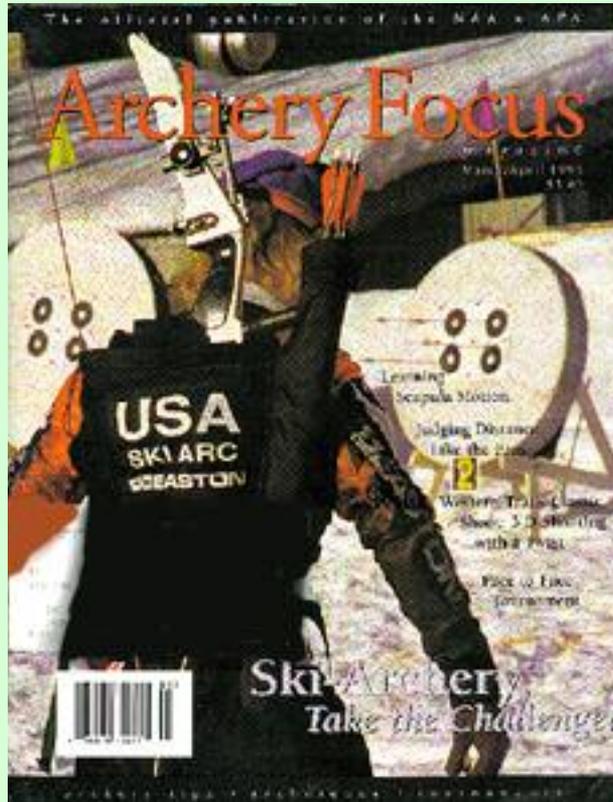


Archery Focus

Volume 2, Number 2, 1998 \$5.00



NOTE

Prior to the Vol. 3, No. 3 issue all we inherited were individual articles from the AFm website. With the help of a generous subscriber we were able to download those articles and convert them to our present file format. This "Whole Issue" has been reconstituted from those files and so doesn't look exactly like the current issues.

Spring's almost here!

It's time to pull the bow out of the closet and get ready for the summer. Of course you shouldn't have had it in the closet in the first place, but if you did it's OK. If you're involved in competition, that means getting ready for travel. If this pertains to you, take a look at George Tekmitchov's list of what you should look for in a good travel case for your bow. Find one that fits your needs. Speaking of tournaments . . .

Hey 3-D Shooters!!!

Have you heard of the Western Classic Trails Shoot in Redding California? You should take the time to read about this 3-D tournament with a little twist. Many claim this is the 3-D event of the year, if you dare try the 101 yard standing bigfoot target, yes I said BIGFOOT!



In addition, Bobby Ketcher shares some secrets about judging distance in his Compound 200 article, 'Judging Distance Like the Pros'. He'll teach you some options to try when 'Ground Judging'. It just isn't an option. So, get up and get out and practice!

For all you die-hard outdoor exercise types, have you ever tried Ski-Archery? It's not for everyone, it's only for those who love EXERCISE and FUN. If you want to combine the physical nature of cross-country skiing with archery it is a must to try.

One of the hardest aspects of shooting to develop, or to teach, is how to use the scapula in drawing the bow through the clicker for recurve shooters. There are so many ways to compensate for incorrect drawing. For example, you can 'hinge' at the shoulder, push through the clicker or even use the biceps muscle which eventually shows through in collapsing. Don Rabska shows you some training aids and techniques to help you learn this difficult skill.

As always, *Archery Focus* offers a wide spectrum of articles loaded with tips and techniques to improve your shooting. We have our 100 level articles designed for beginners, 200 level for the intermediates and 300 for the advanced archer. So enjoy the tips and techniques and I hope they help you!

Sincerely,

Denise Parker

Editor, *Archery Focus* Magazine

Archery Focus

Table of Contents

Volume 2, Number 2, 1998

featured articles

- | | | |
|----|---------------------------------|----------------------|
| 4 | Traditional Leather Goods | T.J. Conrads |
| 8 | Ski-Archery—Take the Challenge! | Denise Parker |
| 18 | Get Off My Case! | George Tekmitchov |
| 24 | Quicktune Rest | Drew Wilcock |
| 38 | Don't Read This Article! | Lisa Franseen, Ph.D. |

technical recurve

- | | | |
|----|--|-----------------------|
| 11 | 100 Stance | Jennifer Furrow-Fonua |
| 13 | 200 What Type of Fletching Is Best | Rick McKinney |
| 21 | 300 Special Training Techniques and
Training Aids for Learning Scapula Motion | Don Rabska |

technical compound

- | | | |
|----|------------------------------------|---------------|
| 15 | 100 Adjusting Your Release | Drew Wilcock |
| 25 | 200 Judging Distance Like the Pros | Bobby Ketcher |
| 35 | 300 Stabilizing Your Bow | Larry Wise |

news

- | | | |
|----|---|---------------|
| 2 | Editorial: Spring's Almost Here! (<i>missing</i>) | Denise Parker |
| 29 | NAA News | |
| 42 | Product News | |

TRADITIONAL

Traditional Leather Goods

by T.J. Conrads

Nothing adds as much to your archery experience as well-crafted leather accessories

If there is one material that ideally goes with traditional archery equipment, it has got to be leather. While most of the modern world lives with plastic and synthetics, traditional archers opt for leather accessories to go along with their chosen hobby, and nothing comes close to the durability, feel, smell and appeal as does fine leather.

For the archer, there are several manufacturers of leather goods, items which are indispensable and definitely traditional when it comes to our archery heritage. The list could be endless, but a few of the more popular items are shooting gloves and tabs, quivers and armguards. Each has a specific use and adds immensely to your enjoyment of archery.



The Damascus style of shooting glove

Gloves & Tabs

The first item an archer needs to start shooting a traditional bow is either a shooting glove or a tab. Several makes and styles are available to fit just about any size hand, from small children to large adults, the most common being the traditional shooting glove. This style of glove has leather finger tips, or stalls, for the three middle fingers, attached to a strap which secures around the shooter's wrist.

Some manufacturers go so far as to install nylon, teflon or plastic inserts in the finger stalls of their shooting gloves. The advantage of this process is that the inserts prevent the finger stalls from creasing, allowing release of the bowstring.

Many archers prefer to use a leather tab instead of a shooting glove. The tab is designed to slip over the middle finger, providing protection from the bowstring while shooting. Some are made of thick pigskin while others can be found which are

made of deer or steer leather. One manufacturer in Alaska makes tabs from seal skin which has been purchased legally from Native Americans.

Quivers

An archer needs a way to carry his or her arrows when in the field, and the quiver provides a safe and dependable way to do this. Back quivers, side quivers, bow quivers and hip quivers are the most common, and there are several high quality designs available which can be custom designed for you.

