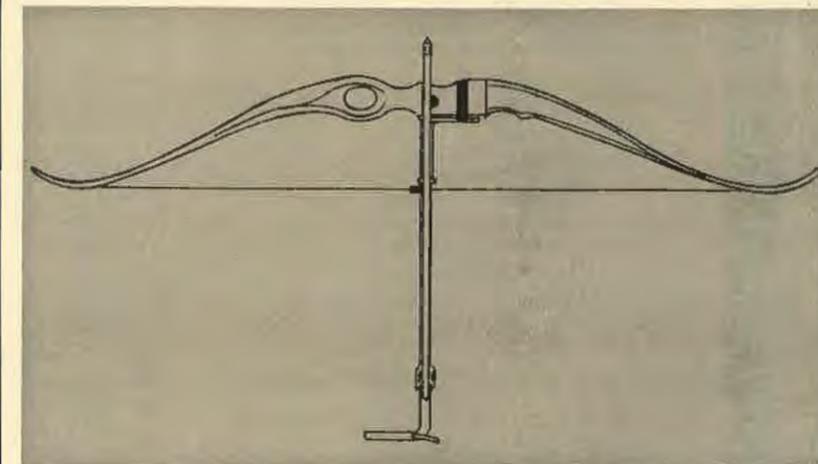
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KITTREDGE
 Continued from page 10

the rest and a bit of leather as an arrow plate on the side of the window. This is not completely satisfactory in most cases. A hunting arrow rest must serve two purposes. It must quiet the sound of the arrow as it shoots past the bow. It must be able to cushion the arrow when you get a bad release, for the resulting whip-like leverage when a heavy broadhead is on the end of the arrow shaft can cause a broadhead hunting arrow to be more temperamental than a twenty-one-year-old blonde!

The most popular hunting rest is the simple feather rest made up of four or five feathers glued upright side by side, then cut into a parabolic shape. It helps if the rest is trimmed up a bit with a hot tip of a cigarette so the parabolic shape tends to slant into the side of the bow slightly and thus hold the arrow against the sight window.

Before the feather rest is installed, some sort of soft arrow plate should be glued to the side of the sight window to quiet the side pressure of the passing arrow. I figure first just where I want the arrow to press on the side of the bow... normally directly above the point on the hand grip that touches the web of my bow hand. Now take a three-quarter-inch length of paper match and glue this to the side of the bow using Duco or Plio-Bond cement. Then cut a 1 x 3/4-inch piece of soft leather like buckskin, a piece of mole or muskrat fur, even a soft corn plaster or a piece of wool felt. Glue this with the one-inch dimension upright, centering it over the piece of paper match which acts as the single point of contact the arrow makes with the bow. The feather rest now should be glued in place so the high point of the parabolic cut is positioned directly across from the paper match hump in the arrow plate. A squirt of feather waterproofing on the feather rest and the arrow plate will eliminate chance of it changing stiffness during a rainstorm and thereby changing your arrow's point of impact.

Now put the bowstring back on your bow. Brace it and locate the nocking position of your hunting arrow. With a broadhead arrow, the nocking position should be such that the arrow points slightly downhill. In other words, if you were to place an arrow directly across the arrow rest to the bowstring so it was perfectly horizontal, you then would raise the nock end up the bowstring about one-quarter-inch to have it in the right position for shooting. With the arrow in this position, mark with a ball point pen on both sides of the arrow nock. Position your nocking points on these ink marks to bring your arrow into the correct position.

You can buy commercial nocking points for this purpose, or you can make your own by wrapping a bump of thread on the string serving and gluing in place with Duco. Generally the smaller the nocking points, the more accurate the shooting. The small heat-shrink type are extremely satisfactory.

A nocking point both above and below the nock is a help. This makes a sort of pocket in which the nock rests, preventing the nock from shifting on the bowstring as the bow is drawn, or if the arrow is bumped while stalking.

Install a set of bowstring silencers. There are a vast number of different kinds on the market to suit your fancy. These can add a considerable amount of physical weight to the bow string and thus slow down the cast of your bow, so select a type which is quite light in weight. Or you can make your own simply by obtaining a couple of heavy banker's rubber bands of about one-quarter-inch width, cutting them to make two flat rubber strips and tying these strips to your bowstring about twelve inches from the bow nock, trimming the hanging rubber ends to a length of three-quarter inch or so. These damp out the bowstring vibration and quiet the bow twang. With some extremely noisy bows, or when you are hunting at very close range from a blind, four silencers will have to be used for best results, affixing the second set about 8-10 inches below the first.

If your bowstring is new, shoot it a hundred shots or
 Continued on page 54

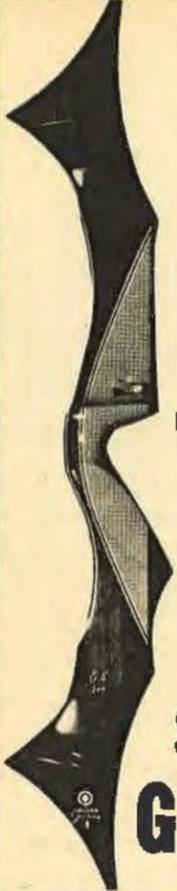
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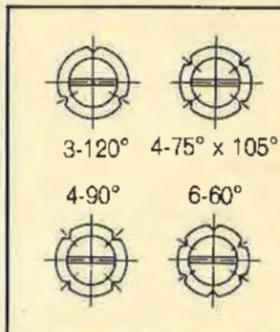
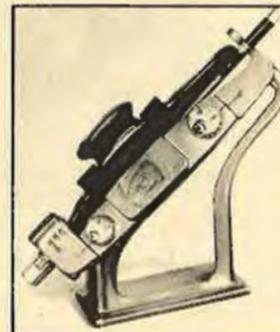
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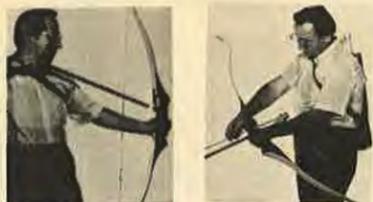
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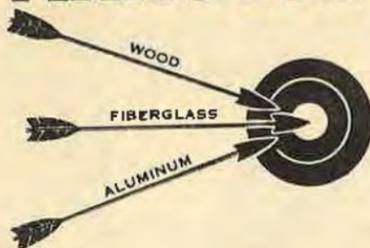
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Both feature a five-sixteenth-inch threaded insert to accept the Browning torque stabilizer. The twenty-two-inch 4.6-ounce stabilizer is an optional accessory with either bow.

