

The Necedah (foreground) and the Super Necedah (background) are available in draw weights of 40, 45, 50 and 55 pounds, both in righthand and lefthand models. For a complete catalog write: Shakespeare Archery, P.O. Box 246 Dept. AW, Columbia, South Carolina 29202.

#### VOLUME 24, NUMBER 5 AUGUST/SEPTEMBER 1975

#### SPECIAL FEATURES

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- **New AMO Archery Range**
- SACO Speed Round
- 1974 Bowhunter Deer Report
- What Happens When Deer Are Overcrowded
- Bow Report: Herter's Compound

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- Names . . . Notes . . . News
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- On The Market

COVER PHOTO: Human skin tones flash like beacons in the woods; good camouflage can make you nearly invisible. To see the benefits of camouflage, and pick up a host of good tips, see the camo story beginning on page 38. Archery World photo.

> The bow is a primitive instrument . . . and a historical instrument.

> > **ATTACH**

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ARCHERY WORLD

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The official publication of the National Archery Association

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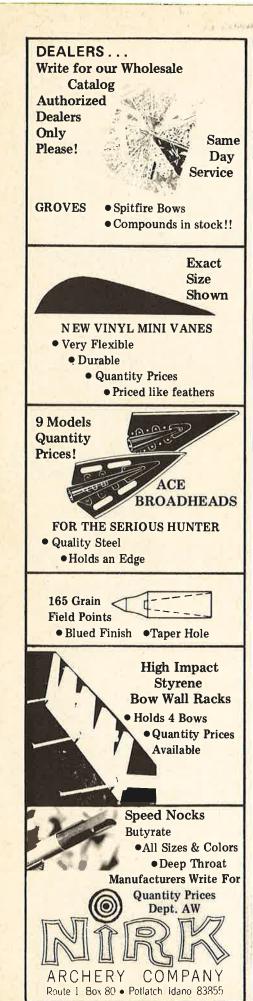
# COMPOUND

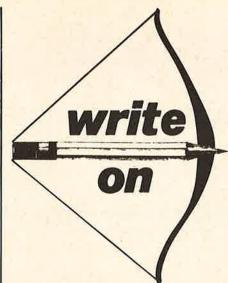
**PRECISION** WING BEAR **JENNINGS** ALLEN

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

#### BOW TEST VALUE

Thanks for the technical bow test articles. I agree it is as important to us to test bows as automobiles, with specific facts which would help us select a bow without having to just eyeball it and resort to heresay. And I hope the manufacturers will print full instructions and specifications for bow setup; I recently bought a bow that seemed to have too long a string, but there were no brace height instructions. I know that brace height can vary with personal preference, but it helps to know a good beginning point.

Gene Dillon Fontanelle, Iowa

#### TO BUILD A BOW

I would like to know of some place I might obtain plans and/or books about making a wooden bow.

Ronald Drews Detroit, Mich.

\* Write to the Kittredge Bow Hut, P.O. Box 598, Rt. 1, Mammoth, Cal. 93546. The Kittredge catalog, which costs 50 cents, has a book called "How To Make A Bow." You might also write to Earl Ullrich, P.O. Box 862, Roseburg, Oregon 97470. He sells yew wood and may have bow plans. Old Master Crafters, 130 Lebaron St., Waukegan, Ill. 60085, sells laminated woods and could probably be helpful.

#### TARGET ARCHERY GUIDELINES

I'm a bowhunter, but am interested in target shooting as a hobby. I would like to use some guidelines close to those of competitive archery, such as shooting distances and number of arrows shot.

> Ron Gordon Blairstown, N.J.

\* Since you're a bowhunter, you'll probably be most interested in outdoor rounds. The American Round is 40-50-60 yards, with 60 arrows constituting a full round. The FITA Round is 90-70-50-30 meters for men, with 144 arrows constituting a full round. The standard field round has 28 targets of animal and circular design to simulate hunting. Four arrows are shot per target and distances range from just a few yards to around 80 yards.

To get full details of National Archery Association rounds, send \$3 to the Archery World Bookshelf, 534 N. Broadway, Milwaukee, Wis. 53202 for a copy of the 4th Edition of the NAA Archer's Handbook.

You can get NFAA field archery rounds by writing to the National Field Archery Association, Rt. 2, Box 514, Redlands, Cal. 92373.

#### BOW TEST FORMULAE

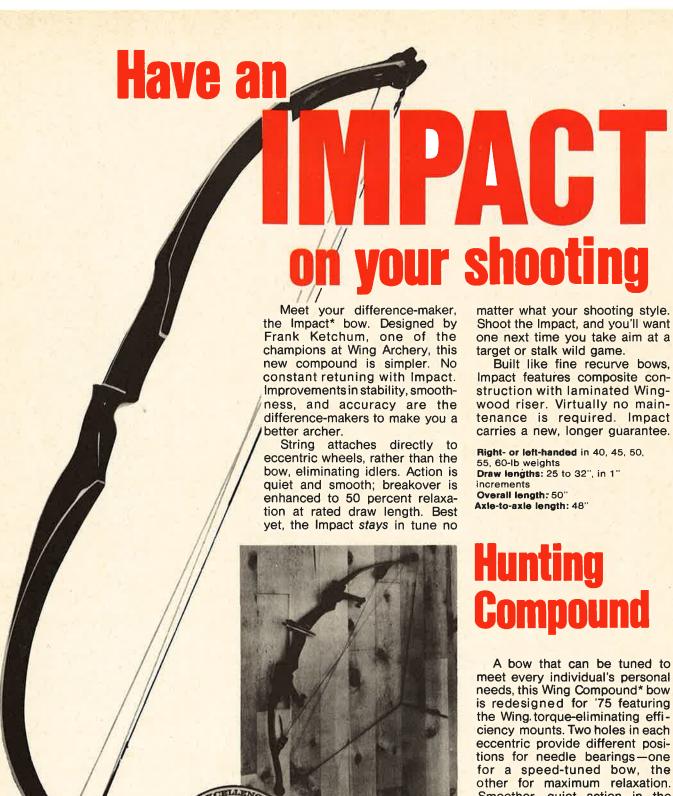
Is it possible to get a copy of the various formulae used in computing and arriving at the conclusions printed in the bow tests you publish? This is necessary so I may arrive at the correct evaluation of a given model.

Harold Durff Chico, Cal.

\* We'll have a detailed explanation of the bow report process, with formulae and sample calculations, in our October/November issue. (continued on page 8)



Archery World



A bow that can be tuned to meet every individual's personal needs, this Wing Compound\* bow is redesigned for '75 featuring the Wing torque-eliminating efficiency mounts. Two holes in each eccentric provide different positions for needle bearings-one for a speed-tuned bow, the other for maximum relaxation. Smoother, quiet action in the compound movement is important when you're in the field. The Wing Hunting Compound delivers faster arrow speeds with greater penetration. Try it once, and you'll want it on your next hunt.

Available in black riser and

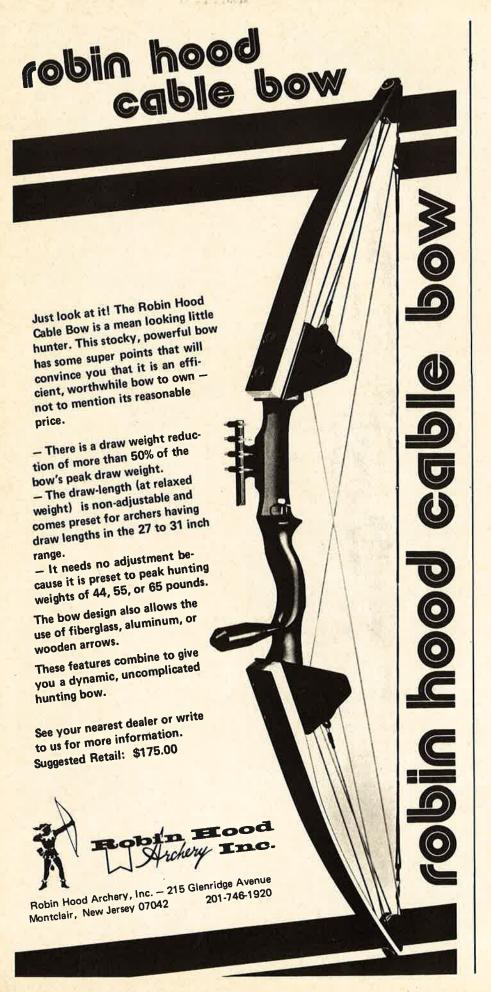
Limb weights: 35-50 lb, 45-60 lb, 55-70 lb Draw length: 24 to 32" Axle-to-axle length: 48

Route 1, Box 1930, Jacksonville, Texas 75766

Wing Archery

WG-75-2

\*Licensed under Allen Pat. #3486495



WRITE ON (continued from page 6)

#### SLINGSHOT COLLECTOR

I have been an avid archer for 26 years and a slingshot shooter for nine years. Since I shoot a bow and a slingshot almost the same way, it seems like most archers would enjoy shooting a slingshot. I collect slingshots and have more than 130 different ones.

I would like to hear from other archers who are also interested in sling-shots. I am always looking for new, old and hand-made slingshots to add to my collection. Boler, Milligan, Special and Tinker's Deer Slayer are just a few of the ones I am looking for.

Kent Shepard 313 S. Miller Roulon, Il. 61483

#### WHY NO COMPOUND IN GEORGIA?

Georgia bowhunters have a problem—we cannot hunt with compound bows. As I understand it, Georgia is about the last state in the Union that prohibits hunting with a compound. Why?

It is my concern because I love to hunt, especially bowhunt. I would love to hunt with a compound, and I believe many other people in Georgia would,

How can all of us Georgia bowhunters get organized and change the law? Maybe you can help us. Maybe some of the archery equipment companies could lobby a little for us. Any help would be appreciated.

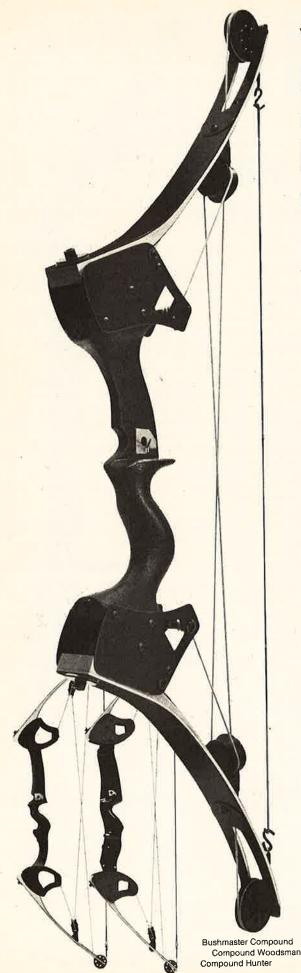
I don't own a compound, but I would if I could hunt with it.

Bob Welch Member, Metro Atlanta Archers Unlimited Lawrenceville, Georgia

\* Georgia is, indeed, the only state which prohibits the use of the compound bow in hunting. Vermont legalized the bow a couple of months ago.

We contacted Georgia Fish and Game personnel on this subject. Their reply is that they feel that bowhunting is done with a primitive weapon, and that any addition to the basic recurve bow takes it out of the realm of the primitive weapon integrity.

Maybe some of the information relative to success ratios in states where the compound is legal [see the story on page 22] — showing that success ratios are still way down in the low percentages - will be helpful. You might also check back through recent issues of Archery World and note the relative speeds of hunting weight arrows from recurves and compounds. The compound's main benefit in hunting is the increased stored energy and the decreased holding weight. These two conditions together should allow the hunter to aim better and get better penetration. But you still have to know how to shoot the thing, and you have to hit what you're aiming at. It doesn't really matter what bow was used if you missed.



# you'll like the dynamite delivery of a browning compound.

A Browning Compound Bow can increase your arrow's speed up to 50%, contrasted to a standard recurve bow of equal draw weight. Your arrow has a flatter trajectory. Your game is less likely to "jump the bowstring." And your arrow arrives with more energy.

What else can a Browning Compound Bow do for your bowhunting? It gives you the big advantage of a steadier hold because the draw weight is decreased 18% to 25% at full draw. You can hold easier and aim longer without as much wavering.

All three Browning Compounds are adjustable in draw weight from 45 to 60 pounds. All three have new offset side plates that reduce cable friction for even more arrow speed. And you can choose from four pre-set draw lengths of 28 to 31 inches.

#### Bushmaster

This little dynamite bow is only 38½" from tip to tip. So it's very easy to maneuver in heavy brush. But it has as much punch as our longer compounds. The lightweight cast magnesium handle riser has a durable vinyl finish and an overdraw cutout so you can shoot lighter, shorter arrows and get even more speed. The Bushmaster is equipped with two ¼ x 28 insert bushings for quivers and accessories. And it's pre-drilled for hunting sights and Berger buttons. \$257.95\*

#### Hunter

This is the Bushmaster's big brother. It has a cast magnesium handle riser with the same finish and an overdraw cutout. Three accessory insert bushings for quivers and stabilizers. And it's pre-drilled for hunting sights and Berger buttons. \$257.95\*

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This is our lowest priced compound. But we didn't leave out Browning performance. Its laminated hardwood handle riser has a black, bakedon finish. It's equipped with three accessory insert bushings for quivers and stabilizers. And like the other Browning Compounds, it's built with rugged stainless steel axles and gears for years of rustless wear. \$197.95\*

1975 CATALOG: 112 full-color pages on all the great Browning Hunting Bows & Arrows, Guns and other Sports Equipment. Plus 13 pages of expert Hunting, Archery and Fishing Tips. Please send \$1.00 to Browning, Dept. A93, Morgan, Utah 84050. \*suggested retail price Copyright ⊗ Browning 1975



Manufactured Under Allen's Patent #3,486



#### A Gruesome Sight

YOU'LL PROBABLY SEE the information contained in the story "What Happens When Deer Are Overcrowded," pages 28-29 of this issue, in quite a few publications. That is as it should be, for this information should be read by everyone who has any concern at all about the welfare of our wild animal populations.

It is a tragic example of what happens when the true objective - healthy wild animal populations in any given area - is subjugated by needless arguments and court battles over the issue of sport hunting. It is slightly ironic that the Great Swamp National Wildlife Refuge, the subject and site of this hassle, was originally created — along with all other national wildlife refuges — by the purchase of land with monies contributed by hunters and fishermen through license purchases and through tax monies paid on the purchase of their sporting equipment. The total, dating back into the 1920's, is somewhere over \$2.5 billion. Much of this money also has helped create and improve game and non-game wildlife habitat in non-refuge areas throughout the states. As one example of the success of these efforts, the U.S. Biological Survey estimated the U.S. whitetail population at about 500,000 in 1900. Now it is around 16 million, with more than 2.1 million deer being legally harvested each year.

But some areas, particularly in refuges, are now suffering from too much of a good thing. Deer will breed and eat themselves out of house and home. The photos on page 28 show that. The result is diseased deer, starved deer and habitat overbrowsed to such an extent it will take years to recover.

'A deer herd in proper population balance with its habitat won't be able to do that.

Thus, the issue — if there should be any issue at all — should be "How can we best maintain proper wildlife populations in a given habitat for the greatest good of the wildlife and the optimum recreation of our people?" If some people just want to look at and photograph deer, fine. But they shouldn't need to

be subjected to the sights of diseased and starving animals. And since some 20 million people in the U.S. choose to hunt as one of their prime recreations, that too should be fine. Everyone should have the freedom to choose his preferred recreation when it has been proven time and again that the recreation chosen does no harm or actually benefits everything involved - man and wildlife.

Yet, the anti-hunters claimed a deer hunt on the Great Swamp refuge would cause "irreparable loss of animal life" and be "unnecessarily cruel to the deer." I fail to see how anything could be more cruel than disease and starvation. And when a wildlife population is kept in balance with its habitat, through the means of sport hunting it causes the renewed vigor of animal life, not irreparable loss of animal life. Continued healthy population control is, indeed, a life and death matter. The death of some will ensure the healthiness and vigor of the remaining population; it will also ensure the health and vigor of the habitat.

In a related item, the state of Colorado in 1974 offered the concerned non-hunters and anti-hunters of their state an opportunity to put their money where their mouths are. The state printed 5,000 conservation stamps which they offered for sale for \$5 each. Funds raised would go specifically for the development of non-game habitat and the preservation and protection of threatened and endangered species.

Slightly more than 500 stamps were sold. Department personnel estimated more than 75% of these were bought by hunters and fishermen. Next best response was from stamp

The program has been continued this year, mainly through the efforts of a Colorado food store chain which poured a bunch of promotional and advertising money into the program. It's going better, but not by much.

As one Colorado spokesman said, "Results have been a fair example of the non-activity of non-hunters and anti-hunters." Glenn Helgeland

& lenn Nalgaland

WHEELS.



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THE HAPPY HUNTER IS DENNY LANE, SHOWN CARRYING HIS FIVE POINT ELK ANTLERS OUT OF THE MOUNTAINS OF COLORADO.

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- All models cut %" past center for perfect shooting.
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- Optional accessories.

#### Two Lines to Choose from:

7303 LINE . . . standard maple core laminated limb hunter; also the -15 Blue Target model. Draw lengths from 23" to 31". Pull weights from 25 to 60 lbs.

7306 LINE . . . all glass limbs with new laminated front face of epoxy bow glass-laminated durability. Draw lengths from 23" to 31", and pull weights from 25 to 60 lbs. Black Hunter, Blue Target and Green Ladies' and Juniors' models.

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**7306 LINE** 

Our survey of hunters using Allen Compounds

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- Improved success ratio

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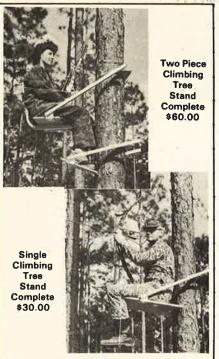
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## AMO Introduces archery range plans; can be built with excise tax funds

SOMETHING IS being done to utilize constructively the excise tax money you're now paying on archery equipment purchases. The Archery Manufacturers Organization (AMO) has designed an archery range that can be built in your city with federal cost-sharing funds.

It is an open air facility constructed in such a way that it can be located in either isolated or high traffic areas. The angle of the side walls and overhead baffles makes it impossible for an arrow to leave the range enclosure. So it is safe.

Construction cost is about the same as a double tennis court. The range will accommodate eight shooters at a time in individual practice or 16 archers in organized flight shooting.

A unique cantilevered target butt design developed especially for this range keeps maintenance costs to a minimum. Corrugated board is used in place of the traditional straw, and a weight similar to a window sash, in a ratio of five to one, keeps a constant pressure on the board to compensate for normal arrow penetration wear. The range also features a gravel surface.

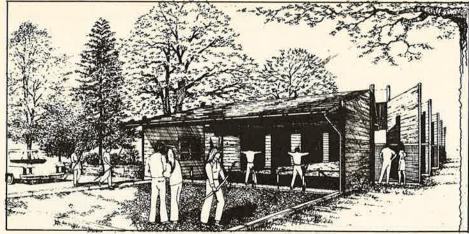
Space required is 55' x 105', less than half that needed for a double tennis

court. There are eight shooting lanes with targets at 30 meters and 10 meters. The design is esthetically clean and the covered interior shooting line contains complete archery self-instruction signs and shooting etiquette standards.

A set of architect's blueprints, materials list and building specifications for the new AMO archery range is available from the AMO office at 618 Chalmers St., Flint, Mich. 48503 for \$10. Extra copies of just the blueprints for your use in obtaining quotations are available for \$5 per set. Please enclose check or money order made out to the Archery Manufacturer's Organization in the correct

If you would like an AMO representative to aid in the planning of this new range in your city, or to answer questions for your park board, contact Fred Schuette, AMO Executive Secretary at the above address. There is a scale model of the range available for your use in presenting the idea to your park board or other interested group.

Funds for the construction, operation and maintenance of public target ranges are available through your state department of natural resources (attention: Hunter Safety Coordinator) under Pub-



•Ground level view of the Amo archery range. Side baffles permit free air flow, gives a feeling of openness yet is safe. Suspended overhead baffles will keep arrows from flying over the butts. The 30-meter maximum shooting distance will be a good hunting practice distance, will allow enough arrow dispersion to prevent Robinhoods, yet is a close enough distance to allow the practiced novice to keep his arrows on the target and remain encouraged. The range was designed by Don Ruble of Berger, Field, Torno and Hurley Architects, St. Louis.

lic Law 91-503 and Public Law 92-558 which amended the Federal Aid in Wildlife Restoration Act of 1937, the Pittman-Robertson Act.

Funds may also be available through your state department of natural resources under the Land and Water Conservation Fund administered on the federal level by the Bureau of Outdoor Recreation, U. S. Department of Interior, Washington, D. C. 20240, James G. Watt. Director.

S. Government Printing Office, Washington, D. C. 20402 has copies of "Digest - Federal Outdoor Recreation Programs and Recreation-Related Environmental Programs" available at \$1.35 each (stock number 2416-00055). The Digest lists more than 290 federal programs of assistance related to out-

Check these various federal and state outlets and publications. Then contact your local park board and your state people to get a program started.

## door recreation. The Superintendent of Documents, U. YOU CAN SHOOT BETTER -PAY LESS-HERTER'S COMPOUND **POWER MAGNUM**

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((Specify 45#, 50#, 55#, 60#, 65#, 70#) . . . \$ 8.00/doz.

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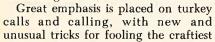


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#### **HUNTING THE AMERICAN WILD TURKEY**

From over 30 years of experience hunting the wild turkey, the author shares his tactics, techniques and hunting psychology. He has found bowhunting turkeys to be the most ultimate challenge. An avid archer, Harbour tells you how to select the best bows and arrows, hold and draw the bow, the best aiming points, and good camouflage.



gobblers. He also gets into float hunting and stalking without calls. He suggests great places to hunt and where to write for information. It's a most comprehensive guidebook full of tales and experiences that entice you to get out in the woods and try your hand at hunting the wily bird.

Hardbound, 5 1/2 inches by 8 inches, 256 pages, \$8.95. Available on the Archery World Bookshelf, page 49.

#### ARROWS AGAINST STEEL: THE HISTORY OF THE BOW

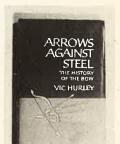
This overview of the bow history emphasizes how the bow has affected human history. From the bow's African origin c. 7000 B.C. to the end of World War II, it tells how the bow has been used in warfare to kill more men than any other weapon, including the atomic bomb; how it has aroused men into flight, into exploration and into dramatic exchanges of ideas.

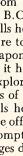
One example tells how the Mongol bowmen cut Europe off from the riches of the Orient, prompting Europeans

into great sea voyages during the 15th and 16th centuries. Not until the late 19th century did the firearm beat the bow in either rapidity or accuracy of fire.

The book is an excellent review of the origin of the bow, different types and modifications, various conquests and battles by many different nations.

Hardbound, 6 1/2 inches by 9 1/2 inches, 238 pages, \$9.95. Available on the Archery Bookshelf, page 49.







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To have your technical questions answered, send them to either Al Henderson, Henderson Archery Center, 1534 West Van Buren, Phoenix, Az. 85007 or Len Cardinale, Butts & Bows Archery, 468 Washington Ave., Belleville, N.J. 07109

#### MATCHING BROADHEADS AND FIELD TIPS

I recently bought a dozen converta-point arrows from an archery mail order house that were supposed to be weight matched. I weighed the points and found that the field points averaged 125 grains and are self-adapting. The Bear Razorheads weighed 160 grains including the broadhead adaptors. I am assuming the 35 grain difference is the weight of the adaptor.

I notice ads suggesting most manufacturers weigh their broadheads without adaptors, leading to the question, "How can matched field points and broadheads that screw in, be found?"

Harry R. Pahl E. Cleveland, Ohio

\* Your assumption that the 35-grain weight difference is the adaptor basically is correct. You have some old field points; the new field points and blunts weigh 145 grains. Most convertapoint arrows come with adapter installed, so you can discount its weight when trying to match field point weights to broadhead weights. As a final check, weigh the entire arrow with the field point, and then with the broadhead. You can thus assemble a batch of arrows which have the same weight adaptor and everything should check out. If the broadhead has an insert, don't forget to include that in the total weight. You may encounter some weight variance in broadheads from two sources: 1] Different paint thicknesses can add or subtract a few grains, 2] some heads may have been ground down slightly more than others.

#### ARROW SELECTION CHART

I have heard there is a chart with all the information for proper selection of target bow lengths and arrow spines. How can I get

What are the minimum bow weights recommended for target shooting at 25 and 70 meters with a 26-inch draw and 90 meters with a 27-inch draw?

> W. Blain Borrero Bogota, Columbia

You can get an arrow spine chart for aluminum arrows by

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writing to Easton Aluminum, 7800 Haskell Ave., Van Nuys, Cal. 91406. For fiberglass arrow charts, write to Bear Archery, Rt. 1, Grayling, Mich. 49738; Gordon Plastics, Inc., 5334 Banks St., San Diego, Cal. 92110, or Dura-Fiber, 2300 Arrowhead Dr., Carson City, Nev. 89701. Wooden arrow spining systems seem to vary from manufacturer to manufacturer, so the best way to get such arrows properly matched would be to write to the company which provided your arrows or to check with your local dealer. And all these charts are based on draw length, not bow length.

Bow weight is generally determined by the farthest distance you must effectively shoot with it, so the 25-meter distance is immaterial. Minimum draw weight at 26-inch draw should be around 32 pounds, and at that weight you may even need to attach the sight on the back of the bow. The bow shouldn't be longer than 66 inches because a bow longer than this will be less efficient. With the short draw you will be less efficient on a longer bow. You won't be using as much of the recurve, and will be exerting less stress on the limbs. For 90 meters, we recommend not under 38 pounds; this will help in wind shooting and give a reasonably flat trajectory.