Many manufacturers sell quivers already stitched and ready to go, while others sell quiver kits where you can assemble the quiver yourself. Still others will build a custom quiver to your design, tooled and dyed the way you want. Many traditionalists make quivers from the skins of animals they have harvested. I have seen quivers made from fox, otter, coyote, deer, bear and even zebra hide which were quite beautiful. In France I met a bowhunter who had a side quiver of zebra hide with a matching knife sheath. With his longbow and zebra quiver, he was quite a sight as we slipped through the French countryside looking for Russian boar.

Jack's Traditional Archery markets the unique One Arrow Quiver, a simple leather sheath designed to hold a single two-blade broadhead. This quiver ties around the upper bow limb with a leather strap, and allows the stalking bowhunter to carry one extra hunting arrow.



The back quiver is one of the oldest designs, and provides enough storage for up to two dozen arrows. This model was made from a kit from Three Rivers Archery.



Bow quivers, such as this leather one from Great Northern Bowhunting Company, are the most popular hunting quiver today.

The One Arrow Quiver from Jack's Traditional Archer. This simple leather accessory allows the hunting archer one extra arrow while stalking.

Quivers were discussed more fully in my previous article, *Hunting With Traditional equipment*, which appears in the September / October 1997 issue of *Archery Focus*.



This custom armguard, made by Franck Le Gall of France, shows the elaborate attention to detail some craftsmen go to with their leather work.

Armguards

Many an archer has felt the sting of the bowstring when releasing an arrow, That little welt the string leaves on your forearm can be downright painful in addition to causing erratic arrow flight. An armguard, or bracer, not only protects the archer's forearm, it also keeps loose clothing away from the path of the bowstring when the arrow is shot.



Made from a piece of thick steer hide and attached to your belt, this accessory allows a light, traditional bow to be hung, freeing your hands for other uses.

Next to the quiver, the armguard is one item most archers personalize. Favorite animals, names and special designs can all be tooled into the leather. The designs can be as simple as block letters of the archer's name, to highly specialized designs hand-tooled into the leather from a photograph.

Franck Le Gall, a French traditional bowhunter, has taken the custom armguard to a new level. With the touch of an artist, Franck will reproduce any photograph an archer wants on an armguard; caribou, deer, elk, moose ... a hunting scene ...

anything you wish. His artistry also can be applied to any other piece of leather for your archery: knife sheaths, quivers, belts, etc. His designs are hand-tooled and then dyed to reproduce almost flawlessly the original photograph, creating a very personal archery accessory.

These and other leather goods are very much a part of the tradition of archery.

And whether you purchase, contract or make them yourself, they will add deeply to your love of archery. By using your imagination, there is no limit to what leather accessories you can acquire to enhance your time in the field with a bow and arrow.

All items mentioned in this article can be purchased from the following manufacturers and dealers.

Alaska Bowhunting Supply

14000 Golden View Dr.
Anchorage, AK 99516
907-345-4252

Jack's Traditional Archery

126 Forest Rd. 20
Randle, WA 98377

Brackenbury Bows, Inc.

8326 SE 252nd Ave.
Gresham, OR 97080
503-666-1667

K&J Leather

440-248-1775

Franck Le Gall

15 Rue Ducis
78000 Versailles
France
Phone: 33-1-39-02-14-49

Kustom King Arrows

1260 E. 86th Place
Merrillville, IN 46410
219-769-6641

Great Northern Bowhunting Company

201 North Main
P.O. Box 777
Nashville, MI 49073
517-852-2082

Mayan Archery Leather Gear

221 Wilson Ave.
Norwalk, CT 06854
888-385-3255

Three Rivers Archery

P.O. Box 517
Ashley, IN 46705

Wyandotte Leather

1811 Sixth St.
Wyandotte, MI 48192
313-282-3403

Ski-Archery Take the Challenge

by Denise Parker



Ski-Archery has been a competitive sport in the United States since 1987 and continues to grow each year. While the competitive format is relatively new, the practice of shooting a bow and arrow while skiing dates back to prehistoric man. Ski-Archery is a combination of cross-country skiing and archery, based on the Olympic Biathlon format. Official Ski-Archery season runs from November to March and consists of more than 20 national events and 8 international races. Oh, and by the way, if you think you can't try Ski-Archery because you live in Arizona or California, think again. Trade in your skis for some roller blades and you're on your way.

There are two main styles of cross country skiing, classic, where the skis stay parallel to each other and skating, which emulates the movements of roller blading. You can compete using either style, but the most popular style for competition is skating, mainly because it is a much faster style once mastered. All types of archers can participate in the sport. You can use a compound or a recurve, you can even use traditional equipment if you wish. Most try to pick equipment that is simple and very light in mass weight because each skier is required to carry their bow on their back, using some type of harness, throughout the race.

Men ski a 12 kilometer (km) course of three 4 km loops, shooting four arrows at the end of each of the three loops, while women and juniors ski an 8 kilometer course of two 4 km loops with four arrows shot at each of two designated shooting stops. In the team relay event, each of three racers on a team skis one 4 km circuit and shoots four arrows. Arrows are all placed at the shooting line prior to the event starting. Men need a total of 12 arrows, while women and juniors need a total of 8 arrows.

"The Italian Ski-Archery Team usually dominates the international events," says Leslie Iowa, an international Ski-Archery team member for the US. "They have an endless amount of excellent skiers. The American teams usually out shoot them, but they out ski us." The opportunity for growth in this sport is amazing. In fact, FITA is hard at work lobbying to get Ski-Archery into Olympic competition by 2002. So if you want to try out a new sport with the possibility of going to the Olympics some day, give it a try.



Let me take you through a typical competition. The gun goes off and the racers begin, both men and women ski 4 km before they pull into the first shooting station. Here, the racers shoot their first four arrows in the standing position, keeping their skis on the entire time. Compound archers shoot at a round target with a 12 cm (4.7") diameter, while recurve archers' target is 16 cm (6.3") in diameter, The target is placed at a distance of 18 meters from the shooting line, The target is a hit or miss situation. There is no score for being close to the middle. Many competitions set up the targets so they are fall-away or breakable, so the archer knows instantly whether they hit the target or not. For each target missed the racer must ski a penalty lap of 300 meters before they can return to the race circuit. For each circuit, shooters must leave the target range with skis on, poles in hand and the bow correctly placed on the racer's back to continue or cross the finish line. The racers then ski another 4 km before entering the second shooting station. This time the archers must shoot their four arrows while kneeling on one knee. Again, for each arrow missed, the archer has one 300 meter penalty lap. At this point the race is over for women and juniors. For the men, after skiing the third and final 4 km circuit, the last set of four arrows are shot again in the standing position. All arrows remain in or near the target until the end of the competition and scoring is completed. In some cases the course officials will add an additional 1 minute to the skiers time for every shot missed in place of skiing penalty laps. The adjusted time will then determine the winner.