The *Challenge* also is sold in a set which includes the torque stabilizer, zippered vinyl bow case with a pocket for the stabilizer and one for accessories; a Reynolds bow sight, Browning eight-inch sight extension and the new Browning No-Cant sight reticle that has interchangeable cross-hair and bead sight reticles.

The *Challenge* handle is made of Brazilian rosewood and has rosewood overlays on the bow's face. Both bows have white fiberglass on face and back. The *Monarch* sells for \$84.50, the *Challenge* for \$127.50 and the *Challenge* bow set for \$165.50. The torque stabilizer, in a vinyl-bound cloth case, goes for \$12.95 from Browning Arms Company, (Dept. BA), Route 1, Morgan, Utah.



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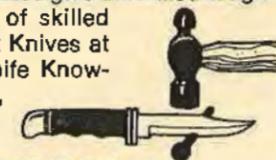
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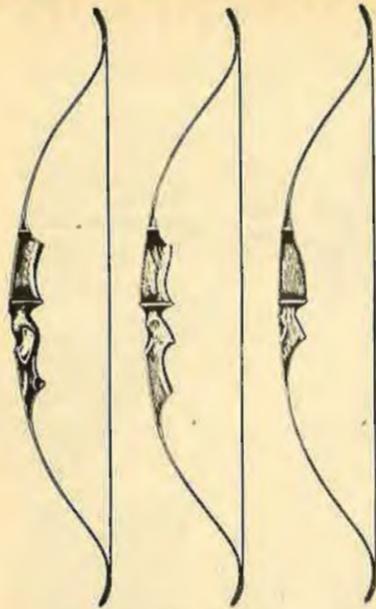
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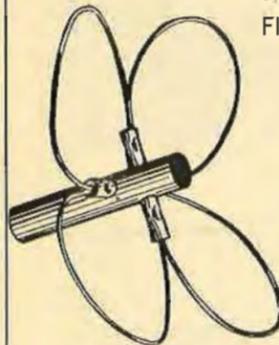
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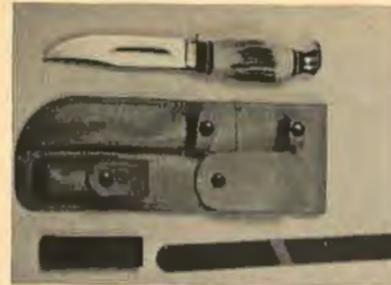
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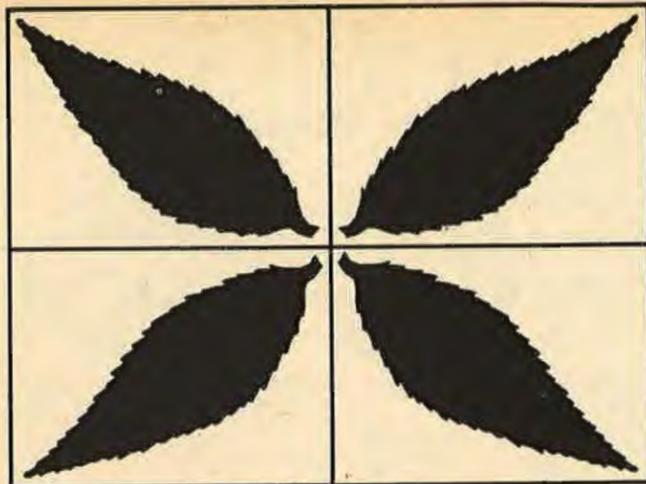
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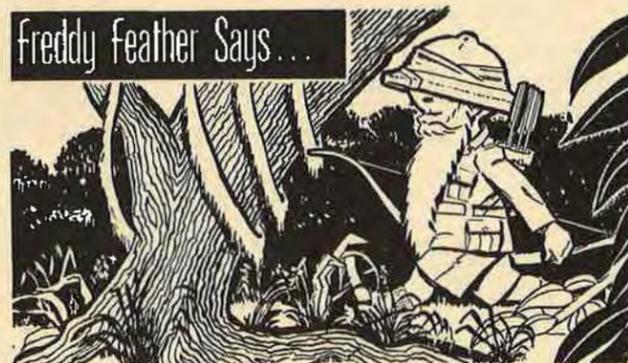


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KITTRIDGE

Continued from page 48

carry a spare bowstring. This spare string must be adjusted by shooting it in as with the first, having nocking points positioned, string silencers in place. This way, should you require the spare when you are in the hunting field, it will shoot exactly the same as the old string.

Needless to say, both strings should be of the same number of strands, same material, same length. This extra bowstring can be carried in the quiver or pocket. However, one of the handiest places is simply to tape it to the bow just below the hand grip. I wrap mine in a bit of Saran Wrap first, then use some friction tape to hold it in place.

A bow quiver is used by many bowhunters, particularly on the shorter, lighter weight bows where the additional weight of the quiver and the arrows will not make the overall bow weight uncomfortable to carry. The quiver must be securely fastened to the bow to prevent noise as the bow is shot. Any shiny surfaces should be painted or covered.

Arrows need to be tuned up, too. Check each one over for straightness. Look at the fletching to be sure that there are no loose feathers and that all arrows have the same degree of spiral. Spin the arrow like a top on the tip of the broadhead to check for head alignment. A crooked head can really throw your accuracy into a cocked hat! Be sure the nocks fit your bowstring. Very often the nock slot is too large for the bowstring serving. You can build up the bowstring at the nocking point by wrapping the string serving with some flat dental tape glued in place with Duco. A better solution, however, is to reform the nock slot by heating up one inch of water to boiling in a saucepan. Dip the first three-eighths inch of nock into the water to submerge just past the slot, count to ten, remove and press the nock ears slightly together holding a few seconds until the plastic cools. Try this reformed nock over your bowstring. It should be snug, but not tight. A good test for being snug enough is to see if you can hang the arrow on the bowstring just by the nock. If it pulls out, it is too loose. Form the rest of the arrow nocks accordingly, testing each one to be sure it is just right.

Before the broadheads are sharpened, shoot each arrow over a distance of one hundred yards or so, being sure you have a soft sand bank as a backstop. Any arrows which don't fly right should be rechecked completely, and if they still do not fly, discard them from the group. Now shoot your arrows a few times at a bale of hay from about forty yards. Don't use a bale you care about, as it will chew it up withdrawing the arrows. Any of the arrows which don't seem to group well also should be discarded. The remaining arrows you now know shoot where they should. Sharpen the heads ready for hunting. Waterproof the fletching with two coats of any of the products on the market, being sure you obtain a product which does not have a scent after it dries. If you can't find anything else, regular dry fly dressing from your local fishing supplier works fine. ●



"I thought you said they were a small band of Indians?"