#### SHOOTING MACHINE PLANS

Where might I find the plans for a shooting machine? I would like to build one to check out my bows.

Ronald Tankersley Pasadena, Md.

\* The only plans for a shooting machine that we have seen published appeared originally in Archery magazine in October, 1948. The machine was designed by Tracy L. Stalker, a long-time archery enthusiast, equipment builder and experimenter. The plans for the machine were repeated in the September, 1961, issue of the same magazine.

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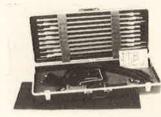


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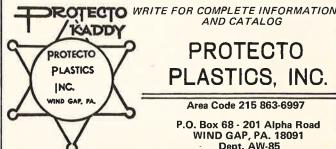
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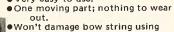
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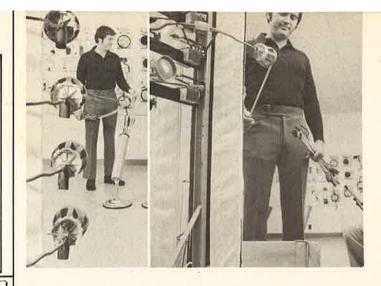
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## SACO Speed Round

IN JANUARY of 1974 a new kind of archery was introduced at the Desert Inn Classic at Las Vegas - the Las Vegas Speed Round. Reaction varied all the way from "the greatest thing that ever hit archery" to "I don't like it." Because we developed the machinery and the game it is perhaps the right time to pass along what our hopes are for this round and what it perhaps can do for archery.

Any conventional archery round in which the distance is known and sights used is quite comparable to the prone position of rifle target shooting. It is a high skill game requiring great self control and training.

I don't know how many of you ever saw the late Howard Hill or Ben Pearson shoot, but they shot rapidly and there was a certain grace in the rhythmic way they pulled, nocked and released an arrow. The instant the first arrow was released they would grab another arrow and nock it and fire off the second. It was our hope that a round could be devised that would appeal to this kind of shooter — the person who would use less finely tuned equipment, standard arrows and a hunting or target bow, whichever he or she chose. Generally they do not shoot in an indoor range, but under pressure can nock, draw and release a lot of arrows in a short period of time shooting arrow after arrow well, but not as well as the precision shooter.

In short, this round was developed not to replace existing rounds, but to supplement them. To develop a new group of archers where accuracy and speed would be the two factors that go together to form the winning combination. The new Las Vegas Speed Round would be, in effect, a new kind of champ just as a blue rock champ is a champ in his own right just as much as the rifle shooter.

Some mistakes were made at Las Vegas. The round perhaps was too long and should be cut to 50 seconds from the 60 seconds used. The really important mistake, however, was in the area of target size. It was too small. The good instinctive archer missed too many shots by only a fraction of an inch, but

Archery World



The new SACO round flip targets have been enlarged, and an aiming spot has been added. When a target on one side of the support unit is hit, it swings back and a target pops out on the other side. Shooter with fewest targets on his/her side of the unit wins. Photos and story by Chuck Saunders.

nonetheless missed. An increase in target size will put more emphasis on speed. Just the right size will give the desired balance of skill needed in these two areas - accuracy and speed.

Since the 1975 Desert Inn Classic we have had splendid cooperation from indoor lanes all around the country helping firm up target size. Four-, five-, and six-inch targets were tried and the target size for the 1976 Las Vegas Tournament has been firmed up at 51/2 inches. This will drastically change the nature of the contest and make it possible for a whole new group to enjoy this fun round.

Another spinoff from this testing by indoor ranges verifies our guess that the man-to-man competition used on the Las Vegas Speed Round was great for a big tournament, but not right for a league operation. A lane operation on the SACO Target necessitated the development of a round that could be scored so handicaps could be figured and league and team play developed.

To do this we have developed the SACO Speed Round. The tentative rules are:

- 1. 50-seconds ends
- 2. Five points scored per hit
- 3. Distance 15 meters
- 4. Target size 5½" with a 1½" spot

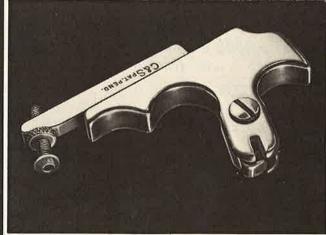
In all ways this duplicates the skills needed to do well in the Las Vegas Speed Round. One element of the Las Vegas Speed Round is lacking — the self control needed to stay cool in the event you miss a couple while your opponent scores. In all other areas there is no difference.

No one can be certain just how popular this round will become. This much can be said with a high degree of certainty. It has more spectator appeal than conventional archery because the spectators and the participant can see the results of a hit — the target disappearing and a target of different color appearing on the opposite side of the unit. This action and change of color adds a visual dimension to the game.

The person-to-person combat of the Las Vegas Speed Round has all the elements of a game that can keep everyone on edge as the lead seesaws back and forth between the two contestants.

There is a good chance that in time we can get some national television coverage of this part of the tournament. The Las Vegas Speed Round has all the elements of suspense and action. An edited tape of the complete Las Vegas Speed Round Shoot could be cut to 26 or 27 minutes. If we can get TV coverage, millions will be anxious to try archery. Many will be attracted to the older rounds and all segments of archery should benefit. This is our hope and we hope you share our desire to see this new phase of archery given an adequate chance to prove itself.

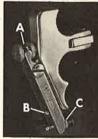
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What shooters say about . . .

#### **BOW SHOULDER**

This is the fourth in a continuing series in which Archery World will query several top archers on a specific aspect of shooting form. There will be a different topic, asked of different archers, each time.

Please remember, the setup of a shot is an individual thing. The styles delineated here are personal styles evolved from many hours of practice. We hope this information will give you an insight to your shooting problem — if you have one. Just remember to interpret this material as suggestions; you must develop your own personal shooting form with your own strengths and bodily makeup in mind.

RICHARD McKINNEY, Muncie, Ind., rising young archer in men's amateur competition:

I try to keep form as simple as possible. This way, when I run into a problem, I don't have so many checkpoints to run through.

First, I position my bow hand and finger pressure at the same time. When I raise my bow hand to a level position, my back muscles take over completely. My bow shoulder lowers and moves out away from me. When I begin to draw, it rises slightly and inward, so I can use the upper part of my back muscles. I keep squeezing my shoulder blades together. When the clicker clicks, I release both hands. Both arms move away from me, and my shoulder blades are as tight as possible.

When I am at full draw, the only thing that runs in my mind is to squeeze my shoulder blades together and positively think 10's.

MARY LYNN SNYDER, Las Vegas, Nevada, one of the top women's unlimited division pro archers:

One of the most important features of a person's form is the bow shoulder posi-

The technique I use to maintain consistent shoulder and body position is to address the target in such a manner so that my shoulders are always in line with the target, keeping my left shoulder (I shoot right handed) in a down position with no roll in or out of the shoulder or arm. This allows me to transfer all of the bow pressure from my arms through my shoulder and back on a line which minimizes the fatigue from holding long periods at full draw.

By using the pressure line through my shoulders, I can relax my grip and lock my arm in position, removing almost all of the stress from my arm. I find this most useful when shooting on uneven terrain.

IRENE LORENSON, Phoenix, Ariz., high-ranking women's amateur archer:

My bow shoulder is one of the more vital parts of my form. I use the down and back method.

Before I ever put the bow up to be drawn, I take a deep breath. While I exhale, my shoulder is placed down and back at this time. Also, just before I draw my bow, I check it a second time to make sure it has not changed.

The reason I use this method is to get string clearance and to get better back tension. If the shoulder creeps up or rolls in, the draw length is shortened. Then, my release arm, using back tension, must pull harder to get through my

clicker. I end up struggling and finally letting down. When my shoulder remains down I get a cleaner, more consistent shot.

ART ROBINSON, Garden Grove, Cal., consistent top shooter in PAA archery:

The bow shoulder is most important in the shooting of an arrow. It must be in the right position with the proper tension for the arrow to go where you want it to go . . . in the GOLD!

I start with the stance. I stand straight, with the shoulders level and in line with the target. This also makes it easier to draw. The shoulder is set at the pre-draw. I allow my shoulder to settle down and back. Then I draw, anchor and start aiming, while maintaining tension with the draw shoulder and pushing with the bow shoulder. This is done with muscles in front and back. I then begin to push the arm and bow straight to the target. If you use a clicker as I do, while you are pushing, you will push the clicker off the arrow and make the shot.

I find this method of shooting to be the best for me. I feel that, if you are pushing the bow arm straight toward



"Well, that's tough. Go buy more arrows."



the target as you are aiming, it is very hard for the arm to go off line and the arrow will have no place to go but in the center of the GOLD!

GINGER McCLINTOCK, Penngrove, Cal., top flight competitor in pro women's unlimited divisions:

I stand straight with the target, raise my bow arm and then psych myself into the spot. Then I draw. My shoulder position is about like it would be if I were just standing there. If I move it at all, it's just a fraction of an inch up. This is my most comfortable position and

gives me the best back tension. I try to maintain horizontal arm and shoulder alignment into my bodily bone structure. My feet are about as far apart as my shoulders; this gives better balance. As I begin the draw I don't physically lock or seat the shoulder. I hold my bow arm solid and level so the pressure against my shoulder comes back straight and I have the proper bow shoulder tension as I begin the draw. And the proper shoulder and back tension must be there if you want to have a good release and proper form through the followthrough. Otherwise you'll drop your bow arm.

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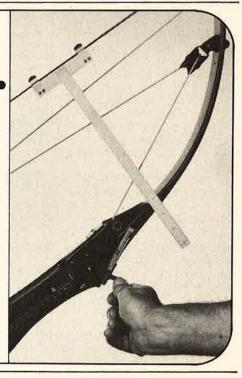
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## 1974 BOWHUNTER DEER SUCCESS

SEVERAL THINGS become evident when you look at these 1974 bowhunting state-by-state statis-

1) There are about 1,170,000 licensed bowhunters on this list. not counting the unknown totals from Alaska, Idaho and North Carolina. There ought to be about 30,000 more bowhunters in these states, so if you add them to the unofficial total, and then count a respectable number of servicemen who don't need to buy a license, the total number of big game bowhunters in the United States is somewhere between 1.2 million and 1.25 mil-

Our previous estimate was just over one million, so it does appear that bowhunter numbers are growing.

2) Most states have a good finger on the pulse of bowhunting.

3) Bowhunters hunting in states in addition to their home state seem to be a group of knowledgeable people. Look at Colorado's figures, for instance, where 37.4% of all deer bowhunters were non-resident, but they bagged more than 43% of all deer taken in that state with a bow. Colorado's non-resident elk bowhunters constituted 51.1% of the total, and they took 58% of elk taken with the bow.

In 1974 Colorado introduced a "one and only" hunting style rule. If you hunted with a bow for a particular species you couldn't hunt with a rifle, and vice versa. This caused their resident deer bowhunter totals to drop from 11,183 in 1973 to last year's 6,343, and dropped resident elk bowhunter numbers from 3,340 to 2,039.

This eliminated the marginal hunters who hunted with a bow simply because they hadn't bagged one with a rifle. "It also was the first year we had zero complaints from ranchers about unsportsmanlike conduct among bowhunters," said Judd Cooney, one of Archery World's hunting editors and a Colorado game management specialist. "The quality of bowhunter in the field was much better; we got only the serious people and eliminated the jokers," he added.

(continued on page 24)

	1974 res: bow licenses	1974 non-res. bow licenses	res. deer taken	non-res. deer taken	hunter success ratio	other game
Alabama * Alaska	20,000 N.S.I.	50	500	2	2.5%	*
Arizona *	7,400		417		5.6%	3,812 javelina permi
Arkansas *	50,000	1,005	275		0.5%	513 kills
California *	35,000		297		0.9%	
Colorado	6,343	3,788	660	502	11.5%	2,039 res. elk permits, 172 kills; 2,150 non-res. elk permits, 238 kills
Connecticut	5,213		105		2.0%	
Delaware * Florida	3,047 9,244		16 72		$0.5\% \\ 0.8\%$	
Georgia **	28,187	187	1,278	10	4.5%	
Hawaii	N.S.I.	107	1,270	10	4.570	
daho	N.S.I.					
Illinois	23,000	~ (a) ~ 89	1,420		6.2%	
ndiana **	21,265	• • • • • • • • • • • • • • • • • • • •	1,092		5.1%	
owa	12,040	(a)	2,173		18.0%	
Kansas Kentucky *	6,246	(a)	1,135 (b)		18.2%	
Louisiana *	13,690 13,728		1,227 2,100		9.0% 15.3%	
Maine	1,800*	ô5*	61	4	3.5%	C.
Maryland	21,500 *	0.5	573 (c)	4	2.7%	
Massachusetts	4,500 *	500	87 (c)		1.8%	
Michigan *	90,000	3,000	4,500	200	5.1%	
Minnesota	30,000*		2,176(c)		7.3%	
Mississippi	9,533	333	766	-	7.8%	
Missouri **	24,508	746	1,375	62	5.7%	50
Montana	10,500 *		711 (c)		6.8%	52 antelope, 111 elk kills
Nebraska	8,976		1,472 (d)		16.4%	12 antelope (123 licenses)
Nevada	1,643	369	* 75	61	6.8%	10 antelope (127 licenses)
New Hampshire	2,188	614	16	4	0.7%	(127 110611363)
New Jersey	32,802		1,717		5.2%	
New Mexico	10,649	1	196		1.8%	
New York *	89,000	3,000	3,106	100	3.5%	
North Carolina (e)	N.S.I.	150	N 0 1			
North Dakota*	6,500	150	N.S.I.		C 107	
Ohio Oklahoma	16,000 * 16,419	145	984 (c) 445	44	$\frac{6.1\%}{3.0\%}$	
Oregon	28,980	170	1,343	44	4.6%	
Pennsylvania	201,855	170	3,034	875	2.1%	
Rhode Island	606	16	44	4	7.7%	
South Carolina *	4,000	1,000	400	100	10.0%	
South Dakota	6,727	322	1,140 (f)		16.2%	543 antelope
Tennessee	14,000		599		4.3%	permits, 95 taken
Texas	44,532		3,998		9.0%	
Utah	16,648		1,367		8.2%	332 elk permits,
Vermont	15,986	12,152	666	903	5.6%	16 kills
Virginia	30,000 *	12,152	708 (c)	000	2.4%	
Washington	13,000 *		N.S.I. (g)		_,,,,	
West Virginia	18,100	2,900	1,791	328	10.1%	
Wisconsin	110,000 *	7,000 *	12,513(c)		10.7%	
Wyoming	3,288	849	469 *		11.3%	149 elk, 262
	2 0					antelope, 40 moose, 29 black bear *
	1,138,643					

- 1973 totals, 1974 totals not yet available

- no separate information

Where single asterisk appears after state, all figures are estimates; where single asterisk appears after a number, only

lf no non-resident totals are given, they were not separated by the state and are included as a combined figure under

(a) — no non-resident hunting allowed

(b) - 20%-22% mule deer, remainder whitetail

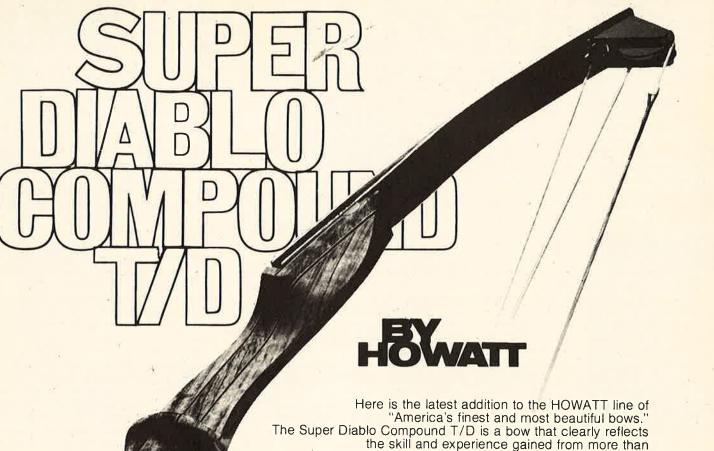
(c) — kills must be registered, so exact count is known

(d) - 1030 whitetail, 442 mule deer separate archery license under consideration

- 885 whitetail, 255 mule deer

(g) - no breakdown as to type of weapon used





30 years as a leader in the design and handcrafting of superior archery gear. The beautifully sculptured and exquisitely finished handle section is made of laminated imported hardwoods. Warm to the touch and exotic in appearance, it requires no insulation in cold weather as do metal handles. HOWATT pioneered the use of 3M glass for limb construction and the Super Diablo Compound T/D limbs are made in the time-tested manner utilizing the finest materials. The limbs are not slotted since experience indicates that slotted limbs invite cracking and twisting. Though modestly priced, this lightweight, cleanly designed beauty invites comparative speed tests with any compound bow on the market. We are proud to include the Super Diablo Compound T/D in the family of traditionally superior bows handcrafted by HOWATT.

Available in factory set peak draw weights to  $60\,lbs$ , and maximum draw lengths to 32''.

Limbs are detachable for quick and easy restringing — no special

White limbs are available for target tournament archers.

Stabilizer insert is standard for attaching stabilizers, flexconnect, fish reel, etc.

May be ordered pre-drilled at the factory for installation of various adjustable cushion plungers at slight additional cost.

Overall length 48".



P. O. BOX 2637, YAKIMA, WASHINGTON 98902

## Pennsylvania tops the license totals; Wisconsin tops the success totals.

(continued from page 22)

Because of this, the resident deer bowhunting success ratio increased, from 8.0% in 1973 to 10.4% in 1974, and the resident elk bowhunting success increased from 6.0% in 1973 to 8.4% in 1974.

The new rule didn't affect non-resident bowhunters, because they knew which weapon they would use anyway. Non-resident deer bowhunter numbers increased from 3,691 in 1973 to 3,788 in 1974; non-resident elk bowhunter numbers increased from 1,461 in 1973 to 2,150 in 1974. Non-resident deer success ratio was 20.0% in 1973 and 13.3% in 1974. Non-resident elk success ratio was 12.0% in 1973 and 11.1% in 1974.

Non-resident bowhunter numbers in Colorado may drop in 1976 when non-resident fees will be increased to \$90-\$100 for deer and \$125-\$130 for elk. The exact figure for each has not yet been determined.

On the other hand, non-resident bowhunter numbers may not drop much. A non-resident who has decided to go on a Colorado bowhunt is going to go, and the cost of the license may be one of the lesser influences on that decision.

Vermont appears to be the New England bowhunter's dream, with 43% of all bowhunters being non-residents and their success ratio is significantly higher.

4) Wisconsin bowhunters bagged a record 12,513 deer. The previous year's total was around 8,500. The state has had three consecutive mild winters, so the herd has been growing and coming through the winters in better physical condition.

5) Pennsylvania's bowhunting total still leads the nation by quite a margin. It is the first state to sell more than 200,000 bowhunting licenses in one year. The 1974 total is an increase of about 8,000 from 1973. Their low success ratio can only be attributed to the fact that much of Pennsylvania's top deer habitat is in rugged, mountainous country.

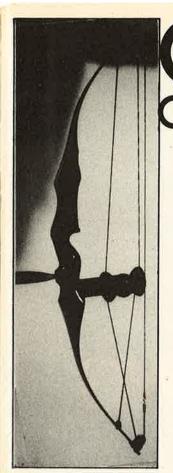
6) Nebraska, Kansas, Iowa and South Dakota bowhunters have the best success ratio. The states have good farm/ranch land, with river bottom hunting at a premium and good agriculture fields to post beside. Kansas and Iowa are not open to non-resident hunters.

7) Where states give a good total for bowhunters, and an unbelievably low number for deer bow kills, it nearly always means that bowhunters in those states aren't required to register their kills. Some states require that kills be registered from special archery hunts or from specific management areas, but do not require registration of kills from other areas of their state. So it is safe to assume that kill totals are higher; how much higher is unknown.

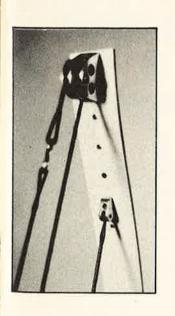
Most state game management personnel said they would like to see a regulation requiring registration of deer kills. This would give them more information about bowhunting's affect, or non-affect, on their state deer herd, and would help them do a better management job and ease enforcement problems.

(Officials are not specifically concerned with bowhunting and bowhunters regarding enforcement. They are concerned, however, about the increase in poaching — and it has increased just about everywhere in the country. A serious poacher, though, would not use archery tackle. Other forms are much more effective.)





MODEL NO. 200
WEIGHT: 3 lbs.
Styling of our high quality
hardwood hunter with compound features, Black limbs.
COST: \$189.50



CHALLENGER COMPOUND HUNTER FROM Partan

Seattle, Wash.

## outstanding features of CHALLENGER

1. Individualized set-up

A. Draw length adjustment that can be adjusted in seconds. Simply use an Allen wrench to adjust the compound rachet assembly. One click adjusts the draw length 1/4" to 3/8". It will have a draw length adjustment of approximately 9".

Example: You can adjust the bow from 23" draw length to a 32" draw length.

B. Poundage adjustment can vary within a 30 lb. range.

C. Drop-over can be adjusted from zero to 35%.

2. Tuning by bow owner

A. The bow shoots as quiet and tuning is as simple as tuning a conventional stick bow. All that is required is adjusting the tiller to your desired shooting style, nock point and arrow plate. Sight window, 3/8" past center, torque free handle. Because of the compound mechanical attachments to the limbs in two different places and to the center of the bow as shown in the pictures, this makes this bow absolutely stable. You can change hand positions up or down, left or right. It can be shot with fingers, release or string walking with no special tuning. The bow limbs are kept in time, regardless of where string pressure is placed.



A. Take-down compound — less than 5 minutes to disassemble and less than 15 minutes to reassemble for the tournament and take-down Hunter only.

#### 4. Compound assembly conversion

A. The compound features of the Challenger can be adapted in converting any wooden or metal-handled bow to a compound. (The minimum weigh we can use is 45 Lb.; preferably a higher weight). Cost will be \$125. This will include cutting, tooling, tapping, stringing, etc., for a complete bow. We cannot make any guarantee on your converted bow, but we will guarantee all of our workmanship.

#### . NO CABLE!

A. Strings can be purchased for 1/3 of the cost of the conventional compound cable or made by the archer. Life, twice normal string.

#### **TEST RESULTS**

Chronograph reading: 41 lbs. dropping over to 33 lbs., shot a 1914, 29" long, 210 ft. per second.

ad a second

MODEL NO. 300

WEIGHT: 41/4 lbs.

COST: \$225.00

High-tempered aluminum.

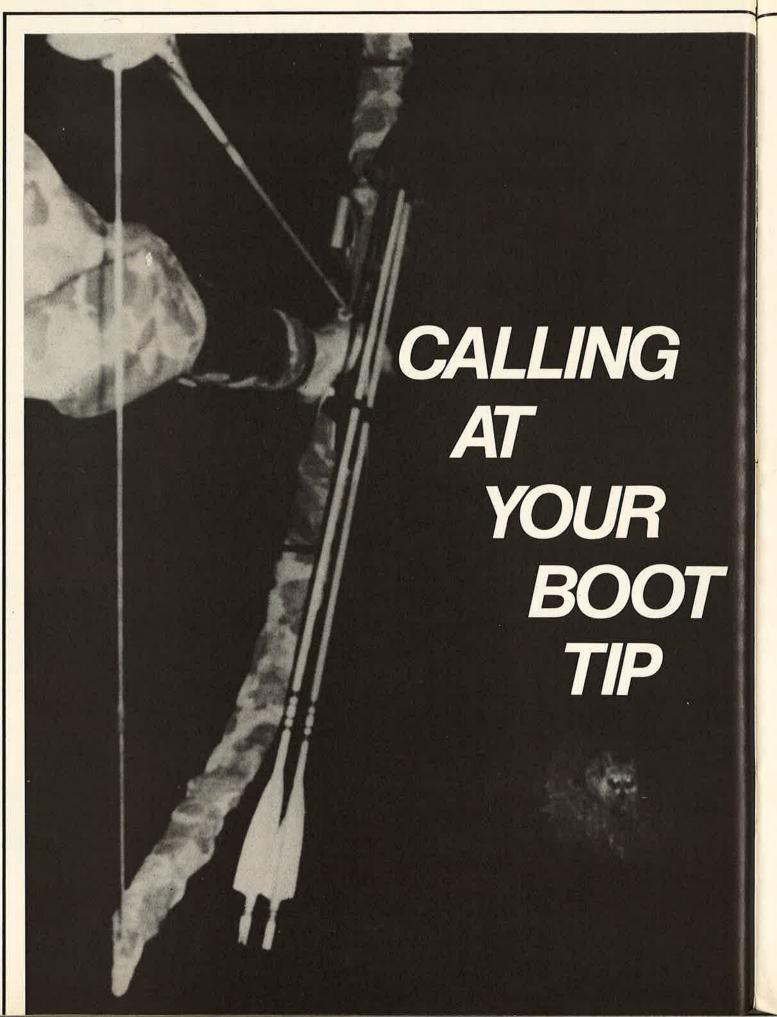
Handle 36,000 PSI. Black

handle riser and limbs.

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WE WILL SEND YOU A FREE CATALOG AND LOGO



Calling raccoons on a moonlit night gets you faster, and closer, action than expected.