And so this is the sport of Ski-Archery. Is it fun - DEFINITELY! Challenging and athletic in nature - ABSOLUTELY! Try it out. You will never feel better than you feel when you cross the finish line. If you want to try the sport, but there isn't a local club that sponsors the event, contact one of the numbers listed for more information on how to start your own Ski-Archery club.



For more information on Ski-Archery contact:

US Archery Association
1750 E. Boulder Street
Colorado Springs, CO 80909-
5778
(719) 578-4576

Italian Archery Federation
Franc Carminati
Via Principi d' Acaia 49
10064 Pinerolo (TO), Italy
0121 73966

**Canadian Archery
Association**
Wayne Carlton
Box 384
Vanderhoof BV VOJ3AO
(604) 567-4363

Mike Frane
22633 Ellinwood Dr.
Torrance, CA 90505
(310) 316-2062

**Federation Francaise De Tir
A L'Arc**
268 et 270 rue de Brement
93561 ROSNY SOUS BOIS,
France
1-48-94-23-82

Stance

by Jennifer Furrow-Fonua

Stance is the position of the feet, the groundwork upon which good shooting form is based. The proper stance will give the archer the necessary power and balance for drawing the bow. There are two major stances used today. The square and the open stance. When you are considering which of these will work best for you, you need to first answer these few questions.

- **Does this stance allow my body to have good alignment to the target?**
- **Does it give me the feeling of solidity?**
- **Does it encourage even weight distribution?**

Remember that stance is mostly a matter of preference. The best stance is the one that allows for the greatest consistency and comfort while shooting.

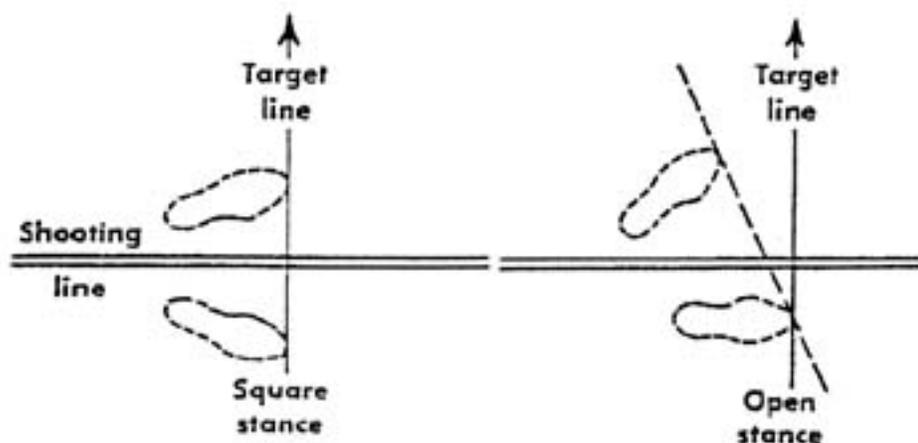
Square Stance

When using a square stance, the right handed archer will stand with the left side of their body toward the target. Imagine a straight line extending between you and the center of the target, your toes should be parallel to this line. Your feet should be positioned shoulder width apart and be perpendicular to the target. If your legs are too close together your stance will be wobbly and unstable. On the other hand, if your feet are too wide apart this can cause muscular tension which could cause inconsistency. The weight of your body should be evenly distributed on both feet, and should stay that way throughout the shot. Swaying or shifting weight from your left foot to your right foot or toward your toes or heels will only result in a weak foundation. Remember that it is important not to lock your knees. Locking the knees can cause fatigue and strain. Keep them relaxed throughout the shot.

To maintain consistency, lay an arrow across the shooting line so the arrow is pointing in a straight line toward the center of the target. With the arrow in this position you will be able to step up to the shooting line and place your feet consistently in the same spot with the toes of both feet against the arrow. Golf tees work well as markers for foot positioning when you are outdoors. When you are indoors, using masking tape will help you to always have consistent foot positioning. It is a good idea when first trying a new stance to mark your foot position so that you can make an accurate and consistent assessment of that particular stance. You will find that when you finally choose a stance that is comfortable for you, after a while you will no longer need to mark them.

When you stand square to the target, your body is lined up properly and you get the full use of your

shoulders. You will find, however, that you will get more left and right arrows with the square stance as opposed to the open stance due to swaying back and forth from the shooting line. It is recommended that a beginning archer first learn the square stance, because it has a lot more strengths than weaknesses.



Open Stance

An open stance can be obtained by first assuming the square stance, then bringing the left foot for right handers, the opposite for left handed shooters, back about 4-5 inches from the center line. This position allows for a more open body position. Once the placement of your feet has been determined for the open stance and you are comfortable on the shooting

line, your foot placement should be marked. The open stance takes a little more time to adjust to than the square stance, but most archers seem to be able to use their backs easier due to the twisting motion just below the chest. Back tension seems to be more pronounced when executing the shot using this stance. Archers tend to have more high and low arrows with the open stance from swaying a little at full draw. The archer will sway forward or backward from the target. In windy conditions the open stance tends to be stronger due to the torque that is created by your body, making it harder to sway. This is the stance that seems to work better for an archer who is overweight or has a hyper-extended elbow. Make sure when you are ready to draw the bow that your front shoulder is set and that your elbow is rotated outward during the pre-draw. Using the open stance for these conditions will help the string clear the arm upon release.

Remember that neither stance is better. The best stance is the one that allows the greatest degree of comfort, stability and accuracy for the individual. If you are deciding which stance is better for you try standing at the shooting line with your feet first in the square stance. Without your bow, pretend to draw, anchor, and then release. Mimic the same actions that you would perform during an actual shot. Do this a few times, then try placing your feet in the open stance and do the same thing. This might help you get a feeling of what might be more comfortable for you to shoot. Of course the next step is to actually shoot a few arrows using each of these methods. Remember that if you are just beginning, learn to shoot using the square stance first. This will help you understand and feel the basic skills of stance. Then find the stance you are most comfortable with and that gives you the most consistency while shooting. The stance is a very important part of the shot, it is the foundation. Be sure to learn the proper stance positioning before starting to experiment on your own.

**Good luck
Good shooting.**

What Type of Fletching is Best

by Rick McKinney



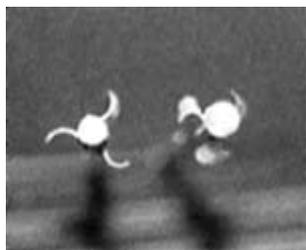
Fletching. A simple device used to stabilize the arrow for consistent arrow flight and good grouping. Sounds easy... slap on some vanes or feathers and you will get good groups. NOT! There are many places an archer can position the vane on the shaft. There is clearance to consider. There are a lot of types of fletching used for various purposes such as feathers, rubber, plastic and mylar vanes. There are different sizes from 3/4" long to 5" long. You can put fletchings on the shafts straight or with a slight angle or helical. Where do you begin?