LETTERS

Continued from page 47

on man would be horizontal for the same reason. So in this respect, they should have been better fighters than hunters.

Dnd H. Thomas,
Tulsa, Oklahoma

(Were he around to comment, we feel certain that a gentleman named Custer would be the first to agree on your final statement.)

WHERE IS IT?

I would very much appreciate it if you can advise me where I may obtain a copy of *The Witchery of Archery* by J. Maurice Thompson; copyright 1928.

A letter to the publisher, The Archer's Company in Pinehurst, North Carolina, was returned by the post office.

E. R. Hallock,
565 E. Locust (Apt. 3),
Canton, Illinois 61520

(This book has been out of print for a good many years, but some of our readers may be able to help. If so, there is the gent's address; please contact him directly.)



KLICHER

Have you ever thought how like the mouse trap the klicker is? I wish I could build a better one . . .

One day I ran out of klickers. I only had five of the darned things and I needed another one real bad. There was a five-and-dime store close by, so I picked up a package of them for just a few cents. They are spring-loaded and loud.

You might find some around your house. Your wife probably uses them for rolling her hair, when she gives herself a home permanent.

See the picture.

Gilbert J. Frey,
Gaithersburg, Maryland

SMARTEST BOWHUNTER

I thought it was time I wrote to say how much I appreciate your magazine. I have read every issue from cover to cover, since you started printing it. Although I would argue some of the points your people write, this is the way I gain my knowledge on archery. Of course, you know, I am

Continued on page 69

IMPROVE A FORGEWOOD?

It sounds almost impossible, but after 20 years of making compressed cedar shafts, we have improved on the FORGEWOOD! The NEW FORGEWOOD "DURA-SHAFT" is our finest shaft development. It is ONE shaft combining, in perfect balance, the best qualities of our previous "unfooted" and "footed" shafts. The FORGEWOOD "DURA-SHAFT" has great strength on the front end to resist breakage (modified from our previous "footed" shafts), combined with a point of balance and spine qualities similar to our famous "unfooted" shafts.

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Camouflage may be great for whitetail but it's unimportant when chasing a boar in open or in palmetto stand.

toted along my carbine it wouldn't take more than a few seconds, if he showed on our side, but only the how was at hand.

I still don't know if Sam has come around to realizing that you can't — or shouldn't — try for a big deer with a bow rated for a forty-pound pull. It's strictly a bow for the Vassar bloomer-girls cavorting on the campus lawn, not for collecting so-called big game. Sam didn't give it a second thought and the deer was even less concerned. It took nearly forty minutes for that buck to finally browse along, but when he did, it was as Sam figured: never more than a dozen feet left or right of that well worn Florida trail.

When it all happened, almost no one reacted with the speed expected. I put an elbow through the window of my light meter, Sam dropped his second arrow in

the brush, as he came out of his crouch, and the completely surprised buck simply froze and looked, not at Sam, but at one side of my camouflaged face, visible along with the snout of the camera. He just started to bend his forelegs as the camera mechanism gave off with a most audible *ka-lick*. Sam Elder had, at the same instant, pushed that broadhead into flight with all the light bow had to give. Seeing as how a whitetail tends toward being thin-skinned, plus the advantageous nearness of the animal, it took just that one well placed shot to put meat in the locker and a head on Sam's wall.

All of the usual planning, the carefully chosen stand and elaborate camouflage precautions were, in this chance-happening, the result of only moments of running and crawling, plus a right place/right time meeting of man and game. Elder laughed about it later

and admitted that chances of ever realizing such a successful lucky encounter were probably less than one in a thousand. Figuring in the business of the forty-pound bow, the animal had to come into a range that practically put him in the hunter's lap. Again, a one-in-a-thousand set-up.

Back at one of River Ranch's plush watering holes, with a cold brew to wet down the morning's road dust, several of us were talking over the exploits of Lucky Sam, and allowing as how some guys just seem to fall into the action without half trying.

While heads still were nodding in agreement, the phone rang and I was called over to talk with a chap who had just landed on Gulf American's strip; he was at the moment at the check-in desk and had just heard tales about the kind of shooting I had enjoyed and the morning project on rabbits and the bonus deer.

The voice's owner was Dick Wilson, top man of Shakespeare's archery division. He had made the scene on behalf of his company to roll some film on the subject of letting the sawdust out of wild boar with bow and broadheads.

The chance to watch a man of Dick Wilson's skill handling equipment as it should be handled interested me enough to prolong my stay by two more days. It was well worth it. What I witnessed was a simple matter of little luck and much skill.

It started that same afternoon when we took a Land Rover back into a remote section where I had taken a big, black boar a few days before.

This Shakespeare *Super-Necedah* model is an off-shoot of the *Necedah* series; it is laminated of fiberglass and hardwood and delivers exceptionally good how action while staying within a most reasonable price range. Where the *Necedah*'s are available, right or left hand, in draw weights of 35, 40, 45, 50 and 55 pounds, the *Super* model runs up to the sixty-pound mark. The sixty-pounder Dick Wilson was using measures fifty-four inches and was just the ticket for tropical growths and working on fast moving, dogging game, if and when they moved into tight cover.

In the wood department, that handle job is made up of a combination of zebrawood and Argentine laurel, and it comes in its own vinyl bow case.

For \$69.50 the *Super* looked as good as the performance it turned in, but if it wouldn't look good in Quick Richard's professional hands, where would it? Before I finally left the scene I spent the better part of an hour getting the feel of this short, hard-hitting bow; its well contoured thumb rest, arrow plate of clipped calf hair and semi-pistol grip made it a piece of equipment most anyone would adapt to quickly.

Not more than seventy-five minutes out of the River Ranch complex, Careless and Rip, our boar dogs, spotted a mixed lot of feral hogs — razorbacks — along with a possible boar that looked, at a distance, to weigh well over two hundred pounds. In an instant they were moving across Florida's plush real estate in hot pursuit of some nasty-tempered porkers that plainly sought to make it for the river. Unfortunately, the dogs moved in on the less acceptable specimens and the big fellow managed to put near a half mile between us before turning into a near impenetrable stand of palmetto lying just yonder from a swampy drainage area.