#### by Russell Tinsley

WHEN WINSTON TOLD me to get ready for action, he wasn't kidding. He'd been blowing on the call only briefly when he reached over and nudged me and I glimpsed the dark blob moving across the moonlighted, sun-bleached grass. By the time I got my bow up and drawn, the shape wasn't five feet away. I guess I missed because the critter wheeled and ran a few feet and stopped again, time enough for me to unquiver another arrow and miss again.

After it was all over, Winston switched on the flashlight to locate my arrows.

"I told you not to let a 'coon get too close," he chuckled. "Easier to miss that way, and there's always the danger you might shoot yourself in the foot."

This was the damndest hunting I'd ever tried. Even the timing was goofy— a warm, humid August night with a full moon showering puddles of silver among the tree branches.

But perhaps I should pause and splice in some background.

Winston Burnham, one-half of the famous Burnham Brothers, and I were discussing raccoon calling. He said the optimum time for calling these ubiquitous critters is at night. Coons are out and prowling and are easily called.

"Oh, you might get one up early or late in the day," Winston explained. "But it's a hit-or-miss proposition; you have to be fortunate enough to be calling near one's den. At night calling a coon is almost a surefire cinch, however."

I told him in a way that was too bad. Many bowhunters were missing out on a lot of fun since some states, like Arizona, prohibit hunting at night with a light.

"Who said anything about a light?" Winston interrupted. "Shucks, just the illumination from the moon is plenty good enough."

He and his brother Murry offered to show me.

The moon was just peeking over the treetops as they closed the pasture gate behind us and drove toward a creek bottom a half mile or so down the road. It was mid-August and I mentioned that if we could call coons in the summertime, at night with no light, then I would indeed be convinced the system has possibilities.

"You don't need much convincing," Murry answered. "From now until the end of September is one of the very best times for calling coons."

"You're kidding?"

"I am not," he went on. "In late summer the coon population is at its peak. The young of spring have grown up and they are naive, easily fooled with a call. And they're gathered around water where there is a lot for them to eat in the summer. That makes them easy to find."

We walked along the creek and examined the moist shoreline with the flashlight. Coon tracks were everywhere.

"Plenty of the critters here," Winston observed. "Get ready and I'll call one."

We stood in the middle of a large timber-rimmed clearing not far from the creek. Our eyes had become accustomed to the dark and it was no problem seeing in the moonlight, reflecting as it was off the summerbleached grass.

Winston put a call in his mouth and ruptured the quiet night air with one of the darnedest sounds you'll ever hear, a shrilling shriek punctuated by harsh, high notes. If you have ever heard the desperate shriek of a bird caught by some animal, it sounds something like that, a piteous and painful cry, yet it is deeper, with a more coarse tone, to give it volume and range. Almost immediately a coon came running!

Maybe an hour and several stops later the fourth one appeared on the scene and I finally connected and we called it quits and headed home. I was convinced.

Now calling coons is nothing new to me. I have seen many duped by the crippled-bird cries. But it was either in the daytime or at night calling with a light. In fact, I always believed the odds were against calling anything if there was any moon.

"The coon is an exception," Murry said. "One will answer a call as readily in the moonlight as it will when it is pitch black."

There is a call designed specifically for imitating the bird-distress cries. You trill your tongue against the mouthpiece as you blow. But where it is legal I often utilize a portable cassette electronic caller. The compact unit is lightweight and it has sufficient volume for calling and the shooter has both hands free. It is sort of awkward to draw a bow and blow on a call at the same time. There also is some hazard involved. Once the bowstring slapped the end of my call and almost jerked my teeth out!

Many different birds have been put on tape. Several years ago I accompanied Winston and Murry on a recording session.

We were deer hunting at the time in southern Texas and they'd brought their recording equipment along. In the small wooden camphouse where we bunked, several woodpeckers had pecked holes in the wall to construct nests. The Burnhams held a fish landing net over one hole and tapped on the wall, spooking the woodpecker into the open. It flew into the net.

When Murry grasped the bird in his hand it began squalling. Winston switched on the tape-recorder and captured the sounds. Later the woodpecker was released unharmed.

Now with these authentic distress sounds in a cassette, all the caller must do is plug it into a machine and he's in business.

Whether using a call or some electronic device, at night or during the day, it is best to call near water. Coons, the Burnhams explained, are water oriented and that's the place to look for them. Even if they've found an alternate food source, such as a field of fresh corn, they won't be far from water. And since coons come to water, they leave lots of tracks in conspicuous places and it is rudimentary to determine whether or not any are present to be called.

Although moonlight is sufficient illumination for calling coons (and Winston Burnham believes calling is more effective without any artificial light), a hand-held light or headlight can be used for tracking the critter as it approaches, if hunting at night with a light is legal in the state where you hunt. A red-lens hunting light is superior to a conventional white light. Wild animals show no fear of a red light. (continued on page 61)

• Far left, if you want to aid the moonlight, use a headlight. Below, sometimes the action is almost too close, especially when the animal thinks you're an easy meal.

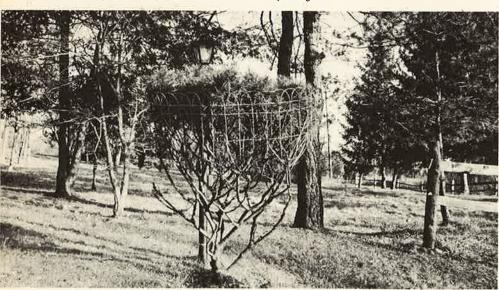


August/September 1975

• A six-point buck taken from the edge of the refuge shows the result of overcrowded conditions. The tumors, which were all over the animal's body, are caused by papillomatosis, a viral disease which is readily spread by contact. The knife point indicates eye position; the deer was virtually blind.



•This nine-month old buck was found starving on March 23, 1974. It weighed 42 pounds. It died shortly after this photo was taken. Photo by Douglas Roscoe.



• Damage to private shrubbery, gardens, orchards and nurseries by Great Swamp deer amounted to \$138,641 in 33 complaints. Total private property damage by deer estimated by the U.S. Fish and Wildlife Service since 1971 exceeds \$3,000,000. Browse line is apparent and vegetation is stripped unless protected by fencing. Top and bottom photos by Tink Nathan, NRA Hunting and Conservation Division.

## What happens WHEN

The H.S./U.S. and other anti-hunting groups blocked a special hunt on the Great Swamp Refuge for four years. The hunt was needed to get deer populations down within the carrying capacity of the habitat. While the anti-hunters appealed an official hunt ok, the deer got sick and starved

ON DECEMBER 10, 1974, a group of 54 anti-hunting protestors, carrying signs and banners, demonstrated in a parking lot at the Great Swamp National Wildlife Refuge in northern New Jersey. They were protesting the final staging of a management-dictated hunt originally scheduled for December 1970. This hunt, to reduce an extreme over-population of whitetail deer, had been stalled by a series of legal maneuvers that brought the hunt to the attention of millions. The delays began with a lawsuit by the Humane Society of the United States (H.S.U.S.) that was ultimately turned down by the U.S. Court of Appeals in Washington, D. C.

The success in stopping the originally planned hunt of 1970 encouraged antihunting groups such as Deer, Ecology, Environment and Resources, Inc., Fund for Animals, and Friends of Animals, to join with the H.S.U.S. and its New Jersey branch (Inc.) to fight the concept of public hunting on the National Wildlife Refuge System.

Originally objecting to a public hunt on the Great Swamp N.W.R., the H.S.U.S. later expanded its suits to

## DEER ARE OVERCROWDED

include a primitive weapons hunt and a bowhunt on Eastern Neck N.W.R. Maryland, and a bowhunt on Virginia's Chincoteague N.W.R.

In February, 1973, the landmark case was heard in Washington, D. C. before U.S. District Judge Charles R. Richey. In the historic and precedent-setting case, Judge Richey found for the Secretary of Interior and listed the following in his findings of fact:

\* The primary purpose for which these refuges were established is to provide a habitat for migratory waterfowl.

\* Public recreation is an appropriate secondary use of areas within the National Wildlife Refuge System.

\* Public hunting is a form of public recreation.

\* Public hunting is authorized whenever such use is compatible with the major purposes for which a refuge was established.

\* The planned public hunts, challenged here, are compatible to the major purposes for which the three refuges were established.

\* The planned public hunts, challenged therein, are compatible with the principles of sound wildlife management.

Once this decision was made public, the U.S. Fish and Wildlife Service and the New Jersey Division of Fish, Game and Shellfisheries started planning the long-overdue hunt for the fall of 1973.

Shortly before this hunt was to have been held, anti-hunters went into Federal District Court before Judge Frederick B. Lacey in a separate action to block the hunt. They charged the U.S. Fish and Wildlife Service with administrative errors, including failure to submit an Environmental Impact Statement before authorizing the hunt. Their complaints included charges that hunters tramping the refuge would damage flora, and that lead buckshot, fired from hunters' shotguns, would cause pollution and damage deer and waterfowl if swallowed. Judge Lacey upheld these arguments and issued a restraining order to prevent the 1973 hunt from being held.

This was a great disappointment to hunters who had been selected on an impartial basis from a list submitted by the New Jersey Division of Fish, Game and Shellfisheries. They had undergone special briefings, orientation, license and weapon inspections, and actual shotgun qualification tests, with hunters who qualified being issued special permits and regulations to follow during the hunt.

Judge Lacey's decision was a bitter blow to the professional wildlife managers of the federal refuge system and the state of New Jersey who were watching a deer herd reach the extreme level of over-population. In an earlier time, before current metropolitan development, large predators such as the wolf, coyote, bobcat and cougar would have shown increased survival rate of offspring (resulting in increased predation) that would have helped balance the deer numbers with the available food. The wildlife managers wanted to accomplish the same effect by use of properly regulated hunting, a technique well proven in the past half-century.

The possibility of re-introducing large predators could not be seriously advanced in this case as an alternative to hunting to reduce the over-population. The refuge includes only about 3,500 acres of suitable habitat for deer. A single specimen of large predators might range over such an area in a single day. The refuge is ringed by residential areas to which such predators would pose a threat.

#### HERD, HABITAT HURT

The fact that there was a serious problem was well shown by the deer herd numbers and condition, and the deteriorating condition of the habitat during 1970-1974.

The deer population grew from approximately 120 whitetails during the year 1964-1965 to approximately 360 deer (300% increase) for the year 1970-1971 when the first hunt was planned. By the fall of 1973, the population was projected by the refuge management study to be 590 deer.

Starvation was suspected in the deaths of several deer in the spring of 1973, and was conclusively proven in the spring of 1974. A survey, conducted March 23, 1974, found two starving deer still alive on the refuge. One, an emaciated nine month-old buck with a whole weight of 42 pounds, died shortly after being

found. A second nine month-old buck, with a whole weight of 58 pounds, was fed by hand, but died the following day. Both animals were examined by the pathology section of the New York Department of Environmental Conservation Wildlife Research Laboratory. Diagnosis for both cases showed the death cause as "circulatory failure as a result of starvation." Seven more deer were found dead of starvation in this same census.

In the meantime, HSUS lawyers were appealing the verdict of Judge Richey to the United States Court of Appeals in Washington. At 11 a.m. on April 24, 1974, a three judge panel heard oral arguments, examined the written record, and shortly thereafter upheld the original decision by Judge Richey. The appeal was dismissed without a written opinion, signifying in effect, that the issues and complaints raised were without merit and did not warrant further judicial review.

During 1974, diseased deer became more apparent in and around the refuge. One such deer, an adult doe, had a calcified fibroma the size of a grapefruit that was bone hard and had effectively blinded the animal. As the deer ran, the growth would swing from its head and eventually knock the deer off balance. Another deer was found to have over 13 pounds of external tumors. These growths, located on the front of the deer's body between its legs, were so massive that they prevented the deer from escaping when attacked by uncontrolled dogs. Area residents, hearing the deer under attack, called local police who killed the buck. Forty deer were known to have perished in the spring of 1974, nine directly through starvation and 23 from known secondary malnutrition effects such as parasites and disease. (The remainder of the 40 were too decomposed to accurately determine the cause of death.)

Despite this evidence, and a highly visible browse line (deer eating all green growth of the shrubs and trees as high up as they can reach), anti-hunters began legal action for yet a third time to stop the scheduled hunt in 1974.

After initial arguments, U.S. Judge Lacey issued an order on November 26, (continued on page 64)

#### by Glenn Helgeland

THE BUCK LOOKS LIKE a cardboard sieve . . . holes all over him, wires sticking out here and there. He runs a little jerkily, and instead of derisively flaunting a big, white flag as he turns the corner there's a four-inch yellow balloon taped on the rib area flipping and bouncing and teasing you into rushing the shot.

You know the buck is on an endless track . . . you know he'll be around again in just a couple of seconds . . . but that's still a deer and that balloon is right where his vitals are . . . and doggone it, that's right where this next shot is going if you can just slow down a

This indoor league,

targets, presents the

type of pre-season

featuring running game

little, take careful aim, keep that solid release and let'er go . . .

PLAM! Figured the lead right for once. About time.

Man, that's almost like hunting. Running shots, a little excitement. But better, because when you miss you can see where you missed and you will get a chance again in just a few seconds to get all heated up and try to bust that deer again, only this time you'll correct your error.

After you've done this a few times, maybe . . . just maybe . . . you'll have your troubles ironed out. You'll know how your arrows are flying. You'll have a good share of the jitters under control. You'll have practiced on a moving

target, similar to a running shot.

I watched this tableau one evening last fall at Leo Baldwin's range in Depew, New York. He has an entire league of bowhunters there for the fun and the practice.

"Bowhunters enjoy practice less than anyone. They're mainly interested in getting ready to go hunting. The hunt is the main thing, not the fine technique of shooting an arrow. So it seemed logical that if you could throw a good dose of simulated hunting into practice sessions, everybody would enjoy it more and benefit more," Baldwin said.

There are four targets — deer, walking pheasant, partridge and flying pheasant. Sometimes raccoon, pig,

woodchuck or rabbit targets are substituted for the three smaller targets; the deer is always available

deer is always available.

With four lanes in the range, each lane represents an animal. Shooters move to the lane to the right after each end and a different animal target. There are two shooters per lane. Shooters shoot three ends per animal, with five arrows per end. A rheostat speed control moves the targets at a different speed for each end.

A hit on the small targets is five points; a miss is zero points. On the deer target, breaking the balloon counts five points, a hit without breaking the balloon is three points and a miss is zero.

(continued on page 62)

## challenge and action bowhunters like. Beating the Bowhunting Practice Blues



 When you hit the balloon, you have the honor of replacing it yourself. Three wires attached to the deer target hold it sturdily.

• Deer target is shot in the far right lane. Note the shooter at far right is at full draw. Shooters in other lanes wait for their respective targets to swing into view. Black side and top curtains make entire target area more visible and bushes set in coffee cans add hunting atmosphere.

• Archer comes to full draw and finds proper lead as deer approaches his shooting lane. He cannot shoot until deer is in his lane. • You score five points on the balloon, three points on any other hit. Space between the regular target butts is filled with corrugated cardboard and then it's all covered with muslin painted to resemble a natural area.





## **BOW REPORT-HERTER'S COMPOUND MAGNUM**

#### TECHNICAL DATA - HERTER'S COMPOUND POWER MAGNUM

Manufacturer:

Model name: Suggested retail price:

Length: Draw weights: Draw length limit:

Sight window length: Degree of centershot: Handle, limb materials:

Mass weight: Eccentric size:

Wheel bearings: String length: String strands:

Cable adjustment:

**Idler mounts:** 

Arrow rest: Special fittings:

Handle style:

Standard equipment: Limb widths:

Finish: Guarantee: Herter's Inc.

Waseca, Minn. 56093 Compound Power Magnum

\$110.97

51", tip to tip 40 to 65 lbs. 27 to 32" 7 1/2" 3/16"

Imported hardwood handle, glass laminated over rock maple core limbs

1 3/4" Needle 43 3/4"

14 Hex key (Allen wrench) Draw weight adjustment: Same Limb tip, U bracket 8 7/8" Measured brace height: Herter's flip rest Side plates accept Herter's quiver Medium low String and cables, arrow rest 1 3/4" at base, 1 3/16" at wheel mount Camo or high gloss urethane 14-months, pro-rated AS ARCHERY EQUIPMENT manufac-

turers' evaluated the acceptance and ultimate market impact of the compound bow, it was inevitable that there would be technical breakthroughs. The bow that is the subject of this test report is such a technical breakthrough or innovation. It employs the compounding principle as well as the eccentric or variable lever action manipulation of the force-draw characteristics to obtain a draw-force reduction at full draw. However, it does so in a manner that the U.S. Patent Office has ruled to be sufficiently different from prior art as to be patentable in its own right.

TEST: Aluminum arrows, 3-fletched, half with 41/2" vanes, half with 5" feathers, fletched straight with 2° offset, 125-grain field points. Velocity read over 3-foot span directly in front of bow, average reading of 3 or more shots. Test shooting, 28-inch draw length.

Archery World bow reports are produced by Norb Mullaney, a mechanical engineer with work experience in structures, mechanisms, energy absorption systems and fiberglass reinforced plastics. He has also done research in wood characteristics and timber mechanics.

He has designed, built and experimented with bows and related equipment for the past 10 years, working exclusively in compound bows since 1969.

The Herter's Compound Power Magnum has a hardwood handle with attached side plates at the extremities. The side plates perform three functions: acting as mounting plates for the adjustable recurved limbs; providing mounting accommodation for the eccentrics and synchronizing sheaves, plus the cable anchor and adjustment mechanisms.

The laminated limbs (wood core, glass backed and faced) are of tapered construction with a tapered plan-form (side outline). This double tapering was unusual on compound bow limbs, until recently. The limbs are mounted to the side plates by axles through the risers. Two idler pulleys are mounted side by side near each limb tip using a U bracket that is bolted through the limb. The bowstring is attached to the cables using the typical S hook. The cables that carry the S hooks are rigged on idlers that are on opposite sides of the bow (right to left) so that the string crosses the arrow rest position at very near the vertical centerline of the handle. This should promote minimal twisting tendency in the tapered limbs although it reduces arrow clearance with the cables and sight window unless compensation is pro-

One unique feature of the Herter's compound is the relocation of the eccentrics from the limb tips to the handle side plates. Besides overcoming a patent hurdle, it also reduces the tip mounted mass which has to help efficiency. Additional limb mounted mass is eliminated by disposing of the mid-limb idlers and hangers. The small idlers at each limb tip and the smaller mounting brackets which are the replacement hardware must weigh in at about been eliminated.

Positive synchronization of the eccentrics, and hence of limb deflection, is provided by a pair of concentric sheaves with a separate lightweight cable connecting them. One synchronizing sheave is attached to each eccentric so that both rotate together around the same axle. With this arrangement, the eccentrics must rotate together with proper timing; and consistent limb tiller is thus maintained.

The bow we tested had spacers between the eccentric and the synchronizing sheave, so that the timing cable is moved away from the path of the arrow an additional 1/4- to 5/16-inch, thus providing additional clearance for the fletching. This is the "compensation" referred to in the discussion of string location. An earlier Herter's compound did not have the spacers; the eccentric and concentric sheaves were attached directly to each other. The result was inadequate cable clearance. Apparently Herter's detected the problem and quickly corrected it. The more recent bow has good cable clearance.

One notable feature of this bow is that anti-friction bearings (needle type) are included as standard equipment for all pulleys and sheaves. This, coupled with the use of hard plastic spacers and bushings, is no doubt the reason we found surprisingly low system static hysterisis when running the force-draw curves. This attention to engineering detail and good practice adds to bow efficiency.

Cable adjustment is accomplished by ratcheted rotating shafts spanning the side plates. These are activated by the same hex key that is used for limb adjustment.

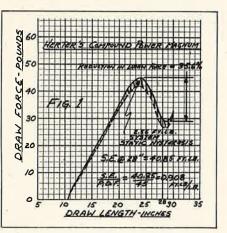
All in all, we feel that the Herter's compound is engineered well with good construction. On a minor point, the attachment of the synchronizing sheave to the eccentric could be improved by the addition of one more machine screw with spacer. This would provide two-point support and relieve the bearings of added stress from the unequal cable loads on the eccentrics. The cable loads are unequal because the eccentric mounting sets each cable at a different lever distance from the axle. Since the cable grooves are set to each side of the center plane of the eccentric, unequal cable loads have a tilting effect on the eccentric and added load on the bearing. The increased bearing span contributed by the spacers between the eccentric and the concentric sheaves is beneficial because it adds stability to the rotating assembly, reduces the load on the bearings and the bending load in the axle.

While it may not be obvious to casual observation, the rigging arrangement on the Herter's compound offers an extra bonus in the area of bow life. Since the cables that carry the principle limb bending forces are attached to the side

plates at the ends of the handle section rather than from limb to limb, as when mid-limb pulleys are used or as in the new breed of compounds with limb tip to tip attachment, the bending stress in the handle section is reduced. The Herter's arrangement confines the bending stresses to the side plates and the heavy handle ends and actually reduces the bending stress in the center section of the handle. This makes it possible to have a smaller handle cross section without undue concern about handle failure.

So much for the novel construction of this compound; now, how does it shoot?

We adjusted the bow for three different peak draw weights - 45, 50 and 55 pounds, with draw length set at 28 inches. The resulting force-draw curves are presented in Figs. 1, 2 and 3 respectively. A summary of the significant data is tabulated here:



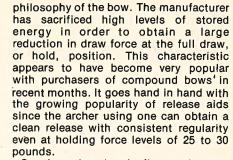
•The bow set at 45 pounds stores 40.85 foot-pounds of energy at 28 inches, which is 0.908 foot-pounds for every pound of peak draw force. Dropoff is 35.6%.

PEAK DRAW		VC.	
FORCE (LB.)	45	50	55
STORED ENERGY (FT. LB.)	40.85	16.54	49.90
S.E/P.D.F. (FT. 18./18.)	0.908	0.93/	0.907
REDUCTION IN DRAW FORCE (PER CENT)	35.6	38.0	41.8
SYSTEM STATIC HYSTERESIS (FT. LB.)	2.56	2.99	3.47

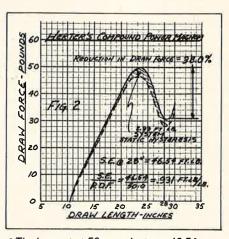
ALL DATA FOR 28" DRAW LENGTH

190.2 197.7 201.9

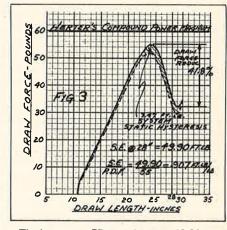
A glance at values for stored energy and the ratio of Stored Energy (S.E.) to Peak Draw Force (P.D.F.) for the three draw weight levels highlights the basic design



On the other hand, finger shooters know that holding forces of 35 pounds or more facilitate a clean release because the string tends to pull itself from the fingers. Swing to the side (of string and arrow nock) is less pronounced and there is less chance of arrow and cable (continued on page 72) contact.



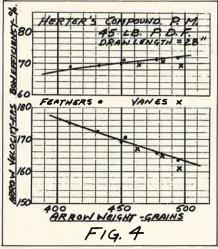
• The bow set at 50 pounds stores 46.54 foot-pounds of energy at 28 inches, which is 0.931 foot-pounds for every pound of peak draw force. Dropoff is 38.0%.

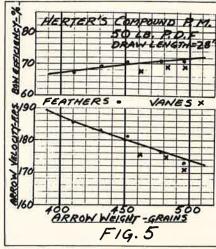


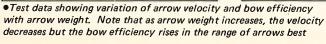
•The bow set at 55 pounds stores 49.90 foot-pounds of energy at 28 inches, which is 0.907 foot-pounds for every pound of peak draw force. Dropoff is 41.8%.

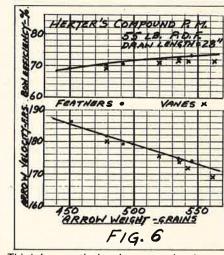
• Force-draw curves: The area under the solid-line curve down to the horizontal base line represents the work necessary to draw the bow. This becomes stored energy. If you would like to roughly check the values given, read the draw force for each inch of draw length, then total these values in pounds from the point where the curve begins (zero intercept) to the stated draw length (28 inches). As example, Fig. 1 shows 21 pounds at 16 inches of draw, almost 25 pounds at 17

inches, etc. Divide the total by 12: this gives you foot-pounds of stored energy. The values on the curves have been calculated by a more accurate, lengthy method of incremental force averaging; you might not come up with the same totals we did, but you should be fairly close. System static hysterisis is the stored energy lost due to friction in the compounding system. There will be less loss during the shot because there is less friction in swifter movement.









matched to the bow. This is because the heavier arrows absorb more energy, and less energy is thus dispended in vibration during the bow's

## Showing them up in the

## "show me" state

With nearly every type of habitat, and deer almost everywhere in the state—some of them very big—Missouri bowhunters have a good thing going.

by Joel Vance

THERE ARE 114 counties in Missouri, and Pemiscot is the only one where I have no desire to hunt deer.

That's because conservation agents haven't seen any deer there and there were none taken during the 1974 gun season. But Pemiscot, a Bootheel county, heavily agricultural, with little wildlife habitat, is a definite exception in a state which is just coming into its own as deer country.

Some see Missouri being one of the nation's tops in coming years, especially as habitat declines in the Lake States. It already ranks in the top 10 in gun hunting with an annual harvest of 30,000 or so.