First, let's talk about the best place to put fletching on your shafts. The best place (in theory) is as close to the back of the shaft as possible. However, there seems to be a problem with getting it too close to your fingers. I know... how can your fingers have an effect on the fletching once you let go, the arrow is still traveling on the string for another 12 inches or so? I can't tell you, except that through all of my experiences if you get the

fletching too close to your fingers your groups will not be as tight as they can be. So get them down about an inch or even 1 1/4" for good measure from the throat of the nock. If you feel the fletching as you start to draw the bow back, they are too close.

Some people like to put their vanes a good three inches down the shaft. They claim they group better. Chances are they just put a band aid on a more serious problem (clearance). Since the arrow bends back and forth as it travels down the arrow rest, there is a chance that the fletching will bend right into the arrow rest as it passes through. Unfortunately, this makes for poor grouping. In order to 'fix' this problem, some archers just put the fletching further down the shaft so that the fletching is far from the arrow rest as it passes, thus better clearance and better grouping. However, it is not the most efficient way nor the best grouping. It would be better to correct the clearance problem and then you can have your fletching where it belongs.

Next let's talk about arrow flight. Obviously you must make sure you have the right sized arrows in order to even have a good chance to get good arrow flight. The simplest method is to use the bare shaft method at about 10 meters/yards (look up the Easton Technical bulletin #4 for a complete explanation on tuning). Once you have established that you have the right sized arrow, then you must make sure that you have good clearance. As most of you know, when letting go of the string, the arrow bends in toward the bow due to the forces applied to it. Then the arrow bends in the opposite direction as it starts toward the target and then back again. The arrow continues to 'snake' to the target the rest of the way. Unfortunately, this 'snaking' affects the clearance of the fletching as it passes the arrow rest. The easiest way to correct this is to re-align the nock with the fletching. And, make sure that your rest does not stick out too far from the arrow shaft.



With a SpinWing Vane there is a natural curve which causes the vane to spin extremely fast in comparison to other vanes. This vane was designed to eliminate as much drag and generate as much spin as possible for speed and stability.

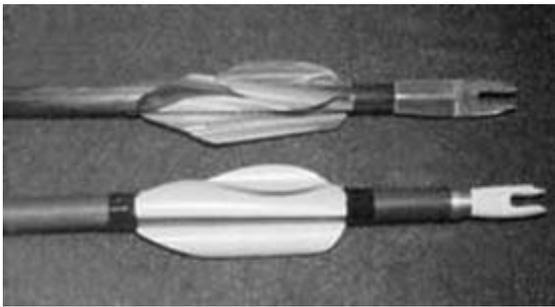
Left - FITA Vane.

Right - The new Compound Vane for better clearance

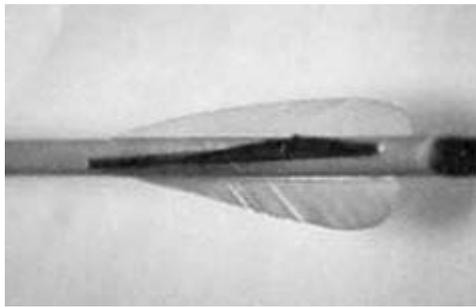
The next item for discussion is fletching length and height. The longer and higher the fletching, the more stable the arrow will be. However, it will be slow and an easy prey for wind, drag and of course, clearance. For speed, less drag, wind and clearance problems you go for shorter length and lower height. However, you get less stability. For indoors, most archers go with a large feather since there are no problems with wind or distance. And feathers just move out of the way as they hit the rest, so there are no clearance problems to speak of for performance. But outdoor shooting is another story. This is when you need shorter fletching in length and height. However, do not go too short, because you will lose the stability needed for good grouping. Most top archers use about 1 3/4" fletchings for outdoor shooting.

The next item is type of vane or feather. As we discussed earlier, feathers are great for indoor shooting and some archers (compound / release 3-D shooters) use them outdoors. Most outdoor usage is for short distance of about 40 yards or less and usually in the woods where wind is not a factor. However, in the long and open distance used in FITA archery, feathers are not used. Plastic vanes are not used much anymore due to the stiffness of the fletch. You must have excellent clearance and not make any mistakes when shooting them. They are very unforgiving. The rubber vanes have been fairly popular since they are soft enough to allow a little forgiveness and their durability is beyond reproach. However, the most popular vane in recurve Olympic style is the Spin Wing vane. It has won more championships and held more world records than any other vane. It is the lightest vane and spins the fastest which gives it the most stability. Unfortunately it is also a fragile vane that needs to be replaced more often than the rubber vanes. Most top archers will be more than happy to change the vanes often, however some archers just do not want to take the time to keep refletching vanes.

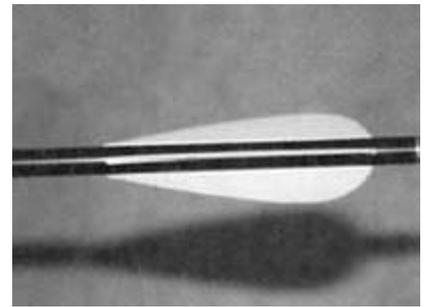
And finally the angle at which the vane is applied should be considered. Straight vanes are not recommended due to the need to stabilize the arrow. Many compound archers use this method and with their equipment they may be able to get away with it. However, with finger shooting and using a much slower recurve bow, you need some sort of spin on the fletch for stability. If you put too much helical or too much angle you could develop drag thus slowing the arrow down and losing stability after a certain distance (parachuting effect). Most archers put on a slight angle of about 2 to 3 degrees. A little testing at long distances will quickly tell you if you have too much of an angle on the fletch (groups will open up a lot at longer distances compared to good tight groups at shorter distances).



Tape is used to keep the vane on the shaft. If the vane lifts up during the shot, it will cause you to miss your target!



A full helical fletch is very popular with bow hunters in order to stabilize the broad-head. It is also a great indoor fletch for good grouping. However it does slow the arrow down a lot.



A straight fletch is very popular with compound release shooters. Most of this is due to clearance problems since the arrow may travel on the arrow rest during the whole time.

So ... where does that leave us?

The types of fletching are numerous and unfortunately, there is no exact science to deciding what type to use. The best method is empirical testing where you shoot the different fletching in different conditions and find which is best for you. It takes time to do this, however, if you want to shoot with the best product you have to be willing to test many different products to satisfy your curiosity. Eventually you will know which one works best for your shooting form and technique.