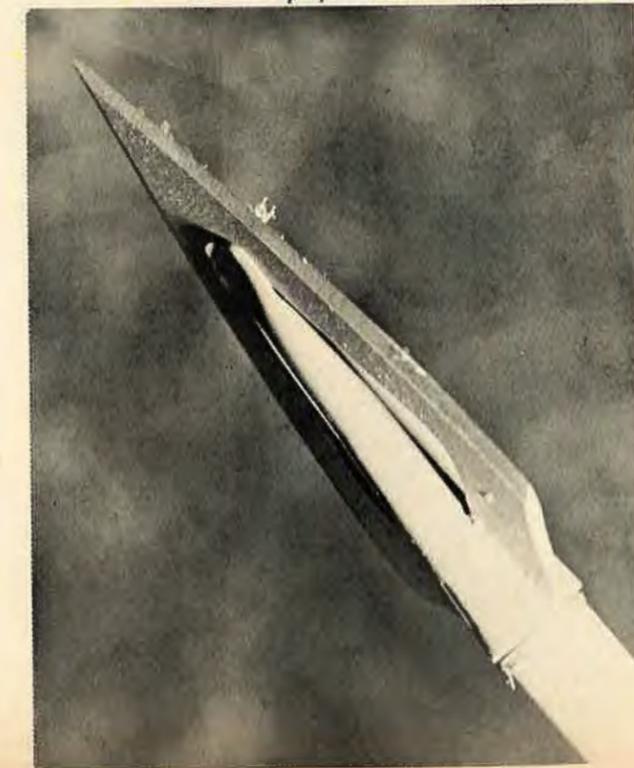
Once we got the dogs back on chains and into the vehicle, Wilson and the Gulf American hands picked

Continued on page 72

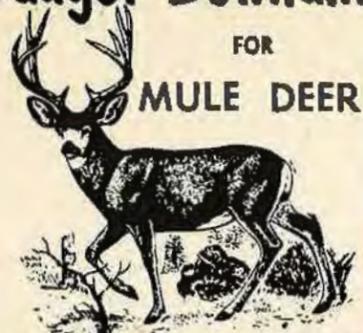


Ranch hand hogties the fallen boar for transport to ranch. Note the cutting equipment in the animal's crockery department.

Hunting broadheads came in for hot discussion during session following collection of the boar. Dick Wilson prefers this two-bladed broadhead.



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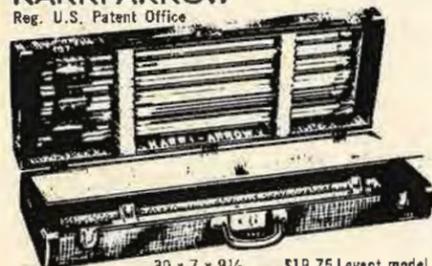
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Elott's bowhunting career began in South Dakota, forty-five years ago and since has ranged from the mountains of Iran to the tundra areas of Alaska. He has been an active member of the National Field Archery Association for over twenty-five years.

A world traveller during his

Army career, Colonel Elott was never without his archery association in twenty-two foreign countries. His knowledge and experience cover both modern and antique methods and tackle. A strong belief in the importance of equipment and keeping an open mind toward changes keep him busy experimenting with new ideas.

Although many of his pupils outshoot him, Colonel Elott is still a competitive participant in many local, regional and national tournaments, simply because he likes to shoot. He also manages to gather a wealth of information on up-to-date methods at these events.

BOW & ARROW feels with the addition of a strong feature for the reader interested in competitive and accurate shooting, another big step is being taken to present a complete magazine for all archers. Watch for it, starting in our next issue. ●

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TIOGA X21

This is the all New Shakespeare "60-incher" designed especially for dual duty (hunting and/or target) use. But for the hunter who prefers the gentle smoothness that is part and parcel of longer bow design, here's a model for hunting with all the earmarks of the bow type. Full working recurved limbs; and the flat-shot trajectory needed for casting heavier hunting arrows. Colorful handle is laminated of exotic Imbuaya, as are the nock overlays. Has shock-absorbing arrow rest, calf hair plate and dacron bow string. A great field test shot in Pennsylvania's deer hills got this bow its name.

No. X21—60", with S71-60" string. Draw weights: 35, 40, 45, and 50 at 28". Right or (LHX21) left hand. Regular price \$50.00
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MANITOU X20

BRAND NEW! 58-inch bow, named after a story book test area on North Manitou Island, in Lake Michigan, a whitetail paradise (and a source of top grade maple for Shakespeare bows). Sized so precisely between the power-packed hunter and the long limbed tournament-styled smoothie that the good archer will be truly amazed at its tremendous range for either hunting or target work. It's a marvel! Handsome, too, with handle laminated of Island Maple, as are the nock overlays. The appointments are recognized quality: A shock absorbing arrow rest, clipped calf hair plate and top grade dacron string make it the top notcher in its price class. Look it over.

No. X20—58", with No. S71-58" string. Draw weights: 35, 40, 45, 50 lbs. at 28". Right or (LHX20) left hand. Regular price \$45.00
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SUPER NECEDAH X30

"Nothing . . . no. There's nothing like the Necedah" echo the owners of our nifty No. X26 — and what a treat is in store for them when they see this year's surprise package in archery, the new No. X30 Super Necedah by Shakespeare. It's short (54"), fast (duoflex design) and as power-packed as any hunting bow ever produced. For its size, the new X30 is unbelievably smooth, with a release that is pure pleasure. Our secret; the new wide track limb, finished to perfection with glare-less black glass. The shooting style handle, semi-pistol grip, is a triple laminate of decorative laurel and zebra woods; the three-ply nock overlay is also laurel and zebra wood. For super shooting — go to the new Super Necedah!

No. X30—54", with S-71-54" string. Draw weights: 35, 40, 45, 50, 55 lbs. at 28". Right or (No. LHX30) left hand. Regular price \$59.50
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YUKON X24

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No. X24—60", with S71-60" string. Draw weights: 25, 30, 35, 40, 45, 50 lbs. at 28". Right or (LHX24) left hand. Regular price \$30.00
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TECH TALK

Continued from page 8

a person shoot much closer than one-eighth-inch of center, as it requires some bow thickness to force the arrow to remain tight against the side of the bow for the first little bit of flight, thus eliminating float of the arrow away from the bow on a shot where one failed to obtain exactly the same release or grip.

(You can try shooting bare, unfletched shafts at about fifteen feet or so, adjusting your rest to give the straightest into the target, so the arrow is at the least angle when shot.)

BACK QUIVER?

I have been bowhunting for about a year with a bow quiver attached. This works fine for deer hunting, but for summer roving and ground hog hunting, it doesn't hold enough arrows.

I have decided to buy a back quiver and would like an opinion on whether to get a centerback or a shoulder quiver. My main considerations are maneuverability in brush — also protection of my arrows in the brush — and the ability to select the wanted arrow.