As far as bowhunters are concerned, Missouri is tops. Archery hunters are catered to and the opportunity is exceptional. In 1973, some 24,508 bowhunters took 1,285 deer, so the 1974 harvest of 1,424 was a jump of nearly 10 per cent. Both bowhunter numbers and harvest have been climbing 10 per cent or more for years.

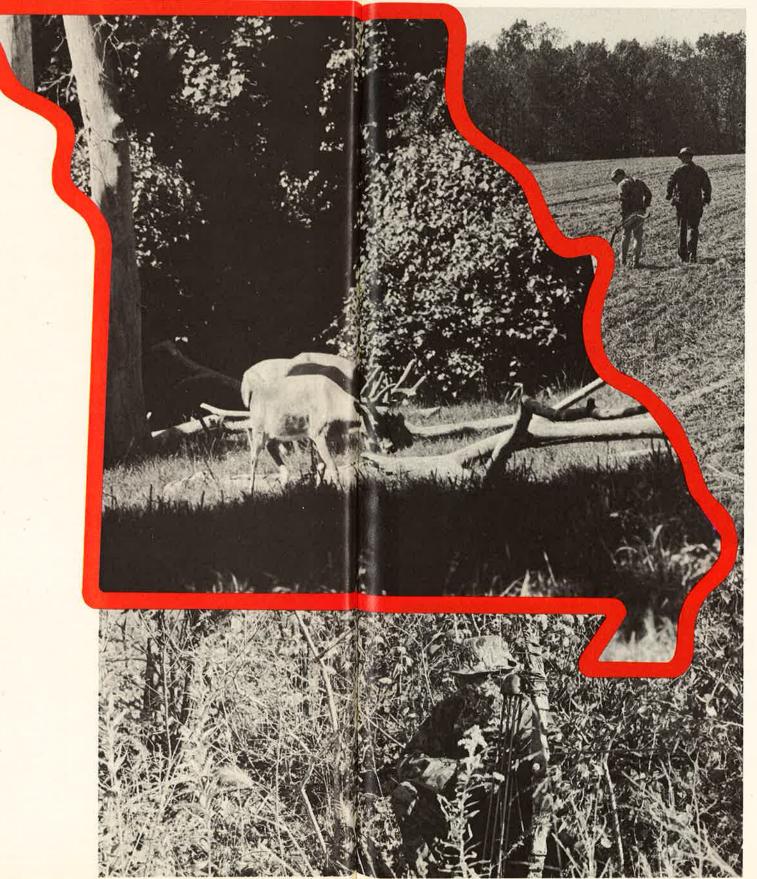
Obviously bowhunting is popular. One reason is a three-month season, October through December. Another is permit cost which is low — \$7.90 for residents and \$15.40 for non-residents. No other permit is needed and archers may take one deer of either sex statewide during the season.

One clue as to where to go is in a listing of the top harvest counties, but that doesn't tell the whole story, for there are few deer taken by bowhunters in the Ozarks — not because of a lack of deer, but because of a lack of hunters. The high harvest counties in 1974 were scattered pretty much across the state. St. Charles, one of the three counties that make up the highly urban city of St. Louis orbit, was the top bowhunting harvest county in the state with 62 deer taken. Of those, 27 came from the 7,000-acre August A. Busch Memorial Wildlife Area which limits deer hunting to bowhunters only, during a special season.

Gasconade and Marion County bowhunters each checked in with 47 deer. Gasconade, a small county, nevertheless is one of the state's best deer areas, with excellent Missouri River hills habitat. Marion is a Mississippi River hills county.

Macon, with 33, Adair, with 24, Linn, with 43 and Knox with 23 all are contiguous northern Missouri counties which always have good gun harvests. Monroe (31) not only has good deer habitat, it has very active bowhunters. Newton (41) is a southwestern Missouri county with two nearby cities, Joplin and Springfield. Taney County, within which was held the Drury Refuge Special Archery Hunt, contributed 28 deer, and Johnson County, which hosted the annual Knob Noster State Park Archery Hunt, had 39 deer taken.

Most Missouri bowhunters do what I do — combine routine, day-to-day hunting with a hoped-for big fling. Most hunters try to nail down an area within a few minutes of their home so they can hunt in the early mornings and late evenings, before and after work. One exception is Frank Tolivar, St. Charles, who may be Missouri's most successful bowhunter. He has taken 17 straight. Considering that the success rate for Show-Me State bowhunters is about five per



cent, the odds that Tolivar would score every year for 17 are heavily against him.

Tolivar hunts on weekends almost exclusively and has taken deer all over the state. He has taken deer from islands in the Missouri River near St. Charles, from around Lake of the Ozarks, from the Busch Area, from Hickory County and from the Mingo National Wildlife Refuge.

Mingo is only one of many, many public areas open to bowhunters. There is a million and a half acres of Missouri National Forest land. Write Missouri National Forests, Rolla 65401, for maps and information. In addition, the Conservation Department has nearly 200 wildlife areas, tower sites, accesses and state forests, comprising perhaps a quarter of a million acres, open to hunting.

#### PRIVATE PATCHES MOST PRODUCTIVE

Missouri landowners are touchy about trespass, so any hunter on private ground absolutely must have the landowner's permission. On the other hand, that usually is not hard to get if a bowhunter is pleasant and polite and takes care of the landowner's land better than he would his own.

The private patches that can be hunted day after day are the most productive, even if they aren't the best deer habitat. The more often a hunter visits his private patch, the better he learns the secrets of the few deer it contains.

Almost all Missouri bowhunters seek out deer crossings, known deer trails. Even in a north Missouri soybean field, the animals tend to enter and leave at about the same spot. An old woods leading into a field is ideal. The best time to scout these avenues is right after a heavy rain so you can be sure any tracks you see are fresh ones. One set of tracks doesn't make an avenue, but a lot of them does.

More successful hunters use a tree stand than set up on the ground, both for visibility from their standpoint and invisibility from the deer's. The elevated stand also lifts a hunter's scent above a deer's ever-sensitive nose. But beware! Once I watched helplessly as a nice doe caught me by surprise. She bounded so quickly across my field of fire that I had no time to react and draw my bow. Apparently she was being pursued by a buck (who never showed up). She stopped directly beneath me, her ears twitching, her sides heaving — but on my right side and there was no physical way I could contort my body to get a shot without falling out of the tree.

Few Missouri hunters stillhunt and fewer yet manage to do it successfully. I've known hunters who sneaked up on deer, but they're in the minority and most of their success was luck—catching a deer asleep, for instance. Once I got within 10 feet of a sleeping deer, but it was 10 feet of solid standing corn and all I saw was a fleeting glimpse of white tail as the animal crashed away. One hunter I know occasionally stillhunts with a white handkerchief in one hand. Every so often, he flicks the handkerchief, simulating the twitch of a deer's tail. He claims it works by lulling the suspicions of deer who may hear, but not see him clearly. (continued on page 66)

<sup>•</sup>Three whitetails, one with a hefty rack, feed in good habitat. The Missouri season is three months long, October through December. Missouri Department of Conservation photo.

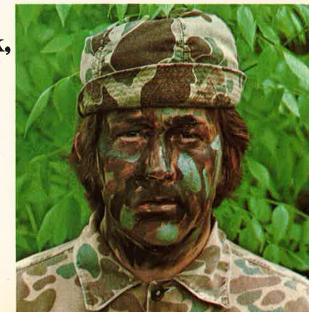
<sup>•</sup>Ron Whittaker and Delano Lewis, Mexico, Mo., upper right photo, search for sign in soybean stubble field.

Good camouflage gives almost perfect concealment, bottom photo.



You see in color, but lower mammals mostly see black, white and shades of gray. Plan your camo scheme accordingly, with most emphasis on proper balance between light and dark areas in relation to your surroundings.

● Here's how you see camo. Fluorescent camo patterns are becoming more common; more and more states are ok'ing use of camo style safety orange in place of solid swatches. Check your state laws before using.



•Here's how mammals see camo, in black, white and shades of gray. Main effect of camo is to break up solid lines. Skin is most highly visible, and such areas move the most during the shot.



TO THE BEST OF ANYONE'S knowledge, lower mammals have little color vision. Eyes of lower mammals have few cones (which distinguish color), but the normal or high content of rods (which are receptive to light intensity). Some animals show the beginnings of cone apparatus and minor color response; and, of course, no deer or elk has stepped forth to volunteer the information. A German study we examined found that if the illumination of the surroundings was approximately the same as that of the test patterns, which would be the same as that of camo clothing in natural terrain, the test animals' threshold of color vision was much, much lower than under more intense light. The test also found that when brightness decreased, the acuity of vision decreases more slowly in the region of cone vision than in rod vision. So get yourself into the shadows.

of cone vision than in rod vision. So get yourself into the shadows.

The German test proved color vision in a pigmy goat, a red deer cow and Nilgai antelope. The red deer distinguished six color regions from each other and from shades of gray of equal brightness. The deer distinguished a slightly reddish violet, red, orange, yellow green to green and blue. On a black background (like shadowy areas in the woods), she could no longer discriminate between yellow and gray in a medium brightness. The study showed that in strong light, animals whose pupils form horizontal slits can discern horizontally striped patterns better than vertical ones. Split-hooved animals, except the camel, have horizontally rectangular slits. So you might be wise to use more vertical patterns in your camo.

Good camo not only hides you, it gives you the confidence to be a better hunter



WE THOUGHT IT would be easy to take these camouflage photos. It might have been, for someone smarter than us. But we're glad we're not that smart, because in the process of shooting and reshooting photos we learned some things about camouflage. We're passing them on to you, and hope that one or two things shown or talked about here will help you.

For instance:

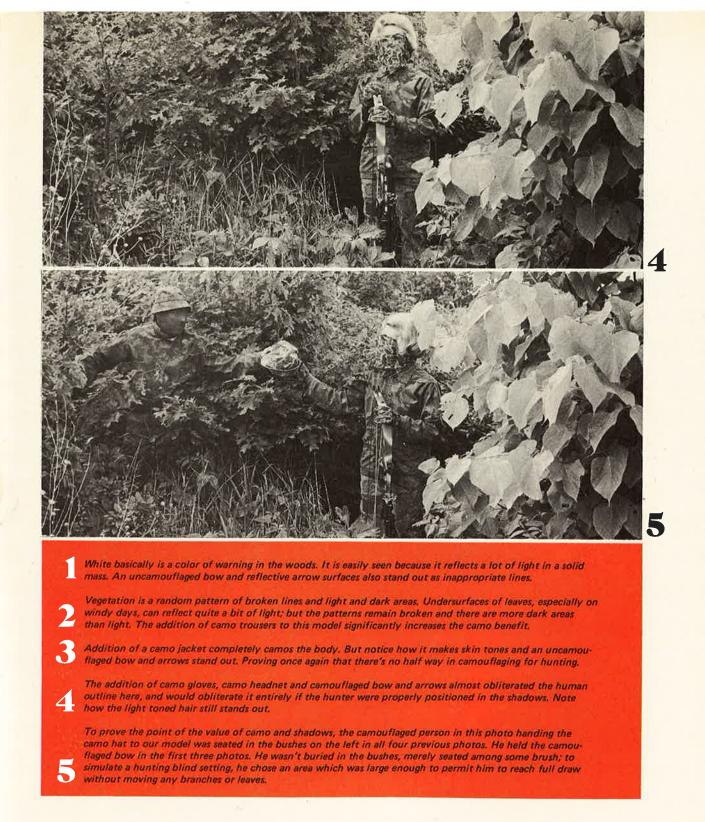
• One small bare spot of skin looks exactly like what it is . . . bare human skin. Which spooks game animals. So take extra care in camouflaging all exposed skin surfaces, and camouflage them fairly heavily. A few streaks of dark camo grease or burnt cork may look fine to you, but it won't be enough. There's still a lot of skin showing.

• On your face, be especially sure to cover shiny cheekbones, the bridge and sides of your nose and your chin. These areas are oily and reflect more light.

Place camo on your eyelids. A deer looking right at you will catch the blink of uncamouflaged skin — and don't tell us you won't blink once or twice if a deer is looking right at you.

• Use camo in short daubs or lines; it more effectively breaks your outline. Don't make solid lines of camo down the tops of your fingers; cross-hatch them with alternating colors of camo material.

• Most natural looking camo is produced by equal streaks of black, brown and green grease. Green grease is highly visible to *your* eye, but it is just another light area to a deer. (See the



photos.) This is why you should use more dark values, especially since you should be stalking or sitting in the shadows.

• Break up the outline of your bow limbs as much as possible. A solid dark camo job leaves an easily seen line. Cross-hatching, or streaked lines, or a leaf pattern are all better.

• The varying values of light are much different from what we expected. We thought that dark brown splotches of flat paint on a medium green wool background would be good camo. But the black-and-white photo showed us differently; the brown was invisible.

So we sprayed an aspen yellow on the green wool background and the results are quite different and much better.

Always be aware of the light or dark value of the color. We thought the yellow would be too brilliant, but when we sat in the shadows, where light played across us as tree branches and leaves moved in the breeze, the yellow splotches on the wool jacket looked just like areas of light among the shadows.

In the color spectrum, reds and blues tend to show dark when converted to black and white. Oranges and yellows tend to go light, producing a gray tonal value in black-and-white viewing. A heavy green will go dark, a light green will probably show as light gray in black-and-white viewing.

A solid fluorescent color, like hunter orange, possesses a certain brilliance unlike few things seen naturally in the forest.



# Introducing the New Ben Pearson Compound So Fast, So Quiet, So Uncomplicated you have to see these

\*The following is a summary of the results obtained in April, 1975, during extensive testing of the new Ben Pearson Compound and the products of 4 major compound bow manufacturers. The tests were conducted by a leading independent research organization of international reputation. For the complete test report, write Ben Pearson Archery, Box 270, Tulsa, Oklahoma, 74101.

\*Certified Test Results

#### Speed Test: All compounds tested at 53 lb. peak weight

	Bow Fi	t. Per Second Average	
Velocity of arrow at	Pearson Compound	226	
20 ft. 29" draw length.	Compound "B"	213	
Arrow weight: 24-25	Compound "H"	203	
grams. Measured in	Compound "J"	216	
feet per second.	Compound "P"	213	

## Quietness Test: The lower the number the quieter

	Bow	Sound Level
Maximum sound level	Pearson Compoun	d 76
at 3 ft, with 64 decibels	Compound "B"	79
average background	Compound "H"	
noise.	Compound "J"	76
	Compound "P"	77

<sup>\*</sup>Bow failure prohibited test conclusion.

### Vibration Test: The lower the number the less vibration

	Bow	Vibration Level
Maximum velocity of	Pearson Compound	7
vibration of bow in	Compound "B"	6
test fixture.	Compound "H"	10
	Compound "J"	8
	Compound "P"	11

At Ben Pearson Archery, the introduction of a new bow is very special. More so when it's the most advanced bow we've ever made.

Our new compound is unquestionably that.

The Pearson Compound has been designed to incorporate the most significant characteristics of today's best compounds with Pearson's own revolutionary new high-performance features.

The end product is a remarkably efficient, one piece, full compound bow that retains all the beauty and feel of a traditional bow while providing extraordinary speed, great stability and quietness. A bow that delivers more foot/pounds of energy, and thus, more speed, than any of what are considered to be the 4 major compounds on the market today.

The Pearson tops them all — by as much as 23 feet per second.

**226** Feet Per Second! The Faster. The Better. We knew the Pearson Compound would be fast. And official results verify it. At 226 feet per second, no other compound tested could equal its velocity.

One key reason is a better working limb. We call it a "Hyper-Flex" limb. It incorporates many of the same principles of energy build up, storage and release exclusive to the "Hyper-Kinetic" action of Ben Pearson's best traditionally styled hunting and tournament bows. Working more efficiently in tandem with the cam, it provides the archer with unmatched speed and great stability.

### Turnbuckle Tuning: The Most Uncomplicated Of All the Compounds.

For the first time, tuning a compound is simple and uncomplicated. The turnbuckle tuning on the new Ben Pearson Compound requires no special tools, no special knowledge of physics or mechanics.

Every new Pearson Compound is tuned and factory tested before it ever reaches your hands. And you can keep it in tune with a simple turnbuckle adjustment. You can forget about attending tuning seminars or pouring over complicated diagrams and instruction materials.

Unless your Pearson Compound is subjected to extreme overdrawing or other severe damage, it can always be in tune for top performance without factory maintenance.

#### The Total Performance Compound

Many of you have been waiting for a compound bow combining speed, simplicity and true handcrafted beauty. It's here. Now. You have it all in the new Ben Pearson Compound.

You've seen the proof on paper. Now go out and prove it to yourself.

ben pearson®

ZEBCO DIVISION BRUNSWICK CORPORATION

+(\*\*



"I disagree with quite a few of the popular elk-bugling notions."

## HOWN BEATUTHEN BULL - BUGE



#### by Michael Lapinski

THE BULL'S answering bugle was so tinny-sounding that at first I thought it was another hunter calling. However, the hollow grunt on the end of the squeal made me realize it was a bull elk.

The bull was about 300 yards away, on the other side of a brushy creek bottom. With each answering bugle, the elk came a little closer until it was only 80 yards away.

He bugled; I bugled. He bugled; I bugled. The bull wouldn't come any closer, and I was becoming worried that he might lose interest. I did, however, have one more trick up my sleeve

Picking up a stout limb from the forest floor, I proceeded to knock the heck out of the surrounding trees and bushes. Then I bugled.

That bull bugled back with as much emotion as I've ever heard come from these animals. The distant crashing of

You can make an elk call from plastic tubing and a wood plug. The notch should be about 1/4 inch deep and one inch long. Shave the plug about 1/16 inch for the air passage slot.



antlers against brush became louder, and then I heard hooves. The bull was coming in!

I nervously positioned myself behind a small fir tree along the creek bank that I'd been bugling from. My bow was up and ready. The crashing was very close, and I could see small trees sway as the bull pushed them aside. Before I could fully prepare my nerves, the huge bull elk had charged up to the creek bank.

But there were a few problems. One, the creek bank was choked with cedar reproduction, making the ten yard shot impossible. Two, the bull had come in on my downwind side. Watching the enormous antlers towering over the small trees, I prayed that the elk had not caught my scent . . . but he had.

The elk wheeled and was gone as quietly as a ghost. I was numb. Ten yards from a bull and I'd blown it! Out of sheer frustration, I bugled as loud as I could. To my utter amazement, the bull answered from about 100 yards away! After catching my scent, could this bull still be in the mood for a fight?

I knelt on the forest floor, feverishly trying to plan an attack. I figured that the animal would not come back after having caught my scent. But he had bugled, which meant he was still interested. Well then, if the bull would not come to me, I would go to him!

Busting through the heavy brush and young trees, making as much noise as possible, I headed in the direction of the bull. We each bugled twice as I closed in, and the last time the bull answered

from only about 50 yards away.

Once again, I grabbed a branch and thrashed the brush. That did it. I could hear hooves as the elk closed in for the fight.

I caught a glimpse of the bull at 20 yards. He stopped there and bugled; I dared not. Crashing and swaying tree tops told me the bull was in mock combat. I crept ahead about five yards to a small opening in the trees.

The massive animal was punishing two six-inch spruce trees as I drew my 65-pound bow and released the arrow. The shaft hit low behind the shoulders, where the heart should be, and only the fletching protruded as the bull lurched and disappeared into the forest. A half hour later I was admiring a beautiful, mature bull elk whose rack later made the book in the 1972-74 Pope and Young Club competition period.

My job as a timber road inspector in the St. Joe National Forest of northern Idaho gives me an excellent opportunity each fall to bugle the mighty bull elk, and from my experiences, I've come to agree and disagree with quite a few of the patented elk-bugling notions.

Of paramount importance when bugling elk is to remember that these animals are extremely unpredictable when in the rut. Forget the "wives tales": it's a waste of time to bugle a herd bull . . . bulls don't bugle during inclement or hot weather . . . they don't bugle at midday. Wrong; elk in the rut have and will contradict the above.

I was hunting with a friend who shot a massive bull elk at one o'clock in the Much of the bugling misconception begins with the bugle itself: use only a copper tube; a ceramic one; a plastic one; a fat one; a skinny one. Any of the above combinations will bring in a rutting bull, but as to there being "the" only way to do it, it is just not true. I've whistled in elk with my mouth and I know a bowhunter in Kamiah, Idaho, who has bagged bulls simply by whistling. The commercial calls all

I use plumber's plastic piping simply because it can easily be cut with a knife and is the cheapest at the local hardware store.

work fine, as does a child's toy whistle,

The latter should be used as a last resort

as it least approximates the real thing.

As far as a bugle's tone goes, it should imitate a bull's fighting call as close as possible; but remember, there is no call, homemade or manufactured, that has the hollow, rumbling, musical grunt of a bull elk. Anyone who has heard a bull's challenge ring through the mountains can distinguish the real thing from the manufactured.

Herd bulls are bugled in and bagged every fall by hunters who have simply given the matter a little thought. Most smart bowhunters, when they either see the harem cows or suspect a herd bull, will close in on the area from downwind; bugling to keep the bull's location pinpointed. (continued on page 70)

 Upper left photo, the author tries to fool a bull elk. Bull elk photo, above, by Leonard Lee Rue III.





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JUNIOR OLYMPIC ARCHERY DEVELOPMENT PROGRAM

George Helwig, Chairman 69 E. Galbraith Road Cincinnati, Ohio 45216 RABSKA, GREEN WIN COLLEGIATE NATIONAL TITLES Don Rabska, San Bernardino Valley College, and Debbie Green, Riverside City College, proved that consistent shooting will win a lot of medals as they won individual titles in the 1975 U.S. Intercollegiate Archery Championships. Green could do no better than tie a tourney record at individual distances within any of the rounds and Rabska tied one and set a Middle Metric record; however, both set new records for total score, Green with her 1855 (521 "600" Round, 771 "900" Round, 563 Middle Metric), and Rabska with his 2000 (550 "600" Round, 845 "900" Round, 605 Middle Metric).

Debbie Green had the toughest time winning, mainly because of her 771 on the "900" Round; but she sewed up her title with a strong Middle Metric score and edged out Debbie Hammer by three points and Wendy McLean by eight. Rabska was one point down after the first day but two strong finishing rounds put him comfortably ahead. He finished sixth in last year's championship.

The top ten in each division:

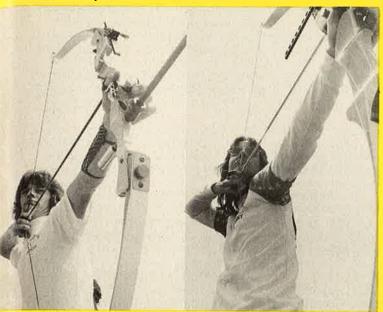
Men	600	900	Metric	Total
Don Rabska, SBVC	550	845	605	2000
Scott Page, Palomar	536	836	598	1970
Glenn Daily, ESSC	551	815	599	1965
John Smith, SBVC	536	845	572	1953
Charles Eby, OSU	527	837	555	1919
Kirk Snyder, Ohio U.	535	808	560	1903
Gary Riley, SBVC	546	785	569	1900
Rich Stonebraker, Penn.	522	817	552	1891
Neil Priddy, U. of Wash.	529	822	536	1887
Jack Wagner, OSU	525	804	552	1881
Women				
Debbie Green, RCC	521	771	563	1855
Debbie Hammer, SBVC	518	787	547	1852
Wendy McLean, ASU	514	783	550	1847
Darlene Sedlock, ESSC	505	769	523	1797
Luann Ryon, RCC	516	776	505	1797
Ann Kilby, U. of A.	510	751	526	1787
Bonnie Lindsley, Citrus	483	772	516	1771
Wendy Vance, ASU	501	780	490	1771
Jean Stephenson, ASU	496	753	520	1769
Beverly Ray, ASU	505	757	496	1758
Diane Tone, ASU	476	761	521	1758

In team competition, the San Bernardino men's team of Rabska, Smith and Riley set a new record with 5853; the Arizona State women's team of McLean, Vance and Stephenson set a new record of 5387; and the East Stroudsburg State College team of Daily, Lecker, Sedlock and Kemmerer set a new record of 7392.

•Margaret Klann, Arizona State University coach, right, retiring director of the NAA College Division receives the first "Coach of the Year" trophy, which will henceforth be known as the Klann Trophy, from Lorraine Pszczola, San Bernardino Valley College coach and incoming College Division director. Miss Klann was the first director of this division and was the driving force which got competitive collegiate archery organized and growing. She was also presented with an \$1,160 check which was compiled by her many archery friends and which she will use to take a long deserved vacation.



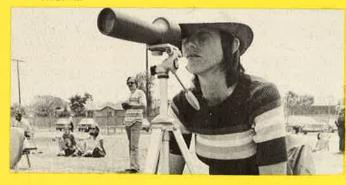
There were 160 archers and coaches from 35 colleges around the country.



•Left, Don Rabska, men's champion, and right, Debbie Green, women's champion. All photos by Dan Cabe.



•Above, the long white line of 130 inter-collegiate archers. The tournament was held at Cerritos College, Norwalk, Cal., under the direction of Joan Schutz. Below, Rose Svarc, a four-time archery All-American and now the Palomar College archery coach, spots for some of her students.



#### WORLD TEAM TRYOUTS

The St. Louis Observatory provided the background for shooters competing in the World Team tryouts at Forest Park, Missouri, May 10th and 11th, hosted by the St. Louis Archery Club on their club grounds. The shooting field was a flat and a well manicured area with descending grades on both sides of the field possibly contributing to the occasional tricky winds that at times confused the archers.