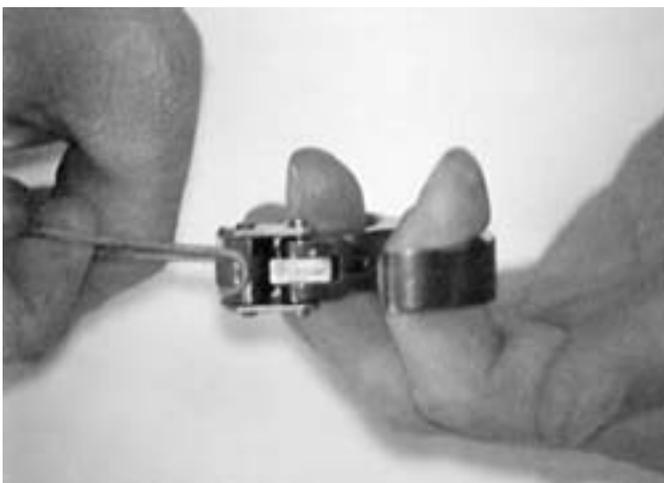
Adjusting Your Release

by Drew Wilcock

If you read the October/November '97 *Archery Focus* issue, I stepped you through the different types of releases available to you and now that you've found a comfortable release, it's time to customize it to fit your personal preferences and needs. Most release aides available to today's archer have a wide range of adjustability to help them fit into each shooter's idea of a 'smooth' release.



Adjust the speed of your release with a simple turn of an allen screw which is usually located behind the thumb or pinkie trigger.



An example of a 'half moon' adjustment. This trigger is set up for a 'slow trigger'

Adjusting the speed of your release is a fairly simple process. Most 'trigger' style releases are adjusted with the simple turn of one allen screw. This screw is usually located near the trigger itself, behind it on a thumb or pinkie trigger, or next to it, on one side or the other of an index finger trigger. As a general rule, the further you turn the screw into the release, the 'faster' the mechanism will be triggered.

Likewise, the further you back the screw out, the 'slower' the trigger will be. Take GREAT CARE when experimenting with the trigger speed of any given release. In many cases, if a release is made too slow, the mechanism won't release at all, and if wound up too fast, most releases won't hold the pressure of the bow's draw weight, and will come off the string while you're attempting to draw the bow. Many veteran archers can tell you how embarrassing and sometimes painful it is to pick yourself up off the floor after having punched yourself in the nose. To reduce the chance of accidents, I strongly recommend you restrict yourself to 1/4 turns when making adjustments to your release's trigger speed.

Some back tension releases work off the same one screw adjustments as a trigger style release, but most make use of a 'half moon' mechanism to dictate their speed. The adjustment for this type of release is still quite simple, all you need to do is loosen the set screw that holds the half moon in place, rotate the



An example of a 'half moon' adjustment. This trigger is set up for a 'hair trigger'

half moon to its desired position, then re-tighten the set screw. Keep in mind that the closer the flat spot of the half moon gets to the 'hook' of the release, the faster the mechanism will release, so again, BE CAREFUL.

Many archers have a tendency to set up their releases with a 'hair' trigger, thinking that this will reduce the number of 'execution' errors they commit. For some it works, but for most this type of set up usually creates insecurities and mental blocks towards their release process, which in turn, can lead to 'punching' habits. In some instances it can even bring about a case of the most dreaded archery

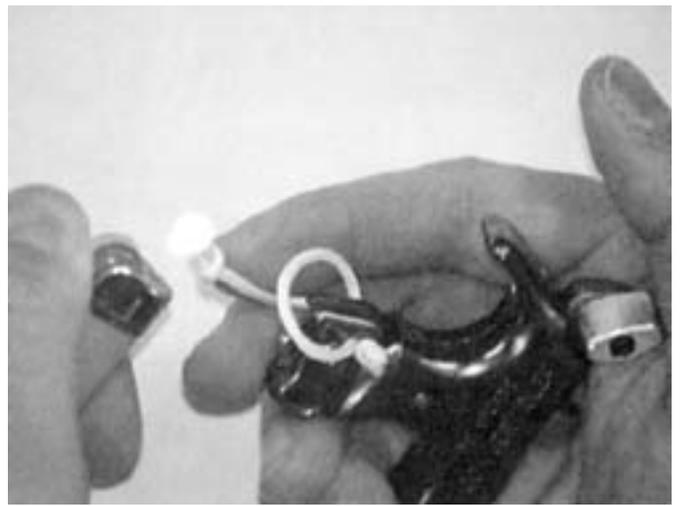
disease of them all TARGET PANIC! Ideally, when you're standing at full draw, you should be able to confidently put your finger or thumb on the trigger before you even start to think about executing your shot. It may seem like work at first but in the long run, your form, and scores will be much better off for the effort.

“Take Great Care when experimenting with the trigger speed of any given release.”

Now that you have the trigger set at a comfortable speed, you may wish to customize the release to your anchor point. If you're shooting a rope release, this is going to be easy, all you need to do is shorten or lengthen the rope until the release matches up to your desired anchor point. Keep in mind that you really don't want to go too short with your release rope, doing so will create torque on the bowstring, and make sure you are comfortable with your set up before cutting off the excess release rope (you really can't glue it back together).

Many of the index finger style of releases available are also adjustable. These releases are usually attached to the wrist strap on a threaded screw, or with nylon cord that can be shortened or lengthened. Most archers shooting this type of release find that they get the best fit when it is set up so that the groove of the first knuckle of the trigger finger lays right across the front edge of the trigger. If your release doesn't appear to be adjustable, I would think twice before attempting to modify the manufacturers design. Usually, custom modification done by the archer will void the warranty on the product.

As usual, if you have any questions, or need assistance, check in with the folks at your local pro shop. They will be more than happy to help you set up your release to fit your shooting style.



It is easy to customize your release to your anchor point. If you're shooting a rope release all you need to do is shorten or lengthen the rope until the release matches up to your desired anchor point and burn the end of the rope to finish it off.

“Usually, custom modification done by the archer will void the warranty on the product.”

Get Off My Case!!

by George Tekmitchov

I was sitting on the tarmac at LAX, in a big metal tube belonging to an airline which I will graciously not name, waiting to fly to a tournament in Europe. Glancing out the starboard window of the plane, I watched as those uh ... 'people' we know as 'baggage handlers' loaded the plane. I saw my bowcase in the luggage cart. I saw a guy pick up my bowcase, and throw it onto the belt. I watched until my case got to the top of the belt, where it disappeared into the belly of the plane. Then **I felt it.**

WHAM! The crash of hard case against aluminum. The high-velocity impact of **my bowcase against the interior of the cargo compartment.** Was I irritated? Sure. Was I worried? Nope. I had a really good, properly packed bowcase. Life was good.

A bowcase is a necessity if you plan any travel at all with your bow. There are lots of choices on the market, and lots of price points. Some of the things you need to consider when buying a bowcase include:

- **Will it hold everything I need?**
- **Is it easy to pack and unpack?**
- **Will it fit in my car?**
- **Does it weigh significantly more than the contents?**
- **Hard case or soft?**
- **Can it double as a good dining room table?**

SOFT CASES

Good for local trips - not so good for heavy duty travel.