Lyle Real,
Bucyrus, Ohio

(This is a case of to each his own, but we'd recommend the centerback

style. One can reach the arrows more easily and your head will tend to hide the feathers from possible game and also shield them from the brush. You can see the arrow, but you'll soon learn to know which shaft is in each compartment and reach instinctively without having to look.)

TEMPERATURE CHANGES

I have been reading your bow tests and see that you test all archery tackle in the south or where it is warmer. Why? Much of the archery tackle would act differently in the cold; aluminum arrows will fly differently, some bows lose cast in the cold, while others gain or stay the same. Some fiberglass arrows shatter, when they hit something hard in the cold, and some glues or cements will not hold as well in low temperatures.

I would like to see some of today's tackle tested in the cold country.

Robert D. Maack,
Foxhome, Minnesota

(You haven't read all of our bow tests obviously. Joe Higgins tests bows in Upstate New York, where the temperatures drop to nippy levels. Jim Dougherty has done a number of tests in the area of Mammoth Lakes, California, at temperatures of twenty-

five below zero, and some of Bob Learn's have taken place at respectable—and cold—altitudes in Arizona.

(Surprisingly, most of the major brands of bows seem to work fine in the cold, provided they are at outdoor temperature, but we cannot advise bringing the equipment into a warm house. For fiberglass arrows that will hold up in the cold, try those made from epoxe plastic. They do not seem to be affected.)

OUT OF PRINT

Where can I find a copy of Payne-Gallway's *The Crossbow*, and the cost of same or any similar book on crossbows? What is the address of the national organization of crossbowmen, and is there any monthly or periodic publication concerning crossbows?

Gordon Hollrah,
Warroad, Minnesota

(The book in question has been out of print for many years, and the only possible answer would be to contact a dealer, who locates out-of-print books. A number of them are listed in the *Saturday Review of Literature*.

(There are two crossbow associations. One is the American Crossbow Association, Huntsville, Arkansas, and the National Crossbow Association,

10 Arlington Road, Cranford, New Jersey. Either of these should be able to give you full information.)

SPLIT SHAFT

I am shooting a sixty-pound hunting bow. This bow is used all year long, as I feel it will help me shoot better for the coming deer season.

So far, I have one problem: using Micro-Flite #8 shafts with 125-grain field points, I find that the point often is pushing the adapter back and resulting in a cracked or split shaft. I realize the force behind the how is great, but is there some way I might be able to correct this? I shoot the fiberglass shafts, because I will hunt with them.

Charles A. Dussmann, Jr.,
Ingleside, Illinois

(This sounds like a poor glue bond, even considering the sixty-pound bow. When gluing, it is necessary to scratch out the inside of the shaft a bit and to be sure the point is free of fingerprint grease, oil, et al. The glue must be mixed fresh and it can be cured, if using Point Fast cement, by holding in boiling water for about fifteen minutes.)

WHAT SIGHT?

On page 26 of the Nov./Dec. '67 issue is a picture of Jim Pickering. Although it is mentioned that he is shooting a standard HC-30 Bear bow with a double sight, the sight in the picture looks very much like a Comanche Longshot sight. Am I wrong or is the Bear HC-30 equipped with a built-in sight?

Robert E. Duguay,
Winnipeg, Man., Canada

(You are right: Pickering does shoot the Comanche Longshot. The Bear HC-30 can be obtained with their built-in sight, but we don't know of any good tournament archer who uses any sight just the way it comes. All have ideas of their own as to what is best and no two seems to agree. As a result, they often modify sights to meet their own needs.)

DEER ARROWS

What kind of arrows are good for hunting deer?

Robert Gibson,
Fremont, Nebraska

(Well, you can't get much more basic than that. The most successful archery deer hunters recommend a bow weight of not less than forty-five pounds and the use of arrows fitted with the sharpest possible broadheads. You can use arrows made of wood, fiberglass or aluminum. The wood will be the least expensive, but these shafts are subject to breakage and normally are not as accurate as those of other materials. Fiberglass affords strength and accuracy, while the most accurate will be those of aluminum.)

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A Dream Come True

Fred Bear Has Spent Years
Assembling Material For An
Archery Museum. Now It's
Open To The Public!

IF you drive a mile and a half west of the town of Grayling, Michigan, you will come suddenly upon a life-size replica of an Alaskan brown bear. Over the bear is a large sign, *Bear Mt.* This is the portal to Grayling's fine all-season family recreation area.

If you turn in and drive a couple of hundred yards, past a woods-bordered pond, you will find yourself in front of a most imposing structure. Lettering by the big glass entry says simply, *Fred Bear Museum.* And therein lies a tale.

The building is about 165 feet long and forty-five feet wide. The entrance is flanked by two authentic totem poles of cedar, carved especially for this use in Alaska. Topping concrete pedestals on either side are life-size replicas of a polar bear and a Kodiak bear, which are sculptured in fiberglass. The walls of the building are fifteen feet high to the lower roof line and surfaced with colored aggregate set in epoxy. Huge beams of laminated wood, two feet through at the thickest point, support the roof of large cedar shakes. The lines are simple, yet strikingly beautiful.

This building represents the final fulfillment of a dream begun many years ago by Fred Bear.

Upon entering the building, you will find approximately one-third of the space occupied by a combination archery pro shop and a gift shop. The pro shop contains one of the largest and most complete displays of all types of a modern archery equipment to be found anywhere. The gift shop too is special; its stock, for the most part, is related with archery, Indians, Eskimos and life in the outdoors. It runs the gamut from authentic Indian chipped flint arrow points selling for fifty cents to Alaskan fur parkas selling for a hundred dollars or more. Lighted glass showcases hold a colorful assortment of Southwestern Indian turquoise and silver jewelry, Eskimo ivory work, Alaskan nugget gold and jade jewelry, moccasins, native pottery, seal skin purses and wallets.

Having looked over the gift shop, as do many visitors when they first enter, you can enter the museum. In doing so you are immediately transported to another world -- the world of the hunter and nature-lover. The walls are lined with large and small game animals from three continents, many of record size. You will see everything from pine marten and bobcat to giant moose, caribou, elk, mountain sheep and grizzlies -- all taken with the bow and arrow.

One complete wall is devoted to Africa. The centerpiece is the head of a huge four-ton bull elephant brought down by Fred Bear with one arrow in Mozambique. A few of the other species in this group

This trophy was taken by Fred Bear fifty miles from the nearest land on the arctic ice pack. At bottom is a hair seal, the bear's chief diet.