Although Mother Nature co-operated by providing sunny skies and temps in the eighties for most of the tournament, intermittent rain plagued the second day and slowed the tournament temporarily. When it appeared that the showers would not let up officials kept the tournament on schedule by having all competitors shoot simultaneously for the remainder of the tournament. The rain didn't seem to have an effect on

the concentration of the archers, nor their form as excellent scores continued to show up on the scoreboard.

Darrell Pace took an early lead with a 603 total after seventy meters, 15 points ahead of Rich McKinney. McKinney rallied at 50 meters with a 323 to make up the 15-point deficit and pull ahead of Pace by eight points. McKinney held a comfortable lead for the remainder of the tournament, finishing strong the second day with a 323 at 50 meters and 348 at 30 meters despite the rain. Following the first full day of shooting the men's scoreboard showed McKinney leading with a 1254, Pace in second with a 1248, Brothers and Gerard third and fourth with a 1240 and 1234 respectively.

Rod Baston had tied for seventh at the end of the first day, however a 286 at 90 meters and a 318 at 70 meters Sunday



• From left, standing, Doug Brothers, Rod Baston, Ruth Rowe, Jodi Crowl, Darrell Pace and Irene Lorensen. Kneeling, Linda Myers and Rich McKinney. They were the U.S. team at the World Championships. Ed Myers photo.

morning along with his continued excellent shooting kept him in fourth for the remainder of the tournament and assured him a spot on the World team, along with McKinney 2520, Brothers 2474 and Pace 2471.

Irene Lorensen shot a strong 295 at 70 meters and built a comfortable lead that was hard to challenge. The second day it appeared that Lorensen was on her way to a new record (until the rains came), with a 306 at 70 meters and a 314 at 60 meters. The rain no doubt had an affect on her bid for the record. Her total of 2453 indicated she would be a tough competitor at the World.

Linda Myers, showing strong form, stayed consistently in second place and finished with a 2371. Young Jodi Crowl, who was in fifth place after the first day, made her move the second day by shooting strong under rainy conditions to finish third with a 2351, passing Cheuvront and Rowe in the process. The only down-to-the-wire battle for team position was between Cheuvront and Rowe. After the first day, Rowe was ahead of Cheuvront by ten points. Cheuvront caught Rowe at 70 meters and was in fourth place at 60 meters, but had difficulty at 50 meters and dropped to fifth place at the end of the day just four points behind Ruth Rowe.

Early in the tournament discussions were heard challenging the advantages of the daily spring practice sessions outdoors in the southern climates as compared to the few warm day practice sessions in the Midwestern states due to temperate weather conditions, including rain, cold and sometimes freezing temperatures. This particular tournament was scheduled somewhat earlier than usual and some felt that the southern shooters had an advantage over midwestern shooters because of more outdoor practice sessions. It was interesting to note that although the southern shooters had warmer climates they also had practice problems — the weather would become so hot during the day that if practice wasn't completed by 8 a.m. the heat was unbearable.

by Bob Skiera

August/September 1975

#### U.S. MEN SWEEP WORLD CHAMPIONSHIPS

Darrell Pace set a host of new records in winning the men's world championship title, Rich McKinney was second, and the U.S. team won a gold medal at the World Championships held in late June in Switzerland. Linda Myers, the defending women's world champion, led U.S. women with a fifth place finish in her division, shooting 2393.

Pace shot a 1266-1282/2548 to set a new World Championship event record. He also set new event records with a 569 double at 90 meters and a 656 double at 50 meters. Plus a new overall world record of 328 single at 50 meters. Plus a new World Championship event record of 698 at 30 meters and a new overall world record of 354 single at 30 meters.

Rich McKinney was second with 2458; Kauko Laasonen, Finland, was third with 2450, Rod Baston was fourth with 2438, Sante Spigarelli, Italy, was fifth with 2437, and Doug Brothers was sixth with 2429.

The U.S. men's team set a new World Championship team record of 7404.

Women's championship was won by Zebiniso Rustamova, USSR, with 1238-1227/2465, a new record. Valentina Kovpan, USSR, was second with 2430 and Hi Han Sun, North Korea, was third with 2401. The USSR women's team set a new record with 7252.

A full report will be in the October/November issue.

#### **REMAINING FITA STAR EVENTS**

July 19 — Southern Archery Association, Pinehurts, N. C. J. Dewey Hutchinson, 180D Westgate Circle, Winston-Salem, N. C. 27106 has all info.

Aug. 5-6 — NAA Championships, Oxford, Ohio.

Aug. 16-17 — Wildlife Archers of Washing. Joan Eliason, 8323 - 12th St., N.W., Seattle, Wash. 98117 has all info.

Aug. 23 — Pennsylvania State Championships, State College, Pa. Ralph L. Shope, Jr., 109 Bottorf Dr., State College, Pa. 16801 has all info.

Sept. 20 — Louisiana State Championship, New Orleans. Gene Thorpe, 230 S. Broad St., New Orleans, La. 70119 has all info

Oct. 25 — Pacific Coast Championship, Sacramento, Cal. Karl Radde, 445 S. Del Sol Lane, Diamond Bar, Cal. 91765 has all info.

#### **NEW JERSEY COLLEGE CHAMPIONSHIPS**

Marge Connell, Atlantic Community College, with an NAA "900" Round score of 627, and Bob Joyce, also ACC, with 754, won top women's and men's individual honors at the NAA College Division New Jersey State Championships in April.

In women's shooting, Lynn Grunow, ACC, 569, and Barbara Boyd, Glassboro State College, 522, were second and third. Second and third men were Bruce Affrunti, ACC, 750, and Dave Roskoski, GSC, 745.

#### MIDWEST INDOOR COLLEGE RESULTS

Jack Hafforth, Bellville Jr. College, won men's freestyle with a 276-271-273/820 (18 meters, 10-ring face, triple 300), and Dorothy Meyers Weldon, Olivet College, won women's freestyle with 236-232-209/677 at the Midwest Indoor Intercollegiate Archery Tournament held at Indiana State University.

Following Hafforth were Kirk Snyder, Ohio University, with 811, and Chuck Eby, Ohio State, 793. Following Weldon were Becky Beuoy, Ohio U., 591, and Terri Devit, Indiana State, 583.

Barebow winners were Gary Alexander, Purdue, with 193-200-185/578, and Sue Meyers, Olivet, 218-186-226/630.

The Ohio State men's team won with a 2335 total, and the Purdue women's team won with 1467. Purdue won mixed team shooting with 2706.

The 1976 tournament will be in February at Indiana State University. Exact dates are not yet set.

#### LESSARD, BOSCH WIN ARIZONA STAR FITA

Lucille Lessard, Loretteville, Quebec, with an 1169 FITA and Colin Bosch, Phoenix, with an 1114 FITA, won their respective divisions at an Arizona State University/Sun Devil Archers Star FITA event in April. Following Miss Lessard were Ann Kilby, 1131, Irene Lorensen, 1112, and Diane Tone, 1105. Following Bosch were Mark Vancas, 1089, John Mikell, 1038, and Robert Nall, 1032.

Carole Cheuvront, Phoenix, with an 1113, won intermediate girl's shooting. Robin Wools, Phoenix, won junior girl's shooting with an 1159. Maureen Edwards, Phoenix, with 938, won the women's pro division.

Martin Sliwinski, Phoenix, with an 1182, won the junior boy's division. Bill Chapman, Phoenix, with an 1114, won men's pro shooting.

#### NAA FLIGHT CHAMPIONSHIPS AUG. 2-3

In addition to the regular flight competition, Flight Committee Chairman R. I. Hancock has announced there will be compound bow, regular flight, compound bow broadhead flight and conventional bow broadhead flight events following the conclusion of the major flight events.

The added events will be governed by NAA flight rules. There are quite a few variations in broadhead flight shooting, according to Hancock, and his committee hopes to have this and the compound bow events eventually accepted by the NAA as sanctioned championship classes.

To get a complete set of the broadhead flight rules, write to R. I. Hancock, 2787 McClelland St., Salt Lake City, Utah

#### WINTER LEAGUE RESULTS

The Cincinnati Archers #1 team, with an 11231 total, topped amateur men's team competition in the NAA's fifth winter league action. Six Gold Archers, Fenton, Missouri, was second with 10914.

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In individual men's amateur shooting, Darrell Pace, with 2913, Richard Bednar, 2885, Doug Brothers, 2862, Rich McKinney, 2805 and Larry Smith, 2801, were tops.

Top men's college team was the Atlantic Community College group with 10413. Brian Keller, 2665, Bruce Affrunti, 2650, and Bobby Joyce, 2637, were top individuals.

The Cincinnati Archers women's team topped their division with a 9560 total. Top individuals were Linda Myers, 2809, Joan Strimple, 2628, Donna Weinsting, 2602, and Carol Cottrell, 2601. Lynn Grunow was the top college woman with 2343.

Doug and Teresa Brothers, with a combined 5354, topped the husband-wife team shooting.

The Cincinnati Archers high school team won their division with 10606. The Portage Jr. Archers #1 team won JOAD shooting with 10674.

Richard Bednar was high individual intermediate boy with 2832, followed by Richard Smith, 2811. Joanna Bednar was top intermediate girl with 2642, followed by Lanette Simmonds, 2323. Billy Blaze topped junior boys with a 2645 total, followed by Bob Rufener, 2419. Paula McKinney won junior girls with 2002, followed by Judy Stundon, 1924. Bill Ferchak won cadet shooting with 2075.

Pat McKinney won amateur men barebow shooting with 2657. The Munsee Olympians, Muncie, Indiana, topped men's pro teams with 11181. Tim McKinney was top men's pro with 2910, followed by Bill Freeman, 2867. Betty McKinney topped women's pro shooting with 2798.

#### 91st NATIONAL CHAMPIONSHIP

The 1975 National Target Championship will be held Aug. 3-8 at Miami University, Oxford, Ohio. Advance registration closes July 7, but you can register late by contacting NAA offices. No registrations will be accepted after August 2. Fees are \$20 for adults, \$12 for intermediates to 18 years, \$10 for juniors to 15 years, and \$8 for cadets to 12 years.

Shooting begins Aug. 5 with crossbow and the two long FITA distances. Aug. 6 will have crossbow, the two short FITA distances and the clout round. Aug. 7 and 8 will be repeats of the first two days, minus the clout.

To participate, you must be an NAA member and present your NAA amateur card. Intermediates, juniors and cadets will shoot in freestyle class only.

For full info, contact the NAA office, 1951 Geraldson Dr., Lancaster, Pa. 17601 or call 717/569-6900.

Requests for rooms should be mailed to Continuing Education, c/o Dr. Robert Sherman, 106 Roudebush Hall, Miami University, Oxford, Ohio 45056. Room fees are \$6 per night when two people occupy a room. Singles are \$8.50. Room fees will be paid at the dormitory and should not be paid in advance. Reservations will also be accepted by telephone at 513/529-2927.

This is a registered FITA Star event. Your single FITA may be used as an Olympic qualifier and as a qualifier for the 1977 World Championship.

#### **ANNUAL MEETING AUGUST 7**

The NAA annual membership meeting will be held Thursday, August 7 at 8 p.m. in the University Center Building of Miami University, Oxford, Ohio. Three people will be elected to the Board of Governors and other business will be handled.

FIELD CHAMPIONSHIP OF AMERICAS RESCHEDULED FITA could not approve the originally planned Winnipeg site for the Field Championship of the Americas by June 20, so the event has been rescheduled for Nov. 15-16 near Orlando,

event has been rescheduled for Nov. 15-16 near Orlando, Florida. U.S. team tryouts will be held in early October. Contact the NAA offices for full details. (continued on page 50)

THE SHAPE OF THINGS TO COME...

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#### 1st U.S. INDIAN ARCHERY CHAMPIONSHIPS

Harry Nez of the Navajo Community College, Chinle, Az., archery team won the men's freestyle championship by one point, 524-523, over Bill West, Orange, Cal. at the First U.S. Indian Archery Championships held on the NCC campus in May. They shot the 25- and 18-meter FITA rounds. All contestants had to be at least 25% Indian blood. Herman Dale, Ganado, Az., was third with 360; however, he topped all competition in men's barebow with 444 and the men's Hunter Barebow division with a 368 (25-meter FITA plus NCC Hunter Round). In the bowhunter division, Charles Arviso, Gallup, N.M., was second with 278, and Ernest Pahe, Window Rock, Az., was third with 265. In men's barebow, Ed Romero, Albuquerque, N.M., was second with 395, and Merlin Yazzie, Ft. Defiance, Az., third with 367.

Debbie Drye, Phoenix, Az., won women's freestyle with 509. Sally Benally, Shiprock, N.M., was second with 397 and Mary Lou Kelly, Shiprock, N.M., was third with 287, Sally Benally won women's barebow with 257, and Louise Benally was

Evan Oswald, director of physical education at NCC was chairman of the organization for the shoot. Al Henderson, Phoenix, Az., served as advisor.

Next year's tournament will probably be held May 29-31 and will have added shooting divisions.

●Top right photo, from left, Tournament Director Evan Oswald; Herman Dale, first in hunter barebow and men's barebow competition; Harry Nez, first in men's freestyle; Bill West, second in men's freestyle; Pricilla Becenti, assistant director. Lower right photo, from left, Sally Benally, second in women's freestyle; Debbie Drye, winner in women's freestyle; and Mary Lou Kelly, third in that division.





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## ARCHER'S INFORMATION SERVICE

This page is designed to help you, the target archer and/or bowhunter, conveniently obtain product information about a host of archery items. Most material is free; some items have a small charge.

Simply circle the appropriate numbers on the bound-in card which faces this page and mail that card. We will forward your requests to the proper agencies for fulfillment. If there is a cost for one or more of the printed items you want, please enclose payment with your card.

1. Free descriptive brochure on the new double adjustable BUCK-EYE hunting sight from Accra Mfg. Co.
2. Free brochure and order blank on

Port 'Orford cedar arrow shafts with "Penna-Seal" from Acme Wood Prod-

3. Allen Archery Co., who holds the patents and is the originator of compound bows, offers a free catalog on their bows.

4. Free catalogs and price list of a variety of bow case sizes and styles from The Allen Company.

5. Free discount catalog from

world's largest supplier of top name archery brands from Anderson Arch-

ery Corp.

6. Free pamphlet on their bow sight and arrows from Archie's Archery

7. Astro Bows will send you a free brochure on their complete line of compound hunting and target bows.

8. A & W Archery has a free brochure on their quick-attach bow quivers.

9. Baker Manufacturing has a free brochure on their climbing tree stands, hand climber, wire saw, safety belt, gambrel and strap assembly.

10. Barner has free printed informa-

11. Bear Archery will send you a free brochure on their Alaskan and Tamerlane II compound bows.

12. Joe Bender will send you information about his No-Glov bowstring finger protection.

13. Bingham Archery has a fully illus-

trated catalog describing semi-finished and finished bows, plus ar-rows and shafts, and archery acces-

sories. \$1.00

14. Free information on hunting sights, adjustable arrow rests, cushion plungers and other accessories is available from Bob's Precision Engin-

eering [BPE].

15. Bowen Knife Co.'s new catalog fully illustrates their complete line of sportsman's knives. 25 cents

16. Bowhunter's Paradise has free material describing the use of their

tree stand hunting safety belt 17. Browning's catalog has 112 pages of archery equipment, guns, boots, clothing, plus expert archery tips.

18. Buck Stop Lure Co. will send you a color catalog of their various scent products. 25 cents

19. Burnham Brothers' new 64-page catalog includes varmint and game calls, calling cassettes and many other

20. Calmont Archery Targets has free literature on their specially-made

cotton targets.

21. Carroll's Archery has free brochures and other literature on their complete line of archery equipment.

22. Chicago Archery Center will send you a free catalog and price sheet of archery tackle and accessories.

23. C & S Archery has free brochures

24. Free catalog describing Sure Kill Buck and Apple lure, plus other items, is available free from Deer Run Prod-

25. Dyn-O-Mite has a free sighting guide plus information on their bow release arrow rest and other items.

26. Easton Aluminum has three free brochures — "How to Attach Nocks,"
"How to Attach A Bowstring," and their Visual Comparator arrow spine

27. Easy Up Tree Stand Company has a free brochure describing the use and

setting up of their tree stand.

28. Vic Erickson will send you a card delineating his hunting arrow supplies and related arrow items.

Feline will send you a catalog showing all major tackle and accessories. \$2.00, refunded on first order. 30. You can get a free brochure on hunting sights and stabilizers from Full Adjust Products.

Gazzara has a free instruction sheet and descriptive literature on his

32. Gordon Plastics has free information on their Glashafts and "Botuff" material, plus a price list.

mation on their line of bows. 34. S. C. Graham Sales will send you free information on their tree climbing steps and other accessories.

35. Herter's big catalog covers all equipment an archer needs, plus hunting, camping, fishing supplies and more. \$1.00, refunded with first

36. Hobby Haven has a free instructional sheet for their shooting release.

37. Jennings Compound Bow, Inc., pound bows and accessories.

38. Jet Aer has a free brochure on their complete line of sportsman's knives.

39. KMK Distributors will send you more information on their camo clothing and hunting blind. 40. Kwikee Kwiver has a catalog sheet available to distributors.

41. Free 20-page catalog showing all kinds of useful archery accessories is available from Lee's Archery.
42. Free brochure and dealer price list bout their portable tree stand from Loc-On Co

43. Marco's Enterprises has a new hunting tips brochure, "What Every Deer Hunter Should Know." 25 cents 44. Mohawk Archery Products has product information on their Magnum and Magnum II broadheads.

45. You can get free material on bowfishing reels, fishing points and Sporting Equipment Co.

46. Big Buck Products from Moore Supply has free information on their game bags, jerky curing, fish smoking and curing and big game hoist.

47. Flipper Rest attachment and use ormation is available free from New Archery Products.

48. Nirk Archery has information on all their products. Wholesale catalog is available to authorized dealers only. their bowstring attachment which can be used in place of a shooting glove.

50. Old Master Crafters has a complete price list of their raw materials for use in building your own bow.

51. Ben Pearson will send you a free catalog on their full line of archery

. The Ambusher tree stand which eliminates tree climbing has free bro-chure and other info from manufacturer W. C. Phillips.

53. Free eight-page Glas-lite archery catalog, plus information on their new Switch-A-Head arrow system is available from Plas/Steel Products.

54. Potawatomi has a free brochure and other literature on the use of their bow square, bow holder and other

55. Precision Shooting Equipment has information about their compound bows, plastic fletching, arrows and other items Free

56. Protecto-Plastics will send you free descriptive literature on their complete line of bow and gun cases.

57. Range-O-Matic will send you free information on the use of their Rangefinder sight and Spin Wing vanes.
58. R & D Products has free information on their variety of bowfishing

59. Pete Rickard's 16-page booklet, "Blinds for Deer Hunters, well illustrated, is available for 50 cents.

60. Robin Hood authorized dealers

offer the finest in archery pro shop office the inless in archery pro shop services. They will send you a free listing of the dealers in your state. 61. Dickie Roberts will send you free flyers on each of his bows, plus other archery product information.

62. There's free literature on the Ramco compound hows and adjustable takedown recurve available from Rocky Mountain Archery Co.

63. Free discount price list on broadheads, arrows and hunting equipment is available from Roman Archery.

64. Free catalog showing hunters using tree stands is available from Ron's Porta-Pak Mfg. Co. 65. Get a free brochure on Port Ordord cedar shafts and price list from Rose City Archery, Inc.

66. Saunders offers a free 20-page booklet "How to Have a Successful Bow Hunt." Covers hunting tips, bow tuning, safety, equipment care, broadhead sharpening tips and more. 67. Savora Archery will send you information about their new Super-S

68. Seattle has a free wholesale

catalog available to dealers only.

69. You can get a free copy of "Archery '75," a colorful 24-page catalog of the complete Shakespeare Archery product line.

70. Free literature available from S & K Mfg. on hunting arrows, hunting re-leases, camo clothing, plastic vanes

71. Free catalog of hunting and tour-nament equipment, also describing special club discount plan, is available

from Southeast'n Archery.

72. Spartan Archery has a free catalog describing their line of recurve and compound bows and will also send you a free Spartan brand sticker.

73. Sportronics has free descriptive literature on history, manufacture and prices of their lighted sight pins. 74. Sprandel will send you their new Bowhunting Specialties catalog of

hunting bows and accessories. \$1.00, refunded with first order. 75. Stemmler Archery offers a free catalog covering their new hunting bows and related items.

76. Sweetland Products has a free brochure on screw-in adaptors, arrow points, fish points, fur tracers and other items.

77. You can get free literature describing their new target and hunting sights from Toxonics.

78. Triple D Tiplite will send you des-criptive material and photos, plus pricing information for pro shops, dealers and distributors.

79. Trojan will send you a new catalog of their complete line of archery tackle and accessories. \$1.00, refunded

80. Trueflight has free information on their brush buttons, string silencers

81. Ultra Products, Ltd., will send you a free copy of their "Spirit of '76" catalog, 75 pages of hunting and target product information.

82. Warren & Sweat will send you a free brochure about the assembly and of their climbing tree stands. 83. WASP Archery will send you free descriptive material on the WASP

compound bow and broadheads. 84. Western Archery Sales has infor-mation about their Rain-Bow hunting

sight.

85. Whiffen will send you a free catalog describing all the archery accessories they have.

86. Handy and useful archery acces-

87. Wilson Brothers will send you free

nformation about their Black Widow line of tournament and hunting bows, plus their "Arrow Flight Control" rest and other items.

88. Wilson-Precision has free infor-

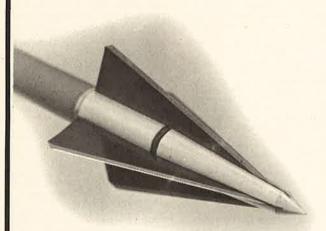
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89. Wing will send you free a colorful 21-page catalog showing their full line of bows, youth sets, arrows, accessories. They'll also give you a list of Wing films you can rent.

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#### Heart Attacks and Hunting:

by E. O. Morrison

FROM A VANTAGE point on a ridge overlooking a narrow valley sprinkled with post-oak trees, a bowhunter watched his buddy enter the valley. They were to meet where this valley and another converged, just a few hundred yards away. The bowhunter on the ridge, catching his breath, waited until his buddy entered a clearing and then pursed his lips to give a soft, two-note whistle. The buddy waved and turned toward the

The middle-aged hunter on the ridge stood up and stamped out his cigarette, and in the same motion bent over to pick up his bow. He never made it. His right leg buckled, throwing him off balance. Instinctively, he grabbed for the rock that had been his seat but missed it when an intense, suffocating pain gripped the left side of his chest, and he crashed head-long into the rock.

The buddy below witnessed what he thought was a simple fall and chuckled. His amusement changed to horror as he soon realized the fall was caused by more than a loss of balance. By the time he sprinted the last 50 yards to the ridge, his buddy's body was rigid and his face an unhealthy bluish color. Heart attack

Quickly, he began to give artificial respiration, first applying external compression on the breast-bone, and when the stricken buddy did not respond, he started mouth-to-mouth

A relaxing hunt was shattered by an unforseen emergency. An emergency of a magnitude needing immediate treatment to save a life. And because the younger hunter had had adequate training in the Boy Scouts, the middle-aged hunter would hunt

Every person who hunts where the stress of excitement can trigger an accident should have a command of basic first aid to avert the loss of life.

Here is a step-by-step procedure for administering cardiopulmonary resuscitation, meaning a person "takes over" the breathing and the circulation for a victim of a heart attack, a potential drowning, etc. The rule in the application of this procedure is, "Give it whenever there is no breathing, or no heartbeat, or both."

1) Examine the patient for breathing: Look, listen, and feel. Get the patient to a physician as soon as possible.

2) Remove anything in the mouth or throat that obstructs breathing.

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#### How To Save A Friend's Life

3) Establish a clear airway by hyperextending the patient's neck. Do this by placing the patient on his back. Place one hand on the forehead and gently push the head back while lifting with the other hand under the base of the neck. This lifts the tongue from the back of the throat.

4) Check for breathing. Often, the only treatment needed is proper positioning to restore breathing.

5) If the patient is not breathing after step 3, you must breathe for the patient by blowing into the mouth. Open the patient's mouth and cover it with your own. To get a good seal, pinch shut the nose. Breathe into the patient three to five breaths; the chest should rise with each breath. Remove your mouth after each breath to allow for exhalation. Watch for the accumulation of air in the stomach; if the stomach begins to swell, gently press on it to force out the air. Check the patient's breathing; the victim may revive after this step.

6) Now you are ready to assist in circulation if the patient has no heartbeat. Do not assume no breathing means no heartbeat. If there is a pulse, continue breathing for the patient at the rate of 12 to 15 breaths/minute. Airway and breathing come before circulation because without oxygen, circulating blood is no good. Check for a pulse by checking the carotid artery measure down from the corner of the jaw about one to two inches on the neck, using the forefinger.

7) If no heartbeat, begin external heart compression at the rate of one compression/second. Place the heel of one hand on the lower half of the breastbone and the other hand on top of the first. The bottom of the bone is where the ribs form a "V." Position your shoulders directly over the chest and keep your elbows straight. Use your shoulders and back to compress the breastbone. Compress and release rhythmically.

8) Ventilation and compression must be continued without pause. If you are alone, continue to breathe twice into the patient after each 15 compressions. If you have help, breathe once into the patient for every five compressions. When the patient revives, you can stop the treatment, but watch the patient carefully. Get to a physician as soon as possible.

You never know when the unexpected will force you to react quickly to save a life. Take the time to inquire where you can enroll in a first aid course; take the time to learn; and take the time to review your facts before a hunt because that time may prevent the shameful excuse, "I did not know what to do!"