There are some good soft cases out there. Most common seems to be the ubiquitous Hoyt soft case, gray in color, and equipped with a nylon coverall bag. This case is capable of handling two complete bows, stabilizers, tools, wet weather gear, arrows, quivers, and the kitchen sink but weighs only a few pounds. Soft cases are great for short trips, travel to the local range, tossing into the car trunk, and with shoulder straps, are easy to carry around. However, for air travel you need special precautions to protect delicate items such as stabilizers and arrows from the tender ministrations of Joe the baggage thrower. Lots of soft case users use PVC pipe tubes to protect arrows, but soft cases have resulted in a lot of broken stabilizers. On the other hand, a good soft case is better than a cheap plastic hard case

any day. They can often expand for those times you want to carry extra stuff. Finally, soft cases are good camouflage for your equipment. They don't stand out as something good for some sociopath to walk off with. They are generally not good for eating TV dinners off of, however.

HARD CASES

Best for air travel and long trips.

Hard cases come in lots of styles and price points. The best advice is, buy the best you can afford. Look for FAA or 'airline approved' strong latches that are lockable and won't spring open on their own, thick walls and reinforced corners, watertight seals and strong handles. The average, blown PVC case that sells for \$49.00 at your local pro shop is NOT up to the rigors of travel. You'll literally destroy 30 of these before your good quality, \$150.00 case needs replacement.

Custom archery hard cases, such as those made by SKB, Hasco, and others, are great for long distance travel. They often come with wheels, like good luggage, for easy handling around airports. One time I flew to Tokyo for a tournament with a hard case without wheels. Don't ever do this. You **walk** everywhere in Tokyo - train stations are huge. Spring for a case with wheels.

Hard cases are often heavier and bulkier than soft cases, but have very good protection for the contents. However, hard cases are not easy to expand. If the one you buy is big enough for one bow and all of your accessories, you won't have an easy time wedging a backup bow in there unless you remove padding, which makes damage more likely.

Hard cases do have a big downside. They tell everyone looking at them that "there's something of value in here!" If you shoot in places like Atlantic City or Moscow, that's not really the best message to send. Sociopaths love to walk off with hard cases because they think they all contain guns. On the other hand, a little linen makes this a great item for the dining room.



SKB's new case combines the nice features of both a hard case and a soft case in one. The case also has wheels on the outer duffel bag portion for the long airport walks.

The six commandments of bowcases:

1. 1. 1. Thou shalt not over-pack, for thou will strain thy back.
2. Thou shalt not put large bold letters saying 'archery equipment' on the outside of thine case, for this is the path to temptation on the part of scumbags who would stealest thy stuff.
3. Thou shalt place upon the bowcase securely and with vivid lettering thine name and phone number, for evil airlines lose luggage.
4. Thou shalt get in the face of the evil butthead ticketing agent who insists upon labeling your bow as a firearm. It's not a firearm, don't let them label it that way. Ask for a supervisor.
5. Thou shalt not put thine tab and custom grip in thine case, for evil airlines causeth the misdirection of luggage and everything can be replaced except thine tab and grip.
6. Thou shalt not pack flammable gas torches in thine case, for the FAA will justifiably place thine butt in jail.

And remember, hard cases make good seats for those times when the tournament organizers are too cheap to provide any!

George is a senior development engineer for Easton Technical Products, a member of the Hoyt International staff, and a 1996-97 USAT (olympic bow) member. He has been known to shoot a bow, occasionally. Any agreement between this article and the views of his employer is pure coincidence.

Special Training Techniques and Training Aids for Learning Scapula Motion

by Don Rabska

Following are several training techniques which focus on the draw arm scapula and shooting fitness. I advocate trying all of the techniques presented to find what works best in your training program. If you are interested in breaking 'old' performance impeding habits, or improving shooting form and archery fitness, the information listed below will be beneficial.

There are a number of different training techniques offered for your review on these particular subjects. A follow-up article will provide additional information on other training techniques in the next issue.

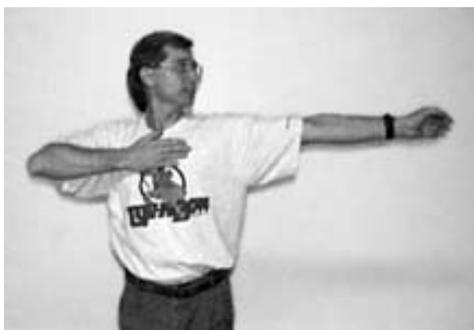
Understanding Scapula Motion

The scapula and shoulder must work as one unit, as if the upper section of the draw arm were permanently fixed or welded to the shoulder. To better understand and teach yourself (or students) the feeling of using the scapula rather than the drawing arm, follow this simple technique.

Stand up straight as if you were going to shoot. Raise both arms shoulder height until they are parallel to the floor, making yourself look like a 'T'. Next, bring your draw hand to the center of your chest keeping your elbow parallel to the floor. While keeping your hand on your sternum (center of the chest), move your draw elbow back as if you were drawing the bow, but do not allow your hand to move from its location on your chest. To move the elbow in this manner, without moving your hand position on the chest, you must use only your scapula. If you use your arm, your hand will move across the chest. When done correctly, you will notice that the upper part of the draw arm does not 'hinge' at the shoulder but becomes an integral and integrated part of the shoulder. This technique will give you a good feeling of how to use the scapula in drawing the bow.



Raise both arms shoulder height until they are parallel to floor making yourself look like a 'T'.



While keeping your hand on your sternum, move your draw elbow back, but do not allow your hand to move from its location on your chest.



If you are using your arm, your hand will move across the chest.

Techniques for correcting 'Collapsing' (finger release)

Collapsing is the problem of the release hand coming forward at the moment of release. The problem is usually caused by drawing with the biceps of the arm and in anticipation of the clicker. The archer will stop the draw as soon as the clicker 'clicks', releasing the string and then completing a follow through, creating a two stage activity. The continuous draw action is stopped because the archer relaxes the entire group of muscles used in drawing the bow to release the shot. This action is exaggerated when the drawing arm biceps are engaged, due to the antagonistic nature of this muscle group to that of the muscles controlling the scapula. The collapsed shot is a weak shot and usually produces a low left impact for right hand archers (opposite for left

hand archers). This problem is the worst possible condition and will cost you the greatest number of points on the scorecard. Part of this problem is created while the archer is ‘anchoring’. At that instant, the conscious mind focuses on the anchor rather than the scapula to maintain tension in the back. Following are some solutions to help focus on the back and to overcome collapsing:

a) Work on relaxing the fingers, forearm and biceps of the drawing arm, especially when coming to anchor. Make sure to maintain focus on the scapula when anchoring so as not to allow tension to enter the forearm and biceps. Feel the scapula move toward the spine or feel the drawing elbow continue moving back through the shot, whichever method you ‘feel’ the best.

b) Continuous Draw Technique: Shoot close to the target (approximately 5 meters). Draw and shoot your normal shot, except that you will continue drawing the bow after the clicker ‘clicks’ for two more seconds. When the clicker clicks, you may have a tendency to allow the arrow to move forward slightly. That forward motion will show you are experiencing a collapse. For this technique, keep drawing the bow after the click and continue motion while releasing the string, i.e. creating a single action shot. It is good to first watch the clicker rather than the sight so you can obtain instant ‘feed back’ of the action taking place. Then, try aiming at a target to build better control. Remember to continue your motion for that short time after the click with uninterrupted movement and release the string while in motion. If you have trouble doing this, start by closing your eyes when you approach anchor to get a better internal feel, then try watching the clicker and finally shoot at a target. Practicing this technique will teach you to fully control the clicker rather than the clicker controlling you.