This four-ton bull elephant was taken by Fred Bear in Mozambique with only one arrow. It centers African display.

are eland, kudu, sable, impalla, warthog, topi, water-buck, reedbuck, oribi, nyalla, wildebeest, hartebeest and the fierce Cape buffalo.

A large center floor space is devoted to full animal mounts in natural poses, ranging from an African lion in deadly combat with a Cape buffalo, through Bengal tiger, Yukon wolves, Alaskan moose and the snowy arctic fox, and Bear's trophy Kodiak and polar bear mounts are prominently displayed.

But animal mounts are not all the museum contains. Housed here is undoubtedly the finest individual collection of archery artifacts in existence. To name just a few of the hundreds of interesting items, there are all types, sizes and areas of our country represented in ancient Indian tools, weapons, decorations and art; from Eskimo to Hopi, from Iroquois to Yahi, relics of the Stone Age in the Japanese Islands, bronze bodkin arrow points taken from the remains of Persian warriors killed in the Battle of Marathon in 490 B.C. There is archery equipment from the Malay Archipelago and the South Pacific islands; from many African tribes, including pygmies of the Belgian Congo; from the arctic Eskimos; from ancient Tibet, Mongolia, China, Persia and Arabia. The world-wide collection of bows and arrows of all types, designs and stages of antiquity, is most interesting to casual tourist and archery enthusiast alike; to say nothing of such extremely rare and unheard-of specimens as the prairie pike. Alaskan furbearing trout and the Mich-

igan carnivorous tree bear.

And therein lies a story in itself. Many years ago, one Spike Mac Neven, then proprietor of Grayling's liquid refreshment emporium known as *Spike's Keg O'Nails*, possessed two extremely unusual wall mounts. One, the prairie pike, he insisted was a scientific oddity; the other, the beer bottle buck, was the result of an experience unique in the annals of hunting.

Actually a taxidermist's nightmare, the legend was that the beer bottle buck was the result of a five-card stud, low hole card wild, poker game. A group of rugged Michigan deer hunters were sitting in their camp enjoying the game, when a buck wandered by. A beer bottle was thrown through a window by one of the hunters, caught the buck in the neck and dropped him on the spot.

The prairie pike (*piscatorious terra*) was — again according to legend, with little similarity to truth — the only true fur-bearing fish known in Michigan. Although its natural habitat was the Au Sable River, it would not hesitate to sneak ashore to avoid cunning fishermen. Once on land, it was impossible to track down, for its feet faced in opposite directions. One could not tell whether it was coming or going.

Then came the great fire of 1948, which destroyed the tavern. Spike Mac Neven, at great risk to life and limb, is said to have rescued the mounts from the holocaust personally, giving them to Fred Bear for safekeeping. Just where truth departs and the

taxidermist's skill begins never has been clearly defined, but these seemingly rare specimens are in the Fred Bear Museum and provide much amusement for visitors.

Since first being opened to the public late in 1967, there have been numerous additions to the museum, including animal mounts, artifacts and weaponry. As time goes on it will, like all museums, continue to expand, so that every year there will be new exhibits to see. The building is purposely constructed to make the addition of a wing, or wings, easily accomplished as necessary, according to curator Chuck Kroll.

Another important aspect of the building is a second floor over the central office section. The main part of this upstairs space is earmarked for a public theatre. Later this year it will be fitted with automatic projectors and some seventy people at a time can be comfortably seated to enjoy Fred Bear's world famous bowhunting films in full sound and color. This area, like the entire ground floor, is completely carpeted.

The museum will be open year 'round, so if you find yourself in the Grayling area — winter or summer — include a stop on your agenda.

The other room upstairs, adjoining the theatre and overlooking the entrance, is Fred Bear's personal retreat. So if you drive up to the museum and see a lanky figure gazing from the large upstairs window, you'll be looking at the man who dreamed of this museum, and made the dream a reality. ●



Another archery trophy, taken on a shikar in India, is Bengal tiger, which glares angrily at visitors.

This impressive mount shows two of Bear's favorite trophies, an African lion and the Cape Buffalo in combat.

The interior of the museum is loaded with the trophies from around the world, which Bear has spent his life collecting in order to equip the place.



This real people stopper at the Bear Museum is the so-called prairie pike, a taxidermist's practical joke, but it creates a good deal of discussion.



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POCKET GUIDE TO ARCHER by Howard T. Sigler. This volume is designed to steer the beginning archer to the right equipment, to teach him the correct stance, techniques of practice, sighting and shooting in field and target. \$2.95

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

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THE ARCHER'S BIBLE by Fred Bear. This internationally known archer offers here a complete guide to the sport with over 150 illustrations of hunting and target equipment, with firm advice on where and how to use it. \$1.95



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

GOOD HUNTING by James L. Clark

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



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

THE COMPLETE BOOK OF ARCHERY by Robert Gannon.

In early chapters, the author discusses the basic equipment needed by the beginner as well as that favored by the experienced archer. As the book progresses, information becomes increasingly aimed toward the individual progressing in form, competence, et al. Sections on field and target archery, tournaments, strings and stringing, and useful tips to avoid shooting problems. \$4.95.



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This book takes the reader through a full year in a deer's life, affording insight for the hunter as to what he must look for when out to get his deer. Written from the standpoint of the naturalist who knows his subject well, there are countless pages concerning the habits of deer. Of great value to the neophyte hunter — even the veteran — who seeks more knowledge about game. \$4.95.



LETTERS

Continued from page 55

the smartest bowhunter in all the world.

Joking aside, your people have helped me to get my first mule deer. He weighed 233 pounds on the state-checked scales at a produce store here. His antler spread was twenty-five inches. This may not sound large to you, but it was great for me.

Zane Frazey,
Hoxie, Kansas

(Let's face it: with the odds against bowhunter success, it's great for anyone!)

DISSENTER

Having recently renewed my interest in bowhunting, I am an avid reader of **BOW & ARROW** and enjoy the articles very much. However, in the March/April 67 issue, there was an article that upset me. Actually, I shouldn't say the article upset me; just a portion of it. This article was titled, *Volcanoland Bowhunting*, by Frank Hulce.

The portion that really got to me was where Hulce was returning to the jeep after killing a sheep. On the way, he spots another band and decides to attempt a stalk. The sheep sensed something was not right and gathered in a group. It was getting dark, he was "sixty yards or more away," so he decided to try a "flock shot." I can't imagine a sportsman doing something of this nature, then having the gall to tell it.

In my opinion, hunting with a bow is a most sporting way to hunt, but even under ideal conditions, the placement of an arrow in a vital area is not easy. Unless I missed some part of my boyhood training, game should be killed as quick and humanely as possible, but this is beyond my comprehension.