Because he did know what to do, a young hunter on our deer lease land in north central Texas saved the life of a 56-year-old hunter who had a heart attack in the woods. Just one instance like this drives the message home — be prepared.



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Archery World



•Left hand has black, brown and green camo grease in equal proportions so the ratio is two dark areas to one light area. Colors are daubed and in short lines to break up hand outline and more closely match the effect of irregular lines in vegetation.

•Left hand has green and brown camo grease. Major brown lines run lengthwise of fingers and hand. Green camo dulls the skin tones, but that's about all; basic hand outline remains.

#### CAMOUFLAGE (continued from page 41)

But when broken into a camouflage pattern much of this brilliance is removed and that which remains tends to look like the shiny undersides of leaves. If you're highly concerned about not being mistaken by another hunter for an animal in the bushes, this or red/black camo is the way to go. Probably not in complete covering, but in a large swatch or two.

As a result of this work, we will henceforth be most concerned with light/dark camouflage patterns. Especially when we're sitting or moving in areas of intermittent shadows. We will have more dark areas than light, probably around a 2:1 ratio, but we won't go solid dark.

You can make a fairly close estimate of the varying values of materials you see in color by squinting your eyes to slits. Artists use this trick all the time when they want to establish tonal color values. Squinting reduces the light hitting the colorsensitive areas in the back of your eye and you will see full-color things in black and white, or close to black and white. You'll have to try this trick a few times before you get the hang of it, but it works.

• Checked or patterned clothing in non-camo design will work in a pinch. There will still be some basic straight lines, but much fewer than if you were to go with a solid item. We had a deer look right at us for more than a minute, dismiss the red/black wool shirt as nothing to worry about, and then walk right under the tree stand.

• Bowhunters who wear glasses are at a slight disadvantage. The glasses become such a part of you that you generally forget to camouflage them. Wire rims must be camouflaged, and a netting of some type should be used. Some people rub dry soap over their lenses to cut reflections.

If you feel that netting inhibits your vision, then you'll have

to select your blind or tree stand position with extra care. Put the sun at your back if possible. If that's not possible because the wind would blow your scent across the trail from such a location, position yourself so any light reflections would glance in some direction other than the line in which you expect to shoot.

There are supposed to be some reflection-cutting sprays or fluids on the market for use on glass lenses, but we haven't found any yet. If any of you know of such items, we would like to hear from you.

• If you're sitting in front of a bush or similar camouflage material, camouflage yourself so your pants will camo with whatever is on the ground and your upper torso and bow with the background vegetation.

• Never present a silhouette if you can avoid it, either with your body or blind.

• Try to select as soft a material as possible in camo clothing. Such material will absorb more light than a harder weave and will thus reflect less. Such material will also be quieter when you move. Rub some dirt on harder weave material; this will help cut reflection.

New material sometimes has a sheen that will disappear with one or two washings. But be careful you don't overdo the washing bit; camo material fades after repeated washings, and this may reduce its effectiveness. On the other hand, don't defeat yourself by too little washing; human scent hangs heavy in clothing.

• A few short twigs stuck in your hat will break up the round outline of your head but won't hinder shooting. Some hunters go so far as to tie short pieces of fly casting line or similar line randomly on their camo jacket, and then tie short twigs and bits of grass to their jacket. If you can do this without noisily interfering with regular movement or your draw, do so.

If you prefer not using camo grease on your face, you can make an excellent headnet from an old pair of pantyhose. Cut off the legs and tie the stumps in a knot. Slip the pants part over your head and mark eye and mouth holes. If you wear glasses you probably should mark a hole for your nostrils; without this hole exhaled breath will rise inside the mask and fog your glasses. Then remove the mask, daub clear nail polish around the eye, nostril and mouth areas to keep the material from running and cut just inside the polish-marked line. Keep the holes as small as you can without inhibiting vision.

This unit will extend down over your neck. It helps keep your neck warm in cold weather. During warm weather it may be too warm unless you're sitting still, so it may not work as well when stalking as when on a stand.

• Be sure to match your basic camo design to the season — white with or without black lines for hunting in snow (the thin black lines look like twigs), more green early in the season, more brown later in the season, etc.

There are as many theories as bowhunters in regard to the best way to camouflage your arrows while retaining visibility of the arrows. You want to see where you hit the game, but you don't want to spook the game before you can shoot. Many hunters have decided upon a dark arrow shaft with six to eight inches of fluorescent paint at the rear of the shaft and fluorescent fletching. You will just have to go with whatever style makes you feel most confident.

• If you're hunting where deer are heavily hunted, there is more need for full camouflage. Such deer know the shape of a human, and they are more likely to flee from any unusual movement.

In the boonies, however, deer will retain much more of their native curiosity. They will be less likely to run from unusual movement or patterns and even may be attracted by them. We have heard of hunters in such areas who carry a white handkerchief in one hand; shaken lightly when a deer is looking, it sometimes attracts the animal.

• Items like belt buckles, buttons, rings, wristwatches all may catch and reflect light. Keep them covered or spray them with a flat paint.

Archery World

Here are some comments from various staff members, giving the items they felt most important. They have not seen our copy, or each other's; repetition indicates the importance of an item and that's why they didn't see other copy.

#### BOB SKIERA, TECHNICAL EDITOR:

1) Prevent reflection, whether it be from the bow, your glasses, shiny buttons or reflective materials. Reflections magnify movement and will alert a deer's attention in your direction.

2) Naturally blend into the area you are hunting, whether you are sitting or walking. Example: Be sure you don't present a harsh silhouette or contrast with your background, or present an unnatural condition in the landscape (like a raised blind in an open field).

3) Camouflage your blind with natural materials that will allow you comfort and a full range of movement to prepare for the shot without being visible from the game's position.

4) All exposed skin should be camouflaged. Skin is a light reflective surface that will attract big game's attention and immediately will be identified as human. Regular camo grease works well; hunters wearing glasses should thoroughly check the use of a head net with light mesh which can be seen through but will break reflection.

5) Arrows with reflective surface should be camouflaged. If light colored fletching is used for visibility purposes, it should be as low reflective as possible, or covered entirely while walking to your blind.

6) Entire bow should be camouflaged, including the fancy looking white tip overlays. Tip overlays move most during draw and shot; and even though they are small, they must not be overlooked. Reflective surfaces on handle must be camouflaged.

7) Build blinds as far in advance of hunting season as possible (taking into consideration possible vegetation changes) to allow game to become familiar with the presence of the structure.

8) Clothing colors must blend with seasonal surroundings; green, brown for most autumn leaves, some yellow in aspen country, red in maple areas to match leaves of autumn. White works when snow is on the ground, maybe streaked with black to simulate branches against snow.

9) Proper camouflaging allows you a close shot from a comfortable and good shooting position.

10) There is a psychological sense of confidence in being properly camouflaged at the moment of truth. You will be less apt to make the wrong move, or the right move at the wrong time. You will be more likely to get a second shot if you miss because the game cannot readily see you or your movement.

#### AL HENDERSON, TECHNICAL EDITOR:

1) Your bow — If it flashes in sunlight, warning everything "here he comes," camouflage it with a bow sock, camo tape, flat spray paint, or rub dirt or sand on it to take off the mirror-like finish.

2) Always use basically dark clothes or camouflage clothing. It should be light in spots, too, so it will look like shadows and sunlight.

3) An uncamouflaged face looks like a full moon in the bushes. Cover it.

4) Hands move unnaturally. Cover them with camo grease or gloves.

5) Your blind should look as natural as possible. Camo netting is an inexpensive way to make a good blind when natural materials are difficult or impossible to use. Just be sure the blind doesn't jut into the skyline.

6) Put your head close to the ground and look under the overhanging bushes as a feeding deer would do. Watch the white sneakers parade by. Then wear dark shoes so your feet don't twinkle when you're on the move.

7) A quiverful of arrows moves almost as much as your hands. Dark paint, anodized shafts and non-flashy fletching will keep the game from saying "thank you." You also want to

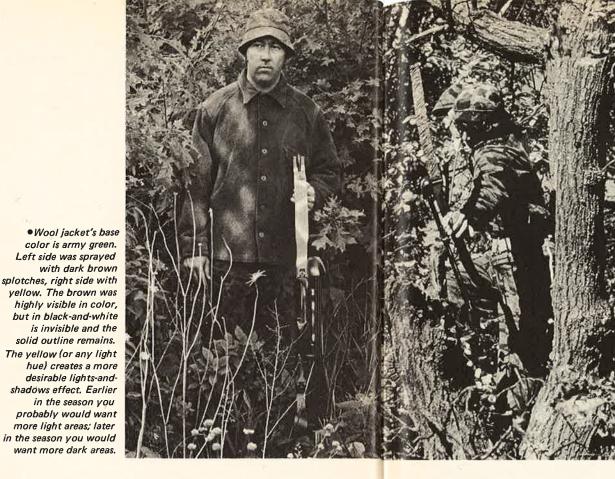


August/September 1975

POST OFFICE BOX 1003-AW

VALDOSTA, GEORGIA 31601





Notice the great number of sunlight splotches on the vegetation and hunter in this tree stand. Individual white arrow fletching doesn't really stand out, but several of them together in the quiver could more easily be seen.

CAMOUFLAGE (continued from page 57)

see the fletching, to identify a hit, so you will have to work out the best compromise you can.

#### RUSSELL TINSLEY, HUNTING EDITOR:

1) Camouflage is a tool, an aid, just one means to an end. It is no magic cure-all. Like any aid, it must be utilized wisely and effectively.

2) The dependable standby, camo, is designed to diffuse the human's outline with broken lines, to blend him into the landscape. Thus always pay close attention to the background.

3) Too much camouflage is preferred over too little. If in doubt about some part of your anatomy or equipment, camouflage it.

4) But Number 3 should be tempered with common-sense judgment. Wearing unnecessary clothing, under the guise of camouflage, only makes you more awkward and makes it more difficult for you to maneuver, reducing your effectiveness.

5) Camouflage is not always synonymous with camo-colored clothing. If, for example, you squat in grass, in front of some greenery, solid green trousers and a camo top might be more appropriate. And for night hunting, such as calling predators, dark clothing is more effective than camo. Ditto white when there is snow. And so forth.

6) Most camo articles do not retain their colors after repeated washings. So the less you launder the garment (always use cold water) the better. But I always wash new clothing before hunting, to remove the sheen which reflects light rather than absorbs.

7) Any shiny surface which rejects light, causing reflections, should be camouflaged or at least hidden from your quarry's view. Everything from the bow and arrows to eyeglasses.

8) Camouflage is more imperative at ground level than above. Construct a blind from indigenous materials to blend with camo clothing, or maybe take a piece of lightweight camo mesh cloth and wrap around bushes or trees to improvise a quick and effective ground-level blind.

9) Choose clothing wisely, both for weather comfort and fit. A person who is too cold or too hot or has uncomfortable-fitting clothing is more prone to mistakes.

10) This brings us to the most important consideration: camouflage per se is just one part of the total picture. Covering yourself with camo, even to streaking your face with paint, is just one step toward negating a wild animal's formidable defense. Equally important are considerations of movement and noise. Have quiet equipment, using aids like string silencers and soft arrow rests. Utilize scents to counteract telltale human scent.

#### JUDD COONEY, HUNTING EDITOR:

1) The highest premium must be placed on your hunting ability and ability to use the woods to your favor, such as stalking with the sun at your back. Camo is 100 percent required in turkey hunting.

2) The shine on your bow will spook game, so dull it with camo or dirt or something.

3) Skin tones stick out like a sore thumb, so cover with camo grease or netting.
4) When hunting out of a tree stand, don't forget to

camouflage the underside of the stand because this is the side animals see. A flat paint works well.

5) Black is the best camo color for shadows; combinations of

5) Black is the best camo color for shadows; combinations of gray and black would be even better. Most camo clothing doesn't have black, so you'll probably have to add it yourself.

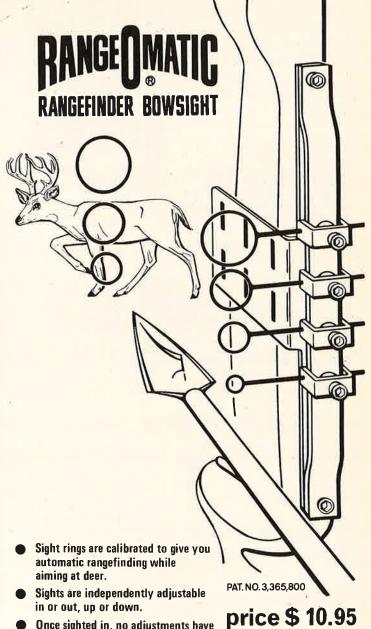
6) In snow, fluorescent orange is as good as white because the reflective intensity is the same. Properly used, fluorescent materials won't spook game and are highly visible to you and other hunters.

7) Arrows should be bright on feathers and crest. You need to see the arrow into the target to identify the hit. Fluorescent is best because it shows well in low light.

8) Camouflage to the proper season.

9) Break up your outline; a portion is better than none.

10) Blinds should be built of natural materials when possible. You shouldn't even be able to see the blind. But don't pile pale dead logs in front of green vegetation, and avoid solid patterns.



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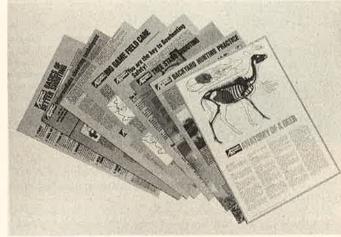
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• These two raccoons were taken with the aid of an electronic caller. Headband on left hunter supports a red light unit which doesn't spook game as much as white light.

BOOT TIPS (continued from page 25)

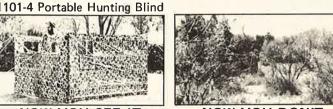
And while coons can be beguiled with a call practically any time of year, the Burnhams recommend two optimum periods, late summer and in the wintertime, periods which they call the "hungry season" because there isn't much for coons to eat during the coldweather months. Frost-killed grass or even snow makes it much easier to see a coon in the moonlight.

In many parts of the country there are birds, such as quail and meadow-larks, which roost on the ground and thus are fair game for any ravenous coon. When an unsuspecting coon hears the cries of a bird in trouble, it hustles to the scene, believing it has lucked upon a quick and easy meal.

Coons also are far less spooky than super-sly predators like the coyote and bobcat. Only a minimal amount of camouflage is required during the day, and at night dark clothing will suffice. Human odor also doesn't seem to frighten a coon as it does a fox or coyote. When a coon waddles into view, you'd best be ready to shoot whenever it gets in your effective range. Otherwise, it just keeps on coming. I've seen coons actually try to crawl up the caller's leg!

Any hunting bow with broadhead arrows is fine for coon hunting. The critter isn't difficult to kill. And there always is that hazard of losing wayward arrows in the dark underbrush; so use arrows you won't mind losing. But if you track the path of your arrow you will find far more than you will lose. Some shooters even wrap reflector tape, the kind that goes on auto bumpers and glitters, on their arrows, making it easier to find them in a flashlight beam.

And be ready for action in a hurryl There is nothing timid about a raccoon. One will barge in close. Fact is, sometimes too close!



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This highly durable hunting blind is made of 100% Oxford nylon, coated with a water repellent, and is very close to the canvass material without the heavy weight. Very portable, weight only 6½ lbs. and comes complete with its own corner poles of lightweight aluminum and "guy-ropes" and packed in its own backpack. This Hunting Blind has been field tested on Deer and varmints with very good results. Dimensions of the blind are a roomy 4 ft. X 6 ft. X 5 ft. high. Each wall is equipped with a window strategically placed to eliminate "see through."

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August/September 1975

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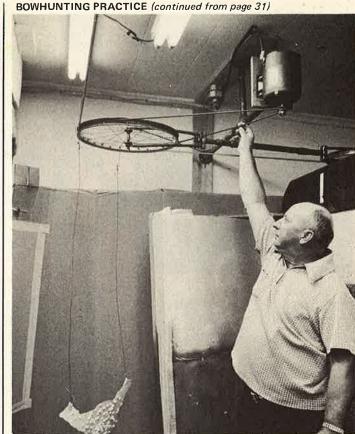
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•Leo Baldwin checks the tautness of the drive belt on his indoor running game target system. Old bicycle wheels and their support brackets make excellent corner pulley units.

Complete game is 60 arrows, with 300 the top score possible. Highest round scored so far was by Clyde Barnett, Depew, with 262.

Targets hang on wires from a main support rope made from the trim off an old conveyor belt. Baldwin says the most important thing here is to use a major support rope totally stretched so it will remain tight.

The continuous line runs on old bicycle wheels, one in each corner. Power is supplied by a quarter-horse electric motor. The line passes 40 inches in front of the target butts so there will be no arrow clearance problems. Baldwin has filled the space between the regular target butts with self-made butts of corrugated cardboard.

"I use a small corrugation board, packed to medium tightness. This holds up well. The arrows can be pulled easily, but they won't go clear through like they do in largecorrugation boards," Baldwin says.

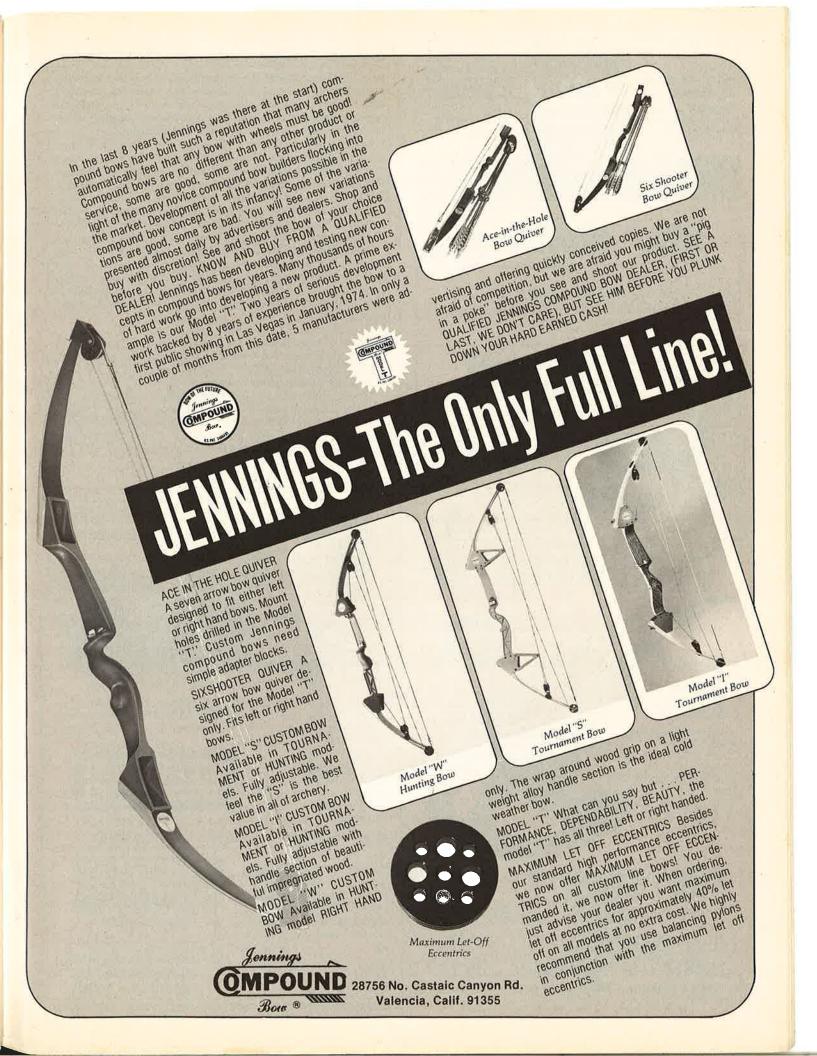
To add hunting flavor, the entire target butt area is covered with white muslin and a weeds-and-brush pattern is sprayed on. Small, leafy bushes are cut, then anchored in two-pound coffee cans and randomly placed throughout the lanes. Targets appear and disappear behind the bushes and the entire line takes on a good bit of realism.

Joe McNerney, South Wales, N.Y., said, "You get some reaction on a hit. The target jumps or the balloon pops. You can *see* something happen and that helps.

"It's just plain fun . . . not the same type of competition as in a target league. These guys are hunters; nearly all the banter and serious talk is hunting oriented.

Jim Sonnenfeld, West Seneca, N.Y., added, "It's a good way to break in new equipment. I've got a new sight on my hunting bow. After I've shot 10 weeks in this league, using it will be much easier on the real thing."

Watching the shooting for a while, you can see every shooting form imaginable, and some not imaginable. "But the hunters who come in here become archers," Baldwin points (continued on page 64)



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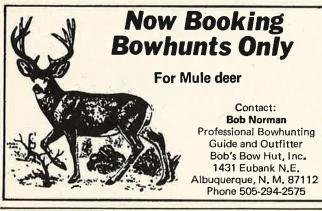


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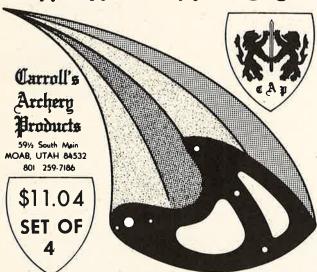
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#### **BOWHUNTER PRACTICE** (continued from page 62)

out. "Everyone knows it's the most fun when you hit what you're aiming at, and it doesn't take long to realize you might have a couple of shooting form parts to work on. At the same time, you quickly realize that as you become a better archer you're also becoming a better all-around hunter."

I watched several guys complain loudly - in the type of complaining you wouldn't mind making yourself - when they busted the balloon on the running deer. It's a house rule that whoever breaks the balloon must replace it himself. You're not allowed to swagger as you walk down the lane to replace the balloon, and you will probably be loudly reminded that you can henceforth shoot only at balloons smaller than the one you just broke.

One bowhunter hit the deer target a little early, and his arrow stuck in one of the forward-projecting butts. On the deer target's next pass it hung up briefly on the arrow, then flopped over and paused with only the rear half of the deer in view. An arrow zipped down the line and passed swiftly through a ham.

"Just like you always shoot," someone said.

"Nope, I was aiming so I'd hit him square just after he jumped that fence. No deer in its right mind would jump so far he'd be half out of sight," was the reply.

And the hunting stories you hear . . .

One guy said he knew a Pennsylvania hunter who carries the rattles from a rattlesnake. He shakes the rattles and gets the deer to jump. Claims he can attract deer with the rattles because a deer will supposedly go out of its way to kill a rattlesnake. Jumps up in the air and lands with all four feet bunched on the rattler. End of rattler.

I've heard of more weird things.

Helen Little, who manages the shop for Baldwin, says the

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fun night is when they use the jumping targets. No snakes are involved, but whoever is operating the rheostat speed control stops, starts, slows, speeds up and generally messes up the movement patterns of the targets. "Arrows fly all over the place," she says, "and so do the words. We all have fun."

Dave Templin, Cheektowaga, N.Y., said, "A buddy and I came in here last year to shoot the hunter league. We did, and then they talked us into shooting the regular winter league. But we shot the same bows, same sights, using range arrows. Averaged around 260 and drove everyone batty. Good fun!"

And the magical, mystical allure of a buck deer — even if it's only cardboard — continues to drive archers daffy. I watched guys nail the lifesize partridge target with regularity, and follow that with a bad hit or a miss on the deer.

Proving once again that you've got to aim — really concentrate - on a tiny spot in the vital area while that handsome dude stands in the trail and your eyes pop and your heart clatters. You can't look at the whole deer, you can't shoot at the whole deer.

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**Bob Seymore** Indiana, Pa.

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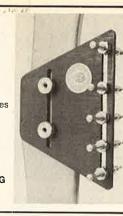
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• Ronnie Hale, New Haven, took this big doe early in the 1974 season, His father, George (Bud) Hale took a doe on opening day. His brother, Alan, took a running doe later in the season. Two younger Hale boys, Dennis and Darryl, also bowhunted, but didn't get deer. But three of five in one family isn't bad. Photo by Rich Ruegge, New Haven Leader.

SHOW ME (continued from page 37)

Riverbottom tangles are tough to hunt, especially in lush north Missouri. The best bet is to find a creek crossing where the bank is low on both sides and the stream is shallow. Again, tracks are the best indicator of these areas.

The big fling is being drawn for one of three archery or three primitive weapons hunts, managed by the state in areas with high deer populations. Generally there are twice as many applicants as there are openings, but I've been to Knob Noster State Park three times in six years. There probably is not a bowhunter at Knob Noster who does not see deer during the hunt (sometimes two days, three days in 1974). On the first morning of the 1974 hunt, I saw 11 deer, but did not get a shot. In one of the previous hunts, I missed two easy shots.

The other two archery hunts are at Drury Refuge and at the Busch Wildlife Area. Primitive weapons hunts are dominated by muzzle-loading enthusiasts, but bowhunters may apply, including crossbow hunters. The three primitive weapons hunts in 1974 were Caney Mountain Refuge, Fort Leonard Wood and Sam A. Baker State Park.

Generally the hunts are held about the same time each season. Knob Noster was Oct. 12-14 in 1974 with a quota of 500 hunters. Some 435 hunters showed up and took 24 deer. one of which killed itself by running into the side of an auto driven by a hunter who had just checked in and was slowly driving through the campground looking for a campsite. (In Missouri, it's legal to tag such a deer.) The 3,610-acre Johnson County park is the granddaddy of the special hunts.

Drury Refuge, 2,004 acres, is in Taney County. The 1974 hunt was Oct. 12-16 with a 300 hunter quota. Some 264 showed and took 21 deer. Much of the area is bounded by Bull Shoals Lake which creates a natural barrier.