“Always make sure you are close enough to the target to guarantee hitting it, even with your eyes closed.”

c) Use the ‘ForMaster’ *: Use the ForMaster training device produced by Range-O-Matic. This device will help correct any collapse of the drawing arm at the moment of release. The ForMaster has a strap that attaches to the draw elbow and elastic tubing which attaches to the bow string. You will actually shoot while wearing the device. If the draw shoulder relaxes (collapses) at the moment of release, the drawing elbow will be pulled abruptly forward toward the target. This device teaches the archer to continue drawing through the shot and to relax only the muscles that control the fingers of the release hand without relaxing the entire shoulder. To use the ForMaster properly, it is very important to aim at the target as if you were shooting for score. This will properly train your subconscious to correct the collapsing problem under actual shooting conditions.

d) Headless Drawing Technique: This is not as drastic as it sounds and there is no need to remove your head to do this technique. In my previous articles, we discussed the issue of anchor. And the fact that your head is not your anchor, your scapula is your true anchor. Your head is simply your ‘rear sight’ and you must be very consistent in your head placement on your rear sight to shoot accurately. Often, when an archer comes to anchor, they stop their motion. The focus shifts from the ‘draw’ to the ‘anchor’, creating a change in the draw and a shift in the muscles used to draw the bow. All of the sudden, the archer has trouble drawing the bow that last little bit through the clicker, The Headless Drawing Technique will help teach you to continue the draw, from start to release, without changing the ‘feeling’ of drawing the bow.



Start up close to the target, no more than 5 meters. Start by going through your normal set up and pre-draw (if you have a pre-draw). As soon as you start to draw the bow, move your head completely out of the way (leaning your head over your bow shoulder). Shoot your normal shot, except you will not have an ‘anchor’ on your face. Allow yourself to continue the draw without changing the feeling of the draw. By not coming to the face, you will not impede the draw in anyway. You should come through the clicker effortlessly and release the string with virtually no tension in the draw arm. Also try this with your eyes closed, to better feel the continuous, uninterrupted draw. After you have shot 15 to 20 times, slowly bring your head into position, but use a very light touch on the face. Do not allow any feeling of change in the draw. You will learn a lot about what your body feels like when you draw the bow and also how the draw

Start with a high drawing elbow, which allows the scapula to move into the correct position as you draw



At full draw it's important to focus on continuous motion (internal) and not the target (external).



If used properly upon release of the shot back tension will continue. If focus is external you will most likely collapse.

about 1/2" past the clicker during the process (do not use an arrow in your bow). Now rest for one minute and do it again. It is fine to start by holding only 20 to 30 seconds at first until you start building strength. Start by doing this only once or twice for the first few days of using the technique. Do this every other day and continue building the number of repetitions to 10 or 15. When you can draw and hold the bow, while maintaining a very slow dynamic draw for one minute and you can do this 10 or more times in 30 minutes, you will be in full control of your bow. It is a good idea to do this in front of a mirror so you can observe your technique. You may find that your bow shoulder wants to raise up, you start leaning back or other stability problems. Try to maintain good 'at draw' position while doing this exercise. After one to two months of using this technique, you will find shooting becomes almost effortless.

Until next time, Good Shooting!

changes when you 'TRY' to anchor hard on your chin. Work toward the feeling of a continuous, uninterrupted motion, For shot control, you can draw as slowly as you like, as long as the feeling of the draw is maintained throughout the shot.

e) Scapula Trainer: The Scapula Trainer is produced by Diana's Research** and comfortably attaches to the drawing elbow and to the bow string. The training device allows the bow to be drawn with the muscles of the scapula while making it possible to fully relax the biceps of the drawing arm. The drawing hand, forearm and biceps are free to relax because they are not in contact with the bow string. This is an excellent device to teach yourself or students how to properly use the back muscles.

Double Draw Technique

This is a great technique and offers several benefits. The double draw is used to help the archer more easily feel the 'back', or scapula motion. Shoot up close to the target, about 10 meters. Draw the bow as you would normally. Stop drawing about 1/8" (4 mm) before the clicker clicks. Now 'let down', i.e. let the string move forward about 8" to 10" (20 to 25 cm) but do not lower your bow arm. Immediately draw again and shoot your normal shot. Do this 15 to 20 times and see if you can more easily feel the back motion. The Double Draw technique is also great for building endurance.

Stability And Strengthening Technique For Recurve Shooters

Use this technique to build strength and upper body stability. It is a simple but exhausting training method that will help you to fully control the shot. I recommend doing this in the evenings as supplemental training. This technique will greatly enhance your shooting strength.

Make sure you stretch and warm up properly before starting. To start, draw and hold your bow at full draw for as long as you can up to 60 seconds. If you cannot hold your bow at full draw for one minute, you are not in control of the draw weight you are shooting. Try to continue drawing, (using your scapula) very slowly, only moving about 1/2" (1 1/2 cm) total while at full draw, i.e.

***ForMaster
Range-O-Matic
43640 Riverway Dr.
Clinton Township, MI
48038**

****Scapula Trainer
Diana's Research
P.O. Box 11117
Marina Del Rey, CA 90295**

Quicktune Arrowrest from New Archery Products

by Drew Wilcock



When I was approached about writing a product review I was more than eager to take up the challenge. I had just suffered a terminal failure with a high dollar, high performance arrowrest, and had decided it was time to try something different.

My choice for a new rest was the QUICKTUNE rest from New Archery Products Corp. The Quicktune is available in two different models. Model 1000 is a standard two pronged style rest, Model 2000 is a single platform style launcher known as the StarBoard.

The first thing I noticed about this rest system was the smoothness of the launchers travel. The triple bearing design is fantastic, the launcher arm travels cleanly and consistently, with no binding, or loose play, and the construction of the housing makes this system virtually maintenance free.

Spring tension adjustments are made easily. The spring and housing have been designed so that adjustments can be made without effecting the windage and elevation of the launcher.