Arlie O. Hubbard, Jr.,
Charleston, W. Va.

WHERE'S HOWARD?

I have been reading your magazine since last November and I must say that it is the best. I particularly enjoy the articles on hunting and the numerous advertisements of fine equipment.

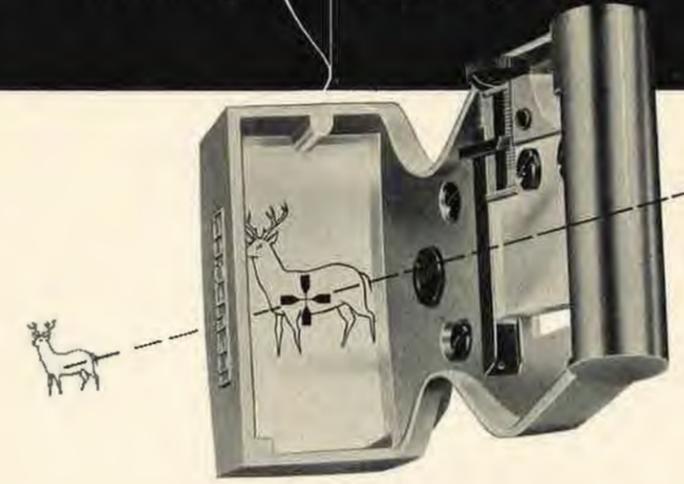
Recently I read a book by Howard Hill and, to judge by some of the shots he has made, he was either fantastically good or fantastically lucky; perhaps both. Could you please tell me what has become of him, as one seldom hears his name any more?

Gary Busser,
Calgary, Alberta,
Canada

(First off, having seen Howard Hill shoot on numerous occasions, he was not lucky; he was good. To the best of our knowledge, he now is living in retirement in Alabama.)

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CLUB CALL!

OHIO ANNUAL

The Ohio Archers, Incorporated, with a membership of 2000, will hold their annual championship target tournament July 13-14 at North American Rockwell recreation park in Columbus.

Starting time for the first day will be 9 a.m., and an hour later on Sunday, the second day. There will be a number of precision archery exhibitions, according to Bob Armstrong, director of the organization. He says there will be ample parking for visitors as well as participants with camping space provided for archers.

ENGLISH IMPORT

As usual, from the swinging Silverado Archery Club of Napa, California, comes a jam packed news release. How nice if all the archery clubs would get their publicity chairmen on the ball. They mentioned having a friendly little balloon tic-tac-toe competition with the Napa Valley Bow Hunters and included an item they had purloined from an English archery magazine.

It seems two Santa Cruz archers were hunting when they saw, from their vantage point in a tree, a thief trying to dodge into the hunting lodge. The two men waited until he came out and greeted him with "drawn bows and wicked looking hunting arrows. He was held at arrow point until deputy sheriffs arrived." Probably turned out to be a California two-legged vamoose.

FREE INSTRUCTION

In addition to hosting state and city archery tournaments and an International Silver Star Tournament, the Rancho Encino Archers of California are offering free instruction on each of the first four Saturdays of the month at their home range at Burbank and Balboa Boulevard, Encino, from 10 a.m. to noon.

NEW WHITE CHIEF

The Kearns Bowhunters Association in Salt Lake City, Utah, have picked Edward White as their new leader. The group is affiliated with the Utah Bowmen's Association, Incorporated, which covers bowhunting, field archery and target archery.

During an archery golf shoot sponsored by the Datus and the Kearns Bowhunters, over \$250 was earned, the proceeds going to the Utah Wildlife Federation.

The Kearns Bowhunters Association now has openings for membership and anyone in the Salt Lake City area interested in archery and in joining the group may call 299-3782.



FAMILY ROUND

A family of archers won three trophies at the Bowmen State Archery Shoot held at Fort Rucker, Alabama, a four-star-rated range. Mrs. Anita Yates (left), of Birmingham won the women's bare bow Class A Division with a score of 458 out of 840. Her two sons took home two trophies in the youth division. Wade Yates won the Youth Division Class B with 392 out of 840 and Ricky Yates took first place in the Youth Freestyle Division with 262.

Seventy-eight archers from throughout Alabama competed in the events which included two rounds—one of twenty-eight targets using the regular bullseye and the hunter's round of fourteen animal targets.

The two-day event was capped by the presentation of trophies by Colonel Gerald Shea (right), director of the Department of Rotary Wing Training at the Army Aviation School and president of the Fort Rucker Archery Club.

Mrs. Betty Dawson, center, of Mobile, won the women's freestyle Class A Division with a score of 571 out of 840.

FILMS AVAILABLE

Two films produced by Easton Aluminum are available for club showings without charge. Running twenty minutes

is *Straight As An Arrow*, which shows all phases of archery with emphasis on exactly what happens during an arrow's flight. This one was produced by the Easton menage at their plant in Van Nuys, California.

The other film was shot in Sweden and involves the 1965 FITA tournament. Both films are in color with sound. To obtain them, simply write to James D. Easton, Incorporated (Dept. BA), 15137 Califa Street, Van Nuys, California.

MEDAL OF MERIT

Clarence Love of Denver, Colorado, has been awarded the Medal of Merit of the National Field Archery Association.

He was introduced to archery as a Boy Scout and, from his early entry into the sport in 1928, became interested in helping groups to build their own equipment, assisting also in school development programs. This interest led to the formation of the Fleetwood Archery Company.

In 1930, Love and his wife, Irma, joined the only archery club in Denver and promoted target archery, persuading the city to provide a target range at Sloans Lake Park. In 1933, the Rocky Mountain Archery Association was formed and he acted as president and delegate to this association over many years. He was a leader in founding the Colorado State Archery Association and served as president several times. He has served as an NFAA field governor and is presently on the board of directors, having been a member for more than twenty years. He has been a member of the National Archery Association for more than three decades and is a charter member of the Professional Archers Association.

During the current decade, the Denver area was without adequate land for field archery. Love established Fleetwood Acres, a complex of four twenty-eight-target ranges. In recent years, he established an indoor archery range.



ROBIN HOOD TYPE

Corporal Mike Skipton of the Canadian Forces Base at Greenwood, Nova Scotia, split one arrow with another. Then fifteen minutes later, he repeated the feat, but it wasn't intentional in either instance.

He was using his new arrows — at \$2 each — for the first time. He is chairman of the Greenwood Archery Club, which has enjoyed rapid growth and now is the largest in Nova Scotia.