The Busch Area is right next to St. Louis and is heavily used for everything from fishing to lovemaking. Its 6,987 acres have much woods and the only permitted deer hunting is during a Nov. 1-15 archery hunt. There was a 500 hunter per day quota for the first three days, then it went to first-come. first-serve.

Caney Mountain in Ozark County is the oldest of the primitive weapons hunts. It started out mostly as a bowhunt, but the longrifle men have become dominant. The 5,497 refuge acres are heavily wooded and it's easy for the 500 hunters permitted to get out of sight of each other. The 1974 hunt, Oct. 12-16, accounted for 50 deer.

There were two primitive weapons hunts on Fort Leonard Wood, the massive Army engineer training post in Pulaski County, one Oct. 12-14 and the other Dec. 27-29, each with a 500-hunter quota. Hunters took 27 deer in October and 10 in

There also was a primitive weapons hunt for the first time on Sam A. Baker State Park, Oct. 12-14, for 150 hunters. There were 19 deer taken on the 4,898-acre state park in the scenic southeastern Ozarks.

Generally, applications for the special hunts, submitted on a postcard, one hunt per hunter, are accepted at the Department of Conservation, North Ten Mile Drive, Jefferson City 65101 between Aug. 1 and the middle of September. Hunters can apply singly or up to a party of six, with each hunter listing his name, address and zip code.

The special archery hunts are a different hunting proposition than the day-to-day hunting. Because of the concentration of archers, it's more like gun hunting and a smart bowhunter will find himself a likely stand and wait for the more impatient hunters to drive deer past him.

During the 1974 Knob Noster hunt, I sat on a stand, an interesting physical paradox, and watched a half dozen hunters and 11 deer tiptoe past me. None saw me. Only once did I have a fleeting chance for a shot at one of the deer and I got to half-draw before she put a bunch of saplings between us. But the point was that both hunters and deer were conspicuous because they were moving.

Pre-hunt scouting is very helpful if possible. Some of the areas permit it, some don't.

The biggest deer in Missouri come from the agricultural northern part of the state, especially from north-central and northeast Missouri. In fact, two of the top five Boone and Crockett all-time whitetailed typical racks came from north Missouri counties. Larry Gibson, a Moberly roofer, took a deer within sight of his Randolph County house in the 1971 season which is the all-time top rack taken by a known hunter. Gibson, also a bowhunter, has been looking for a buck he has seen and which he believes is bigger than his national champion gun-taken deer.

The growth of Missouri's deer herd has been phenomenal. There were 500 taken by gun in 1944 and now the annual gun harvest tops 30,000. In 1956, the year I graduated from college, there were 33 deer taken by bowhunters. Now the harvest tops 1,400.

The success rate for Missouri bowhunters is about seven per cent, but the good hunters are those who beat the odds, like Tolivar and his 17 straight.

There even will be a fall archery season for turkeys in 1975. And there have been several turkeys taken in the spring gobbler season by bowhunters. One bowhunter even dropped a flying Canada goose a couple of years ago with an arrow.

All in all, Missouri has to rank as one of the nation's most archery-conscious states. And, speaking strictly as a bowhunter, that's just fine with me. . . .

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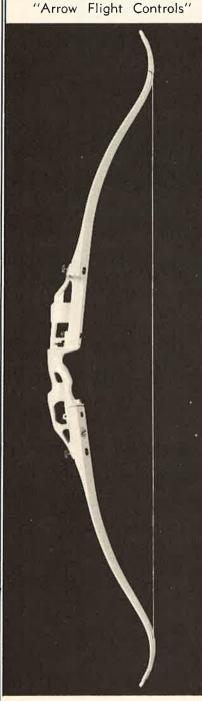
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#### OVERCROWDED DEER (cont. from page 29)

1974, blocking the December hunt. On December 6, Judge Lacey withdrew this order. He stated that the hunt would probably serve the public interest by eliminating the overpopulated deer; the complaints were overly technical; and, the objections raised were unfounded. (The anti-hunters had claimed the hunt would cause "Irreparable loss of animal life" and be "Unnecessarily cruel to the deer.")

When the anti-hunters received that decision, they again filed in the U.S. Federal Appeals Court. The Court issued a temporary restraining order, ordering the hunt to be stopped. However, they did agree to hear arguments on the case at 9:30 a.m. Tuesday, December 10, 1974, the morning the hunt was scheduled to commence. At 10:25 a.m. the three-judge panel heard the arguments, vacated the temporary restraining order, and ordered the hunt to proceed.

This news reached the refuge shortly before 11 a.m. The demonstrators reacted to the loss of the case with an outburst of boos, cheers and some namecalling. The waiting hunters moved into the hunting area, and the hunt was finally underway.

Within an hour, the first successful hunters began bringing their deer to the refuge check station for examination by wildlife biologists, a parasitologist, a pathologist, and a veterinarian. The results were clearly supportive of the reasons for the hunt.

Examined deer were found to have diseases and parasites in greater number and in more advanced stages than deer examined at other New Jersey locations. Preliminary tabulations by Douglas Roscoe (pathologist and examining team leader from the University of Connecticut) showed that 45% of the deer taken in the hunt were infected with a mild peritonitis; 121/2 % had lungworms; and 22% had a larval form of tapeworm that is normal in dogs and cats, but is not found in wild canids. (This was interpreted that uncontrolled dogs had been feeding on the deer in the refuge. Infected dogs contaminate the ground with droppings containing eggs. Feeding deer pick up the eggs and thus become infected.) An 18 month-old buck was found with head, neck and shoulders covered with tumors caused by a viral infection.

Examined deer were noticeably light in weight for their age class, averaging 14 pounds lighter and as much as 20 pounds in some cases. One deer had a dressed weight of only 32 pounds. Also noted was a poor overall immunity system condition of the deer, caused by poor nutrition. A healthy deer fights disease with a functioning immunity system; a malnourished deer with lesser resistance will often perish from the same disease or from secondary causes.

By the end of the first day, 36 deer were taken. The total harvest of the six day hunt amounted to 127 deer (22% reduction of projected herd numbers). Hunters, and some of the antihunters, commented on how wellmanaged the hunt was. There were no accidents, no violations, no physical confrontations and no major problems.

The high incidence of diseased and underweight deer in the harvest strongly supports the reasoning behind the herdthinning. The well-defined browse line underscores the need for further herd reduction to allow the vegetation to recover and to better balance deer numbers with the environment.

One can only hope that anti-hunters, both those present at the hunt and those absent, will study the facts of this case with open minds. In the face of such compelling evidence, further attempts by such groups to block managementdictated hunts may well be interpreted by the general public as less of a concern for the wildlife involved than merely a misunderstanding of the necessary and vital role of regulated hunting in modern wildlife management.

This paper was written by the Hunting and Conservation Division staff of the National Rifle Association of America. It is based on a field report prepared by Tink Nathan.

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such things to say as:

"I don't know what I ever did without one," Glenn Winch ineral Springs, Arkaneas — and Glenn has killed over 30

"I think you have outdone yoursell. It works better than I have ever imagined. Two deer have been shot from mine. Thanks," Gene Jabben, Independence. Kansas.

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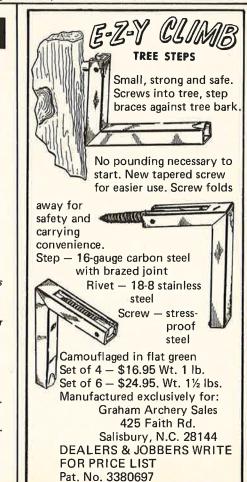
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 The author and his Pope and Young record class elk trophy taken by bugling. BULL BUGLING (continued from Page 45)

Now it's true that the herd bull isn't going to roam all over the countryside, leaving the harem behind, just to fight. But when he figures that another bull is getting too close to his girlfriends, the herd bull is apt to charge a hundred yards to rout the imp. This is what the hunter should try to do; give the bull the impression that you're coming to help yourself.

Exactly when the elk start bugling depends on the geographic location. In my neck of the northern Idaho woods. the bull's romantic notions begin with the first frosts of early fall; usually late September through early October. Here again, there are exceptions. The bull I told of bagging at the beginning of this article was taken September 9th.

Elk may bugle for a few weeks without being overly rambunctious, but there comes a few days in the middle of the rut when the rutting fever rises to peak. This is when the bulls are easiest to fool!

If a bull answers your call at first, but then loses interest, don't be too quick to blame the call or your technique. As I've said, bulls take a while to get fully zonked out, and you may be too early. Also, the young bulls often lack the nerve to face a mature bull and often limit their rutting to a few uppity squeals.

I honestly can't tell a bull's age by the sound of the bugle. I can, however, "usually" tell the squeaky bugle of a yearling from the rumbling bellow of a mature bull.

By all means, if a bull sounds interested in your call, but doesn't come in, try that brush-busting technique I mentioned at the beginning. When the bull gets into hearing range, grab a stout limb and thrash the trees and brush as noisily as possible. Then bugle. It's a bull's way of warning and taunting a rival, and quite often it will bring an outraged bull on the run. If it does, don't be surprised if the bull forgets the game trails and meadows and makes a beeline through any tangle in the forest to get to youl

The elk bugle is simple to make. Take about 14 inches of any type of piping; about 11/2 inches from one end make a cut about one-fourth inch deep, perpendicular to the tube and crosswise. Next, shave a piece of tubing out; starting about 1 inch ahead of the first cut and aiming for the bottom of it.

Cut a piece of dry wood a little thicker than the inside diameter of the tube and whittle the plug to fit snugly into the notched end of the tube. The plug should not be longer than the 11/2 inches (or to the beginning of the cutout in the tube).

Once the plug fits snugly, tap it out with a rod and shave a flat spot about one-sixteenth of an inch deep into any part of the round surface of the wood. Slip the plug back into the tube with the flat spot on the wood directly underneath the cutout opening.

Your bugle is now complete and ready for a test run. It's wise to buy an extra section or two of whatever tubing you use because if the slot in the tube or plug is too large, the bugle is apt to sound more like a scream than a squeal. If this does occur, start over with smaller cuts.

When you have your bugle toned to what you believe is the perfect squeal, wait until the first frost of fall and take it to elk country for an audition. But don't blame me if it works!

August/September 1975

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For the Herter's compound the reduction in draw force is relatively high (35 to 42 percent). This, along with a moderately sharp peak on the force-draw curve. results in Stored Energy to Peak Draw Force rations just over 0.9.

However, by way of compensation. hysterisis loss due to friction in the compounding system is remarkably low. The narrow hysterisis loops attest to this, so we have included calculated values (from the force-draw curve) of the system static hysterisis increases with an increase in Peak Draw Force since the added load on the cables, pulleys and eccentics causes more friction.

The values of Virtual Mass obtained for each level of Peak Draw Force are also tabulated. This shows the effect of the increase in kinetic friction on Draw Force because the Virtual Mass also increases slightly as Peak Draw Force is raised.

Figs. 4, 5 and 6 present the arrow velocity and bow efficiency curves obtained as arrow weight was varied. As usual, we have shown the experimental points as well as the fitted curve based on the average value of Virtual Mass obtained from the chronograph tests for each level of Peak Draw Force.

Here again we can observe the effect of the small reduction in initial velocity obtained with soft vane fletching when some interference exists between the vanes and the face of the sight window cutout. The velocity values obtained with

vane fletching (indicated by X) fall slightly below the average curve in all cases. Fine tuning might eliminate most of this minor loss of velocity, when the arrow spine is correct for the bow weight. In testing a wide range of arrow weights and spines, the vane fletched arrows have always been more critical than feather fletching when deviating up or down from the ideal arrow weight and spine for the particular bow setting.

When viewing performance data for compound bows, keep this fact in mind: most any normal fully adjustable compound bow is capable of a range of performance levels at a given Peak Draw Force depending upon how it is tuned. Working with variations in brace height, limb angle, cable length, eccentric size, eccentric ratio, draw length and a few other possible adjustments, a knowledgeable compound bow mechanic can set up a bow to favor almost any desired feature that an individual archer may prefer.

Some compounds are more receptive to adjustment and tuning than others, but even the new breed of relatively "nonadjustable" compounds can be adjusted to some degree.

For example, you may be a finger shooter, want maximum arrow velocity, not really care about draw force dropoff and be able to shoot a relatively low brace height with good results. All these features are compatible and the bow that is adjusted and tuned for you will outperform the same model that is tuned for Joe. Joe shoots with a release aid.

favors a high brace height because he gets better groups and wants a large dropoff. If you have identical draw lengths, his arrow that matches yours in weight could be 10 feet per second slower than yours. If you also shot with a release aid instead of your fingers, you could pick up an additional two to four feet per second or more depending on how clean your finger release is.

Not all compounds are capable of this wide range of adjustment — the design of the bow may emphasize certain features that the manufacturer feels are most desirable from a performance or marketing viewpoint.

We attempt to adhere as closely as possible to the manufacturer's recommended adjustment procedures when setting up a bow for test. In this manner we hope to highlight the specific features and characteristics that the manufacturer emphasized in the design and construction of the bow.

Herter's enclosed a set of clear and well written instructions with their compound Power Magnum. Adjustment was relatively easy as we moved from draw weight to draw weight for the test. We substituted a Hoyt Pro Flex rest for the rigid finger rest that was provided on the bow, feeling that the flexible type rest afforded a greater tolerance for widely ranging arrow spines and weights.

The Power Magnum weighed in at four pounds, six ounces in hand on our scale. It's a fine piece of equipment for the price and an interesting variation of the compound principle.

#### names...notes...news news...names...notes

#### PLAN FOR NHF DAY

If your club plans to do something special for National Hunting and Fishing Day, September 28, you can get a packet of helpful information for \$2 from NHF Day Headquarters, 1075 Post Road, Riverside, Conn. 06878.

#### WILDLIFE BOOKLET AVAILABLE

"Placing Wildlife Management in Perspective," a 29-page booklet from the Wildlife Management Institute, defines the complex factors governing wildlife, and will help you explain the value of hunting to the non-hunter. It lists major wildlife management accomplishments, shows the need for management, habitat and population relationships, the roles of protection and hunting in wildlife management and its many aids. Single copies are 25 cents, or \$90 per 1,000, from the Wildlife Management Institute, 709 Wire Building, 1000 Vermont Ave., Washington, D.C. 20005.

#### GEORGIA CARP WINNERS

Joel Votaw, Valdosta, Ga., with a two-day total of 142 pounds, and Billy Roberts, Moultrie, Ga., with a 21pound, 9-ounce fish, won the top honors at Jack Wingate's annual "Carperee" held in April on Lake Seminole. Leroy Rogers, Moultrie, with 88 pounds, 15 ounces of carp, and Terry Mock, Tallahassee, Fla., with 68 pounds, 13 ounces of carp were second and third in the total weight category.

#### NEW GROUP DEFENDS SPORTS-MEN'S RIGHTS

The National Society for Conservation and Animal Protection (NASCAP) has organized to supply the legal arm to help sportsmen in court cases against antisportsmen. Lewis J. Batt, Bethlehem, Pa., organizer of the group, said all funds will go toward legal costs, costs that anti-hunters can meet with funds obtained throughout the country, but which hunters and other sportsmen haven't organized to obtain.

Membership info is available from NASCAP, Box 3129, Bethlehem, Pa. 18017.

#### **ULTRA-HI ARCHERY CATALOG**

The Ultra-Hi Products Co. has entered the archery market with a full line of bows and accessories. You can get their 14-page brochure by writing Ultra-Hi Archery Co., Dept. AW, 150 Florence Ave., Hawthorne, N. J. 07506.

SPRANDEL'S CATALOG AVAILABLE Sprandel's Bowsight Co. has a new 32page catalog of hunting bows and hunting accessories. You can get a copy by writing to Sprandel's Bowsight Co., Dept. AW, 19 Brookside Dr., Monroe, Conn. 06468.

#### ANTIQUE ARCHERY GEAR AUCTION

Antique archery equipment and memorabilia from around the world will be sold Aug. 12-13 at the auction galleries of Richard A. Bourne, Co., Corporation Street, Hyannis, Massachusetts. This material is from the estate of the late Harold Abbot Titcomb, Farmington, Maine. A fully illustrated catalog of the items is available. If you want one, you'll pay \$10 at the galleries, or \$11 by mail (\$13 outside the U.S.). Mailing address is P.O. Box 141, Hyannis Port, Mass. 02647.

#### **S & K MFG MOVES**

S & K Manufacturing Co. has moved to 11320 East Mill Plain Blvd., Vancouver, Wash. 98664. Phone is (206) 892-6073. They produce the Comanchero releases and are distributors for Easton and Ranger.

#### BEAR ADDS DISTRICT MANAGERS

Robert O. Errett, Jr. is the new Bear district manager for Delaware, Maryland, Virginia and parts of West Virginia. Charles (Bill) Kidd is his counterpart in Georgia and most of Florida. Charles (Dwayne) Allen is responsible for Arkansas, Missouri and Oklahoma.

#### **NEW ASTRO MANAGER**

Astro Bows (Bro-Ken Arrow Archery), West Allis, Wis., has hired Eugene Moe to manage all pro shop operations and bowhunter leagues. Astro has also expanded their manufacturing area, according to Astro chief George Sattler.

#### STEMMLER CATALOG AVAILABLE

Stemmler's 1975 full-color catalog introduces an assortment of new hunting bows, target bows and related archery accessories. For a free copy, write to Stemmler Archery, Inc., Dept. AW, Southford Road, Middlebury, Ct. 06762.

#### INDIAN CATALOG AVAILABLE

The Indian Archery catalog shows a whole new look in their 1975 archery equipment, featuring their new economy takedown hunter, the Deerslaver II. Complete accessories are also shown. For a copy, write to Indian Archery, Dept. AW, 817 Maxwell Ave., Evans-

#### RUSINEK BUYS FLETCHING COMPANY

Joe Rusinek, president of Jo-Jan Sportsequip, Inc., 729 Frederick Rd., Baltimore, Md. 21228, has announced the acquisition of the Multi-Fletcher and Mono-Fletcher, previously manufactured by the J. G. Gebhardt Co.

#### SURE-KILL DEER LURES



The powerful NATURAL aroma of SURE-KILL BUCK and APPLE lures attracts deer from great distances. A few drops applied to hat brim or boot GUARANTEES to mask all human odor so that deer approach unafraid for close-in shots, even in a down wind. Thoroughly field tested and recommended by veteran hunters, SURE-KILL DEER LURES are as important as your gun or bow. used for Elk Moose and Bear.

### SURE-KILL BUCK LURE \$200 APPLE LURE

Deer Run Products 166 GRANITE SPRINGS RD. YORKTOWN HTS. N.Y. 10598

E - Z OUT ARROW TIP TOOL

#### At last, an essential pocket tool made to remove converta-tip broadheads and field points from trees, stumps, targets, etc. Simply screw off shaft, screw on E-Z OUT ARROW TIP TOOL Takes seconds -Saves time. Shafts, Broadheads, and Field points. Also, use the E-Z OUT ARROW TIP TOOL as a

holding device when sharpen-

ing broadheads. Distributor and

dealer inquiries invited. Patent pending,

Send \$3.90 postage paid to: EZ-OUT TOOL

130 Rimmon Rd. Beacon Falls, Conn. 06403

Individually hand crafted with blades of high carbon rustproof steel that holds its edge even after the mos rugged use. The blade opens smoothly and locks firmly

The handles are made of solid brass inlaid with Pac-

The G-96 Titan Folding Knife is preferred by many hunters because of the ease with which it can be carried. With its heavy duty con-struction and superb qual-ity, it performs as well as any fixed bladed hunting

POCKET KNIVES These knives have been en

gineered to fit the needs of the sportsman. The blades Model #990 model #350
daes: 1-2½", 2-1½"
Handle: 3½"
\$14.00 pp
tile sportsinalis in the practice of the precision crafted handles. The handles are solid dies. The handles are solid dies. The handles are solid dies. brass fitted with exotic Pac-ca wood. You will carry des: 1-21/8", 2-11/2 these with you everywhere Available in two sizes: Handle: 25/8 \$12.00 pp

THE ORIGINAL

COTTON - FILLED Archery Target

"The finest and most practical archery target ever developed."



Dimensions: 36" wide Weight: 30 lbs.

The first arrow you shoot into a Calmont Target will convince you. Penetration will be from 6 to 10 inches and the arrow can be removed effortlessly with two fingers, thus arrows will not be bent by trying to force them out of the target. There will be no fletching damage done because it is virtually impossible to shoot through a Calmont Target.

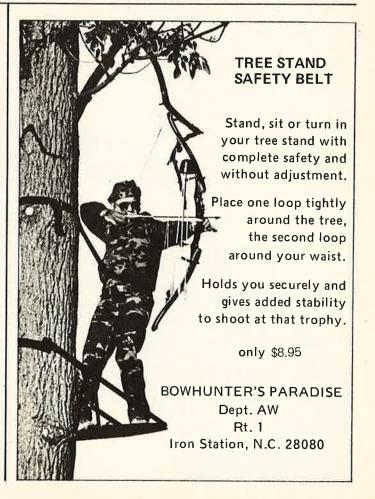
Unlike hay targets which get chewed up by countless arrows hitting the Unlike hay targets which get chewed up by countless arrows hitting the center of the target, due to the unique compression characteristics of the cotton fiber inside and the double wall butlap outside, the Calmont Archery Target will withstand many hours of hard use from even heavy compound bows without any damage. Field points and target points do not damage the cotton fiber inside and a burlap cover outlasts a hay target at least 4 to 1. Extra burlap covers may be purchased for a small price and you have a new target. Paper targets are easily glued or taped to the covers.

Once you shoot a Calmont you will never be satisfied with any other target. Rush your order to:

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(shipping and freight only COD by UPS)

All orders will be shipped the same day they are received. Dealer inquir-



## DICKIE'S SUPER HUNTER FIREBALL COMPOUND

As I sit here leafing through the magazine, looking at all the different kinds of compounds and all the other merchandise, I wonder what one can say that is different from many other ads.

Most of the products are well built and one can see many hours have been spent tryng to develop a product that is best. I suppose I am no different than the rest, I have developed a compound that I think is the best on the market to date.

My compound has a handle grip that is designed so it can be shot high, medium, or low wrist. The grip is very small and the slim line gives it the beauty one can only appreciate

The side plates have been cast into the handle, allowing us to fasten the limbs in a different method than any other compound. The side plates not only hold the limbs in postion, but allow them to pivot 180 oto a fold down position, being the first on the market. We have had people ask if by folding down the bow, it would get out of tune or adjustment. Not at all. You just set the limbs back to their original setting and you are back in

We have cast into the handle section a specific place where a side mount sight can be

The bow is cut by center 5/16", more than enough to fine tune it. It has a hole drilled and tapped for a plunger, and a hole drilled and tapped for the stabilizer 1/4x20 thread. We added a rough finish to the handle, and came up with a fantastic SUPER HUN-TER FIREBALL COMPOUND.

The idler and eccentric wheels are turned from black delrin which is the best to be found. The cable too is a high quality coated cable. The laminated limbs are cored with hard maple and powered with Gordon glass. We have a phenolic disc, each side of the limb, where the idler wheel fastens, to assure us that the limbs will not crack at that point and to reinforce the limbs.

We also have a phenolic trim where the eccentric wheel rotates, again to assure us that the material will not fail. There is one more thing I'd like to add. Other companies sel-

dom put a suggested retail price on their compounds. According to what I have seen on the market, my bow should retail for \$250.00, but we are letting you have this beauty for only \$165.00. There's no mistake. Now I ask you, when you can get all this for less than the cable bows or single reduction or whatever compounds you might look at, we can't see why you'd want to buy any thing else but a Super Hunter Fireball Compound. I am going to ask you to remem ber two things. We have a motto. "Better than the best, for less than the rest". Also remember the Flaming "DICKIE'S FIREBALL COMPOUND"

Dickie Roberts, past national field champion and bow manufacturer and designer for the past nine years, brings to you one of the most fantastic fold-down hunting compounds on the market to date

Two years of research have gone into the limb design and handle technology of the bow to provide you with the finest and only fold-down hunting compound on the market today

Our limb fastens on different from any other compound bow. We have a round linen base phenolic material attached to our specially designed nb that is anchored in place by a ¼inch pin allowing the limb to pivot 180 degrees to a fold down position

DRAW WEIGHT RANGES 35 to 45

55 to 70

While most compounds are strung continually, the FIREBALL can be folded down, relieving the limb tension and allowing easier transporting to and from hunting or storage for many months while not in use.

Plus state & excise tax ALUMINUM HANDLE ROUGH TEXTURED HANDLE

MASS WEIGHT 41/4 POUNDS

HUNTING MODEL

\$165

"BETTER THAN THE BEST FOR LESS THAN THE REST'

DICKIE'S ARCHERY COMPANY, Inc. Route 6, Box 580, East Roberts Road Three Rivers, Michigan 49093 Phone 616 278-3455



#### names...notes...news news...names...notes

#### **COMING EVENTS**

\* Sherwood Hog Hunt Jamboree, Aug. 30-31. Write to Jerry's Archery Lanes, Rt. 2, Monroe, N. C. 28100 for full info.

\* Mountain Trail Bowhunters' Festival, Sept. 6-7, Binghamton, N. Y. Write to Chuck Francisco, 1 Jerome Ave., Binghamton, N. Y. 13905 for full info.

\* White River Bowhunters' Jamboree, Sept. 6-7, Bedford, Indiana. Write to Gary Baldwin, 923 "L" St., Bedford, Ind. 47421 for full info. Two mule deer hunts will be given as door prizes.

\* Lake of the Woods Pro-Am, Aug. 16-17, Mahomet, Ill. Sanctioned by NFAA pro division. \$4,000 purse, plus merchandise. Team events. Amateur trophies. Full info available from George Chapman, Lake of the Woods Pro-Am, Main Street, Mahomet, Ill. 61853.

#### DR. JULIAN SMITH, AAHPER LEADER, DIES

Dr. Julian Smith, 73, education professor emeritus at Michigan State University, died of a heart attack June 23. Dr. Smith was instrumental in starting a new thrust of archery in public school systems throughout the country, through the AAHPER's Outdoor Education Project. OEP has conducted archery workshops since he began them in 1960. He was also instrumental in developing the archery instructor's guide for

In addition to many state, regional and national honors and positions of responsibility in education groups, he was a member of the Camping Hall of Fame, on the board of directors for the National Rifle Association and the National Safety Council, and in 1972 received the Gulick Award, the highest



honor the American Association of Health, Physical Education and Recreation can bestow on one of its members.

#### POPE & YOUNG BOOK

It is projected the first edition of the Pope & Young Club records book titled "Bowhunting Big Game Records of North America" will be off the presses in time for the club's awards banquet scheduled Aug. 22-23 in Boulder, Colorado. The book will include the ninth competition, which is the latest competi-

Highlights of the book include a history of the club and the awards, how to measure and enter trophies, minimum scores for entry, official list of measurers, how to hunt the various species, complete tabulations of bowhunting records, photos of world record heads, stories behind the records, hunting photos of Art Young and Saxton Pope, and trophy rooms.

To order your copy of the book, send a \$17.50 check or money order, payable to the Pope & Young Club, to Carl Hulbert, Executive Secretary and Treasurer, Pope & Young Club, 600 E. High St., Milton, Wis. 53563.

#### WING ARCHERY CATALOG

The 1975 Wing Archery catalog lists 13 Wing bows, seven sets, a full range of arrows and tips, plus a complete list of accessories and other items. For a free copy, write to AMF Wing Archery, Box 1930, Rt. 1, Jacksonville, Texas 75766.

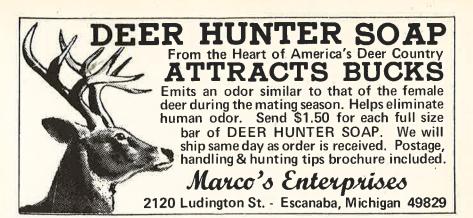
#### BEAR ESTABLISHES SERVICE CENTERS

Selectively chosen, fully stocked with Bear parts, and staffed by factory trained technicians, a network of Bear Archery Authorized Service Centers has been set up around the country. Object is to place expert guidance and quality work at readily available locations and eliminate shipping problems and down time on any bow needing service. This will also permit more customizing.

For info on the address of your nearest service center write to Bear Archery, Dept. BASC, Rt. 1, Grayling, Mich.



 Winner of the pro division team competition at the Bowhunter's Nationals tournament at Clinton, Iowa, in June was the Precision Shooting Equipment team of, from left, Frank Durdle, Jerry Smith, George Chapman, Pete Shepley and Jim Philpott.





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- ONE MODEL FITS ALL LEFT HAND, RIGHT HAND, OR ANY ANCHOR POINT

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Dealers inquiries invited.

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"LIGHTED SIGHT BAR" FOR THE HUNTER

lets you hunt at dawn and dusk.

\$16.95 Plus \$1.12 FET-POST PAID NO C.O.D.'s



**HUNTER S** 

8/32" screw size

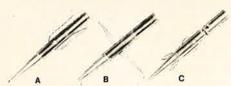


#### HUNTER 1

Available for the Target Archer in a ringed bar. Ranger S 11/2" long. Ranger 111 21/2" long at \$21.95 plus \$1.45 FET. \$23.40 total shipped postpaid. No C.O.D.'s. DEALER INQUIRIES WELCOME.

Your sight bar is now visible in all light. See it at your favorite dealer or order

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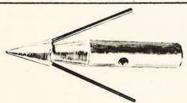


#### REVERSING TEMPERED STEEL BARBS

A. Fish Point in flight B. Barbs open in retrievemaximum holding power

C. Barbs reversed for removal Simply twist the arrow shaft counterclockwise to reverse barbs and remove arrow, You can't lose tip or barbs. Sting-a-ree Fish Point \$2.89 ea. Sting-a-ree Fish Arrow \$4.46 ea.

#### Lil' STINGER POINT



#### **DOUBLE BARB HARPOON POINT**

Screw off point to remove arrow Lil' Stinger Fish Point \$1.58 ea. Lil' Stinger Fish Arrow \$3.15 ea.

#### **WEE STINGER POINT**



Screw apart style, Spring wire barb Wee Stinger Point \$ .79 ea. Wee Stinger Arrow \$2.35 ea.

> See your dealer or write: R & D Products Box 154A Euless, Texas 76039

Complete Line Of Archery Needs

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## TRADINGPOST

#### TRADING POST GETS ACTION WITH BUYING AND SELLING

Rates are 50c per word, minimum 20 words. 10% discount for three consecutive insertions and 15% discount for six consecutive insertions. YOU MUST send cash with order to ARCHERY WORLD, 534 N. Broadway, Milwaukee, Wis. 53202.

#### **Books and Catalogs**

BOWHUNTERS! Largest Supplier! Bows, arrows, supplies, crossbows, everything! Giant 200 page bargain catalog. 25 cents covers mailing. Kittredge Bow Hut, R3, Mammoth, California 93546

FREE DISCOUNT ARCHERY CATALOG. Bows: Wing, Bear, Olympus, Easton aluminum and Dura-Fibre glass arrows. Robert's Archery Co., Smith Rd., Palmer, Massachusetts 01069.

TARGETS, Complete line, fast service, Best prices. Field, Hunter, Animal, PAA Flint, FITA, NAA, Deer, Safari, Big Game. Cardboard, paper. Free catalog. Finnwood Products, 516 Mill St., Cincinnati, Ohio 45215.

WINEMAKERS — Free illustrated catalog of yeasts, equipment. Semplex, Box 12276E, Minneapolis, Minn. 55412

#### For Sale

FREE HANDS WITH BOWMINDER. Holds bow securely in tree-stand. Minimum movement when game is close. Allows warming hands, resting during long wait: \$2.95. Nylon safety-belt works! Straps to tree and encircles you. Safe, comfortable, allows free movement: \$6.95. Tree-ups! Set of 5 portable steps gets you up 10 feet: \$9.50. Use regular closed-faced spin-cast fishing reel on your bow with this light-weight adapter: \$2.50. Portable lantern hanger attaches to tree safely, securely, quickly: \$3.95. Build 4-burner butane camp cookstove. Materials / list / instructions: \$2.00. Build portable, lightweight, rugged, safe canoe motormount. Materials list/instructions: \$2.00. WG's Supplies, 12301 Chicamauga, Huntsville, Ala.

Start your own TAKE APART BOW BUSINESS. Complete tooling and Patents for sale. CHARLES DIEHR, R.R. 6, Box 455, Noblesville, Ind. 46060.

WHOLESALE, QUALITY ARCHERY PRODUCTS. Stabilizers, fish reels, bow strings and stringers, finger slings, leather goods, aluminum arrows, etc. Dealer & jobber inquiries invited. For more information write: Springer Archery Supply, Inc., 16084 Hannan Rd., Romulus, Mich. 48174.

HUNTING ARROWS, Bear Razorhead, \$1.84 ea. Matching field arrows, \$1.42 ea. Best Port Orford Cedar. Specify arrow length and bow weight. Dowling Archery, 132 Foxdale Lane, Port Jefferson, N. Y. 11777.

#### Taxidermy

WORLD'S LARGEST, most complete Taxidermy Supply House. Has everything! Big full color catalog only 50 cents. Vandyke's, Woonsocket 10, South Dakota 57385.

#### **Emblems and Patches**

EMBROIDERED PATCHES — Club emblems, custom embroidered from your artwork or present emblem. ANTHONY EMBLEMS, Box 7068, Grand Rapids, Michigan 49510.

CUSTOM EMBROIDERED EMBLEMS, your design, low minimum. Free booklet, design hints and guide. Write now: Patches, Dept. 49, Littleton, New Hampshire 03561

Don't set up another blind until you've seen the Potawatomi Bow Holder.

The holder secures your bow in a ready-to-shoot position. Arrow nocked. No more spooked deer because you had to scurry for your bow. No more missed shots because muscles were tensed from waiting.

The Potawatomi Bow Holder straps to any tree trunk or limb up to 18" in diameter. It keeps your bow ready, releases silently with a very slight upward movement. And rolls up pocket-size when the hunt is \$4.85 over.

Order direct or write for more information.



**PRODUCTS** 

Precision Companions for Archery R.R. 7, Plymouth, IN 46563

## the Pros

#### DIXON, McKINNEY WIN MARSTON SHOOT

Darrell Dixon won a shootoff with Chuck Bigelow on the fourth arrow of the overtime end and took the \$600 top prize at the Ann Marston Memorial Tournament in Flint. They had tied with 599s. Betty McKinney stepped into the lead on the next to last end of women's shooting, after having been tied with Jody Holder and Barbara Kale, and won \$300 and the women's title with a 579. Jody was second with 578 and Barbara third with 577.

In the men's division, John Williams was third with 597 and Tim McKinney fourth with 596.

#### ROBINSON, WEBER WIN NEBRAS-KALAND

Steve Robinson, 296-298/594, and Judi Webber, 290-292/582, won the men's and women's pro titles at the Nebraskaland Pro-Am in Omaha. In men's shooting, Chuck Bigelow was second with 294-297/591 and Del Schweitzer was third with 296-295/591.

Trailing Webber were Denise Libby with 289-282/571 and Norma Sether

TREE STAND

THE HUNTERS

PRACTICAL

TREE STAND

EASIEST OF ALL

STANDS TO PUT UP

A must for both the

gun and bow hunter.

climb to step

of seat ladder

No tree hugging or

Put in tree with or

without limbs, with

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no harm to the

This all aluminum stand folds easily to a

• COMES COMPLETE-NOTHING EXTRA TO

For Free Brochure Write: Retail: \$49.95

carrying weight of approx. 8 lbs.

• Tested over 600 lbs.

torn clothing.

Attach seat and

with 290-275/565.

Amateur winners were Chris Beardslee with 294-292/586 and Donna Gyulavies with 276-287/563.

#### **BIGELOW, KALE TOP BANANAS**

Chuck Bigelow, the Omaha Kid, with a perfect 300, and Barbara Kale, with a 291, topped their pro divisions at Dick LaMar's Big Banana Open in Bristol,

Runnersup in men's shooting were Al Lizzio, 297, Dave Jackson, 296. Women's runnersup were Jody Holder, 288, and Ann Butz, 286.

#### BIGELOW, McKINNEY TOP IN-DOOR LEAGUE

Chuck Bigelow added to his winnings with a total score of 1,494 in the First American Indoor League action, and Betty McKinney won women's competition with a 1450. They each won \$400. Richard McLaughlin was second with 1484, for \$300, and Greg Shumaker was third with 1478, for \$280. In women's shooting, Joan Neubauer and Denise Libby tied for second with 1432, for \$290 each.

CHALLENGE Fleet of foot, excellent sight, hearing and smell. Skilled at concealment, Truly a chal-

lenging trophy.

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THE STAND

All-aluminum construction, 5/8" platform size 19" x 24" with comfortable 10" x 12" folding seat, Portable and light 81/2 lbs. Folds flat, fits back, Unique design gives strength safety and is quiet Meet the challenge with the LOC-ON LEM.

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Unfold and hang on tree 5" to 18" thick, Nothing to put together or adjust. Locks on tight. No slipping, sagging or tilting. Quiet and strong. Tested to 800 lbs.

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Only \$44.50

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Special . . . Save \$5.95. Lem tree stand and set of 4 E-Z-Y climb tree steps \$55.50. Shipped postpaid.

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The Sidewinder Bouquiver



LIGHT STRONG QUIET



Fits all bows including compounds Arrows carrying problems

(1) Attach ladder and climb onto by way

solved by the SIDEWINDER Carries up to 10

**Broadheads** 

TROPHY SIX

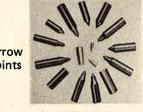
6 arrow capacity in three models (1) Compound

(2) Adjustable tape/bolt on (3) Wina

Write for free brochure

A & W ARCHERY

Box 1219 Garden Grove, CA 92640 NEW!! We have added interchangeable screw-in adapters for glass and metal shafts, plus nock and point adapters. Write for a brochure, or see your dealer



Screw-a-part Fish Point

**Blued Steel** \$1.00 P. pd.

**FUR TRACERS** 

They show up like a lighted candle! With self-adhesive, they are quick, easy to apply. Instructions included. \$3.00 for one



red, orange, or hot pink **SWEETLAND PRODUCTS** 1010 Arrowsmith Street

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Easy Up Tree Stand

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Wilmington, OH 45177





## on the market



#### PRO-TOTE TD CASE

The Pro-Tote takedown bow case holds a handle riser, two sets of limbs, with big space for side mount sight, stabilizers and accessories. Holds 30 arrows. Meets FAA requirements for transportation on commercial aircraft. Full info available from Protecto Plastics, Inc., Dept. AW, P.O. Box 68, 201 Alpha Rd., Wind Gap, Pa. 18091.

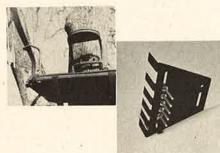


#### SPORTRONICS SHORT PIN

The new Hunter 'S' Sportronics lighted sight bar is 11/2" long, designed specifically for use on compound bows. Estimated life of light is 80 years. Unit made of leaded stainless steel, brass and PVC plastic. Full info from Sportronics Co., Dept. AW, P.O. Box 09045, Detroit, Mich. 48209.

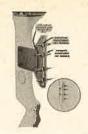
#### TIEFEL BOW HOLDER

Metal U-bolt, with right-angle bend at top, can be installed by drilling two 5/16-inch holes in front of stand platform and through base tubing. Unit is coated with green rubber to protect bow and be silent. Models available for conventional and compound bows. Suggested retail for each is \$9.95. Full info on bow holder and tree stands from Tiefel's Tree Stands, Dept. AW, 87 Fillmore St., Rochester, N. Y. 14611.



#### AI HUNTING SIGHT

This side mount sight has fluorescent rangefinder and pins for 15 to 25 yards. Fits any undrilled conventional bow or compound, and most pre-drilled bows. No extensions and brackets needed. Non-reflective black coating. In left or right hand. Suggested retail \$12.95. Full info available from Archie's Archery, Dept. AW, 3042 Lone Oak Rd., Paducah, Ky. 42001.



#### **ACCRA HUNTING SIGHT**

Accra's new Buck-Eye sight is double adjustable; you can adjust elevation settings without disturbing windage settings, and vice versa. Four sight pins standard. Available in four models, two side mounts and two front or rear mounts. Two-piece models suggested retail of \$12.95; one-piece models suggested retail of \$9.95. Full info available from Accra Mfg. Co., Inc., Dept. AW, 1226 So. Norwood, Tulsa, Okla. 74112.



#### **RAMCO BOWS**

Ramco introduces the "flatlimb" compound and their adjustable draw weight takedown hunter. The takedown is available in weights from 30 to 75 pounds. On lighter limbs you can adjust for four to five pounds of draw weight variation; heavier limbs adjust for seven to 10 pounds. Retail is under \$125. The "flatlimb" has no partial recurve at limb tips, so is slightly shorter than other Ramco compounds. Available in 30/40, 40/50, 50/60 and 60/70 draw weights. Draw lengths from 24 inches to 33 inches. Full info available from Rocky Mountain Archery, Dept. AW, P.O. Box 208, Rangley, Colo. 81648.



#### "CROW'S NEST" TREE STAND AND LADDER

Designed for the hunter who hunts different areas during season and doesn't always have ideal tree to safely climb. Platform is 15" x 22". Ten-foot ladder composed of five sections 27 inches long. Unit weighs 22 pounds, can be carried in a pack 27" x 16" x 10". No tools needed to assemble. Non-corrosive aluminum frame, non-slip surface on rungs and is flat painted to remove glare. Full info available from Greg Kinart, Impact Industries, Dept. AW, 4990 S. 2nd St., Milwaukee, Wis. 53207.



#### HERTER'S ONE-PIECE COMPOUND

The Model GLH is designed with the same quality, shooting ease and advantages as the Power Magnum compound, gives up to 50% letoff at full draw. Overall length is 51 inches, draw weights available are 45, 50, 55 and 60 pounds. Draw lengths are 28, 29 and 30 inches. Retail \$97.50. Full info available from Herter's Inc., Dept. AW, Waseca, Minn. 56093.

#### MOULD-N-MOUNT TAXIDERMY

This is a chemical kit that moulds and mounts the entire animal in four steps. No gutting, skinning or tanning is needed. Kit contains a syringe, molding compound, water preservative, molding clay, grooming material, touch up paint and a hair set. Moulding compound is injected into animal which forms a cast around internal matter and permeates tissues. Preservative chemical does the rest. Entire job can be done in 11/2 hours on a squirrel, five hours on raccoon. No

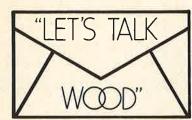
Distribution and Sales, Dept. AW, P.O. Box 579, Santa Anna, Texas 76878.

#### C & S HUNTING RELEASE

The Model 303 is an adult size release with a sear head of heat treated carbon steel. Pivot pins are made of stainless steel. Adjustable trigger spring tension and travel, trigger head travel, position change for finger fit. Also available in Model 304 for women and children. Suggested retail \$39.95. Full info available from C & S Archery, Dept. AW, smell. Full info available from KMK P.O. Box 156, Cheektowago, N.Y. 14225.

#### **ROSE CITY ARCHERY**

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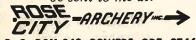
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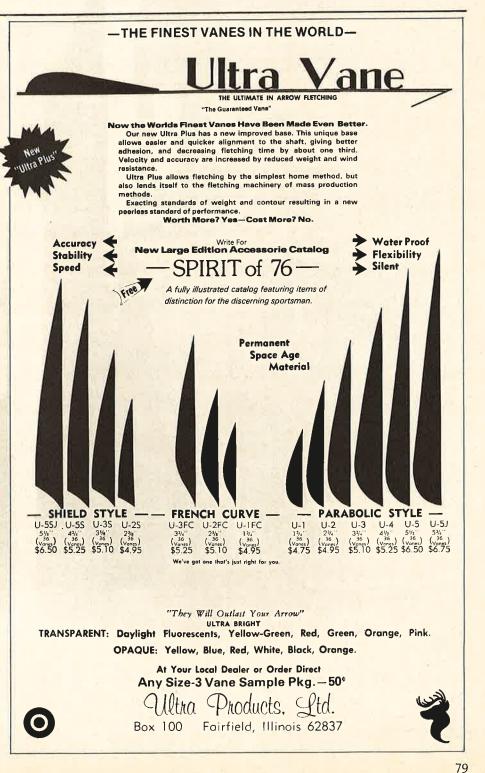
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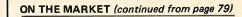
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#### LIGHTWEIGHT TREE STAND

Made of tubular aluminum framing, the stand has an 18" x 181/2" plywood platform. Complete stand weighs eight pounds. Fits any tree up to 50 inches in circumference, supports up to 500 pounds. Chain snaps securely to hold position, extra support given by tubular under arms against tree. Warranted for 12 months from date of purchase. Suggested retail of \$44.95. Full info available from Hunter's Hideout Tree Stand Mfg. Co., Dept. AW, 1817 McKeon Rd., Kenosha, Wis. 53140.



#### **DEER HUNTER SOAP**

This soap contains a combination of ingredients formulated to mask human odor and make the user emit an odor similar to that of a female deer during mating season. Bar weighs 3.6 ounces, used for general washing and carried in field to rub on boots and clothing. Suggested retail \$1.50. Full info available from Marco's Enterprises, Dept. AW, 2120 Ludington St., Escanaba, Mich. 49829.



#### ASTRO BOW CASE

This case is made of a heavy fabric, adapts to most compounds with quiverful of arrows. Has 3/4-length zipper. No handle on case; open slot lets you grip handle of bow when carrying. Case folds easily. Future cases will be of dark material. Full info available from Astro Bows, Dept. AW, 1620 S. 81st St., West Allis, Wis. 53214.

#### WILSON - PRECISION The Take-Down **ROTARY RELEASE** MARK II TC Bow that started it all hl-tensile aluminum ailoy pistoi grip handle. Long, thin sight window, bi-radial shelf, in lustrous, nonreflecting black. Non-stacking fullworking recurve interchangeable limbs in hunter brown. Length, 60", 3-plece takedown for easy packing. Choice of draw weights from 25 to 65 lb. in 5-lb. steps. Right hand draw only. winner for hunting or target. PRECISION RELEASE CONTROL MEANS ACCURACY FOR YOU This new Model features: ■ Two Handles: New Unitized flex handle, Quick attach-detach, no disassembly necessary, New T Handle that comes with two interlocking spacers to adjust length for big hands or gloves in cold weather. Use with or without rope loop. Can also be used as Thumb trigger release when T handle is used. Reliable precision Rotary mechanism with hardened and chromed \$3995 at Your Dealers including Fed. Excise Tax working parts. Tested to hold over 200 lbs. ■ Micro-adjustable trigger for precise If not in stock order direct trigger control. In new carrying carton with plastic handle ■ Use right or left handed. Simple "Make it yourself" replace-Plas/Steel Products, Inc. ment loops. Nothing more to buy. Comes complete with both handles 805 Park, Walkerton, In. 46574 and wrenches and two spare loops. Send Bushwhacker Bow\_\_\_\_draw wt. \$39.95 postpaid. Enclosed is Money Order or Check. \$44.95 Plus \$1.50 Shipping & Ins. (Fla. Residents add 4% sales tax.) WILSON — PRECISION P.O. Box 560611 Kendall Branch



#### KEVLAR BOWSTRING MATERIAL

Kevlar is one of the "miracle" fibers, originally produced by duPont. Reportedly is as strong as steel, has good acid and alkali resistance, won't corrode in air or salt atmosphere. Full info available from Synthetic Thread Co., Inc., Dept. AW, 825 Twelfth Ave., Bethlehem, Pa. 18018.



#### DAWSON RAZOR BROADHEAD

The Trophy head has quick-change razor insert cutting edges, designed to vibrate on impact for maximum shock effect and flex to minimize bone resistance. Steel nose screws on for better strength. Suggested retail is \$6.90 for six. Full info from Dawson, Dept. AW, 13B Bradford Ave., Trenton, N. J. 08610. (continued on page 82)

TOP COLORADO BOWHUNTING! Hunt Colorado's Flattops Wilderness Area for mule deer and elk. Season opens August 16, 1975. Make your reservations now! Call or write:

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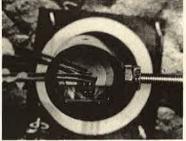
If your local dealer can not supply you, write direct.

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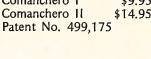
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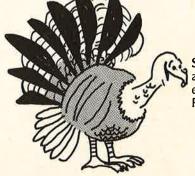
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ON THE MARKET (continued from page 81)



**DUAL-MONO BOWSTRINGS** 

Two separate strands of monofilament give a unique serving process reported to be softer and more flexible, yet stronger than single-wound mono. Acting together, Dual-Mono coils help keep serving from slipping and also help prevent fiber damage at nocking point. Full info available from Imperial Archery, Dept. AW, 1451 S.W. 11th Terrace, Pompano Beach, Florida 33060.



**B&H BOW SCALE** 

This handy draw weight scale will remove all doubt whether your compound bow has slipped or changed after adjustment. It's compact, so you can use it anywhere quickly. Suggested retail \$22.95. Also new from B&H are the Quick-Detach Fit-All bow quiver and the B&H coated bow hanger. Full info available from B&H Archery, Rt. 2, Dept. A, Armstrong, Iowa 50514.



ROBIN HOOD SUEDE GLOVE

The three-fingered hunting glove with closed tips of soft suede leather is in forest green. Wide brown elastic attaches the adjustable brown leather wrist strap which is extra long to accommodate all wrist sizes. In S-M-L sizes. Suggested retail \$2.75. Full info available from Robin Hood Archery, Inc., Dept. AW, 215 Glenridge Ave., Montclair, N. J. 07042.



**EASTON ARCHERY T-SHIRTS** 

Silk screened, 100% cotton, available in tan or all white with blue trim. In men's sizes S-M-L-XL, boy's M-L. Colorfast, machine washable. Retail \$5 from Easton Aluminum, Dept. AW, 7800 Haskell Ave., Van Nuys, Cal. 91406. No

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With PSE's newly-developed **Proficiency** and **Pacer** Models,\* built especially for hunting! These clean, uncomplicated designs are rugged and reliable, and eliminate unnecessary frills to rest easy on your pocketbook. Yet both offer those most-wanted compound bow features, including **completely adjustable weight ranges** and famous PSE quality. **Standard hunting-oriented features** include fully laminated limbs; improved let-off for less-effort holding; magnesium handle for light, easy control; and non-reflective black textured finish.

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#### The PACER

Bow-hunting's Economy Champ, priced under \$150, Pacer is the only bow in its class with fully weight adjustable limbs (no need for special "stringer" to change strings or cables). Amazing 50% let-off with no complex tiller design to cause problems. Non-critical tuning for accurate shooting with any style under any conditions. Specifications: Weight—3 lbs, 7 oz.; Bow Length—48"; String



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