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FLORIDA BOAR
Continued from page 59

the way across the terrain until near enough to try the dogs on a look-see maneuver to find out if old ugly had stayed where I last glassed him going in. He had!

But he didn't stay put once he heard and saw the dogs and our assorted band moving in his direction. This is somewhat rare; usually they prefer to fight the dogs in among the thick, often snake-inhabited tropical growths. Spots such as this make it a bit sticky for unseasoned hunters to move about, or for that matter, see the charge in time to act with any degree of coolness.

With the speed that comes of brute anger, the boar tore out of the opposite side of the cover, just ahead of the two dogs, one of which already was slashed on the face and muzzle. In about one hundred yards the boar turned fast and took a seven-inch gash in the side of Careless before the dog could change his direction to avoid the sudden encounter.

That is when I came to realize Wilson must have been a sprinter long before he got hot with the bow. He moved out like he had his own private boar snapping at his shirt-tail — in minutes he closed the range and started moving around, looking for a safe shooting angle that would protect the dogs from a misplaced broadhead. One of the ranch hands, Roger Wilson, grabbed one dog, then called in the second close enough for me to collar. Wilson managed to figure out the boars intended direction, each time, and gradually found himself closer and closer to an infuriated animal that was fast growing to hate him.

Wilson may have been breathing hard, but he proved to be the kind of guy who knows what he is about and how he intends getting it done. As the boar let out another warning series of grunts and throaty growls, Wilson quickly place his feet, came out of his crouched stalking stance and zeroed in with one of his rifled arrows. That was all it took. With the broadhead angled in deep just behind the right shoulder, damage was extensive and near final.

The razorbacks and other assorted hogs have mighty thick hide but nothing in the world to stop the penetration of a shaft unleashed at close range from a bow pulling sixty pounds. Wilson, by the way, usually prefers a four-bladed head over the two. Speaking of it later, he stated that archers could argue with him until they were blue in the face concerning this business of four blades as opposed to two. Many, he said, still insist penetration is best with the double-edge, but years of research and big game hunting have proved to Wilson and others this is not true in actual field use. The deadly four-sided broadhead is the only type he will use on really tough-to-collect heads, and he has good reason to know the answers.

On this particular hunt in Florida, during which he collected several species of game, and since it was primarily a testing session for equipment and various accessories, he used at various times, both types of broadheads in order to judge and compare performance.

The boar weighed in at a solid 258 pounds back at the River Ranch stables. Not bad for a quick afternoon hunt, made principally to get the lay of the land.

I talked to Quick-Richard today. That vinyl bow case is packed again — this time it's on its way to the scene of some of the best jaguar and tapir hunting available. ●

TACKLE TIPS
Continued from page 12

In retrospect, I still retain mixed feelings about this sight business. I found that use of the sight is an entirely unnatural thing to the barebow hunter, especially under the conditions of the hunt. The target you practiced on is no longer in a perfectly stationary position oriented at a ninety-degree angle to your line of sight. It doesn't always stand out in the open presenting clear definition of its outline. It no longer remains a constant size of specific dimensions. The single eye bit cuts down awareness of the peculiarities of a given situation, with limited anticipation of what the deer is going to do. In most instances I think an instinctive archer can estimate the range and set the trajectory as well as the sight does. In poor light and on a running shot, I'll take the instinctive method any day.

There are times, however, when due to certain conditions of the surrounding landscape, a barebow archer finds himself with a loss of confidence in his judgment of the distance. In these cases the sight becomes a great aid.

Hunting sights are generally of the multiple pin type or the V type. The multiple pins can be set in a number of ways. One use is to set a pin for each of several nominal yardages — 10, 20, 30, etc. This gives no range-finding value, but if your range estimating is good, using the right pin should get a good hit with no need to make any physical sight adjustments.

In a second multiple pin method which will have range-finding capabilities, you set one pin for a certain yardage — say ten yards — and at that range, set a second pin so that a twelve-inch target just fills the space vertically between the pins. An average deer has a vertical thickness in the chest area of approximately twelve inches. If the deer's chest area just fills the space the range is ten yards, in which case you bring the ten-yard pin to bear on the "spot". If it fills one-half the space the range is twenty yards, one-third of the space, thirty yards, etc. Other pins can be set for a second range-finder spacing at a greater distance, or for sighting at other nominal ranges. Aiming with this setup is really a two-step operation — first finding the range with the space gap, and then bringing the proper pin (or space between pins) for that range to bear on the target. The multiple pin sight requires some guesswork for distances between the set ranges.

The V, or modified V, sight does its measuring in a horizontal plane. This type of sight is predicated on the principle that the angle established by line of sight from eye to left edge of target and from eye to right edge of target decreases as distance to target increases. The sight intercepts and measures these sight lines and gives you proper elevation for the range automatically as the bow is raised and the target becomes "squared". Gauging by the height thickness of the deer's chest area, you visualize a width on the deer equal to the height and elevate until you get a "square of hair" in the V. This sight is advantageous in the respect that aiming is a one-step operation — simply elevate until you get a "square of hair" and release. Its range-finding capabilities are continuous. It is effective for any distance within its limits. However, it is not truly accurate for several reasons. At the longer ranges, the left and right parameters of the sight are so close to being parallel that elevating to show a perfect square becomes a matter of fine judgment. Furthermore, for production and simplicity purposes, the variable facets involved — distance from eye to sight, trajectory as affected by weight or cast of bow and length of draw — are engineered for the average archer rather than to the peculiarities of a particular bowhunter.

An archer who is willing to spend a little time on the project can develop a V sight for deer engineered to his own particular variables. This involves the use of two cardboard gauges, one for line of sight heights for the various nominal ranges and one for view widths at these ranges. The points thus established are plotted on a transparent plastic blank (slotted for mounting with two small screws) and the points connected with a faired line using a french curve and a sharp pointed instrument like an icepick. The scribed lines are filled with paint for better visibility. ●



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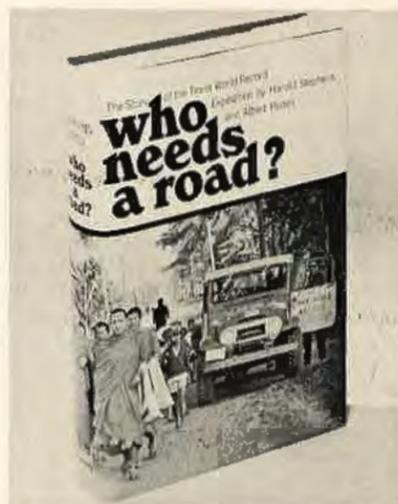
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