Model 2000's StarBoard launcher is a pretty neat trick all in its own. Its 'X' shaped head allows the archer to adjust the launcher to fit any arrow size without having to change launchers, or affecting the center shot of the bow. I tested arrows from 2018's to 2613's through this version of the Quicktune, and was quite pleased with the performance of the versatile launcher.

Another great feature offered by the Quicktune is the ease with which adjustments are made. I was able to install this rest on my bow and have it tuned to a bullet hole in about five minutes (that's no lie). All adjustments to the Quicktune arrowrests are made with one size of allen wrench, making fumbling with tools a thing of the past.

I would like to close by thanking the folks at New Archery Products Corp. for producing such a great, no nonsense, high performance rest system at such an affordable price.

Judging Distance Like the Pros

by Bobby Ketcher



Many of you may have read the article ‘*Visualization*’ by Lisa Franseen, Ph.D. in the November/December 1997 issue of *Archery Focus*. This article contains many valuable lessons that archers of any level could benefit from. In this article you will learn how to apply some of the same techniques in estimating distance.

Estimating Distance by Using the ‘Ground Method’

The most common mistake of many archers who prepare for 3-D archery and distance estimation is that they limit themselves to only one way of estimation, which is referred to as ‘Ground Judging’. This is a good way of estimating distance if the archer has good level ground to look at, but there are many times when this is not the case. The ‘Ground Estimator’ will be in trouble when the ground is not in play such as an ‘across the canyon’ shot, or a shot where the ground disappears before the target and you have to judge air. This is where the amateurs and the professionals are separated. Many of the amateurs have the shooting ability, but lack some experience in yardage estimation. This article should help those who need help with their yardage estimation.

Estimating Distance by using ‘Visualization’

When I am preparing for the approaching 3-D season it is very important that my judging skills are as sharp as possible, which means hours and hours of practice. If you want to compete in the pro division you will have to have many different ways of estimating yardage. The primary way I judge yardage is by the ‘Visualization’ method, whereby I actually estimate the distance to the target by

‘size’. I spend countless hours behind my house at my range shooting target bales. This helps me reflect the size of that particular target at different distances. You do not have to have a 3-D target to achieve this skill, you can use anything that will have the approximate height and length such as a block of foam or target bag. To learn this technique of yardage estimation, you need to shoot, or look at a lot of known distances at objects that are similar to the 3-D targets you will be shooting to learn what that size animal should look like at that particular distance. You may have heard the saying “Your first guess is the right guess”. In this case you are most likely using the visualization method.



Using Markers at Known Distances

I also use very colorful markers which I believe stimulate the brain and help me learn distances at a much faster pace. I use many different kinds of markers such as painted bricks, boards, metal stakes, ribbons and more. It is important to set the desired objects at known distances such as 10, 20, 30, 40 and 50 yards, or you may want to set a sequence of five yard increments such as 5, 10, 15, 20, 25, 30, 35, 40 and 45 yards. I have both as well as several different sequences which really help me be able to ‘visualize’ what the yardage should look like at a particular distance. This method really helps determine the distance at first glance when you have nothing to work with such as ground or other objects to go off. I find it very helpful to have 3-D targets at known distance with these markers showing me where each increment should be located. For example: I may have a deer target set at 35 yards and markers at 10, 20 and 30 yards. This helps me ‘visualize’ where those distances should be, or I may have a coyote target at 25 yards with markers at 10, 15 and 20 yards. I feel this is a valuable method in my success.

Estimating Distance Using the ‘Sound Method’

The sound method is a new method that many 3-D archers use without knowing they are using it. Have you ever been at a target and have already determined how far you think this particular target is, then hear the person in front of you shoot the target and you say to yourself, ‘farther than that’ even before you see where the arrow has landed? I know I have. If so, you have already used this

method. This is a method that is somewhat harder to learn and is not totally accurate and reliable. It is used mostly to keep yourself from making a big mistake. Usually this method comes in play when the archer has a very difficult target ahead and is lucky enough to hear an arrow or two fly towards the target. He or she can determine if their previous guess is even close. This method is hard to learn and takes a lot of mental imagery and focus. I close my eyes or focus on the spot I would like my arrow to land and with my predetermined guess in mind listen to the person in front of me shoot the target. I then determine whether or not my arrow would have hit in that particular time frame.



Implementing the Methods You Have Learned

It is very important that you incorporate several different yardage estimation methods in your bag of tricks to be competitive on the 3-D course. Use all the methods; Ground, Visualization, Marker and the Sound Method. When you are at the next 3-D tournament or at home practicing try the following:

First look at the target and not the ground and guess your yardage using the Visualization Method.

Next, look at the ground and determine your distance using the Ground Method.

Then, find a natural marker that you feel is the same as one of the markers you have used at home such as a tree, spot of grass, etc. and find the distance of the target using the Marker Method.

Next, if you are shooting with a friend or another shooter and he or she shoots before you, listen to their arrow fly and focus on the time it takes for their arrow to hit. Use the Sound Method to reassure yourself that you have chosen the correct yardage.

These methods will help make you a well rounded 3-D archer at any range anywhere in the world, as well as help you in your future hunting situations. It is also important to remember that you may be

better at one of the above mentioned methods and may have to rely on that method for most of your estimations. But if you can incorporate all methods mentioned it will make you a better yardage estimator and archer.

“Incorporate all the methods and it will make you a better yardage estimator and archer.”

Youth Archers Enjoy Lake Placid - JOAD Camp

by Bob Graham, NAA Level 4 Instructor

What a great week: a trip to the Lake Placid Olympic Training Center and six days of archery. The training center is located in upstate New York in the beautiful Adirondack Mountains. The lush, green hillsides provided the backdrop for the shooting session each day. Although the weather threatened the first few days, the rains never came and the camp stayed dry for the entire week.

A total of 15 archers attended the Junior Olympic Archery Development Camp, representing the states of Florida, Michigan, Georgia, Vermont, Maine, New Hampshire and, of course, New York. The archers were Aimee Beauvais, Carrie Jump, Margaret Kinner, Patricia Menard, Jessica Sweeney, Erin Moore, Joe Dunne, Brian Earnshaw, Ben Foley, Robert Hayes, Jason Moore, Mark Salisbury, Jacob Vicente, Matt Walkden and Jason Wong. National Coaches Rebecca Wallace and Bob Graham staffed the camp.

Each day started off with a 7:00 a.m. stretch and a walk or run around the Olympic Training Center. A breakfast of Olympian proportions followed each workout. Afterward it was out to the range for the daily sessions of form work, videotaping, or one on one with a coach. There was blank-bale time to work on equipment tuning or form, and targets set out from 18 meters to 70 meters for continued form work. By mid-week everyone had been videotaped and it was on to learning to shoot the FITA Olympic Round. Although the distance was limited, the rounds were shot at 50 meters for the more experienced and at 30 meters for those who felt more comfortable up close. Everyone seemed to enjoy the individual competition but the hands down favorite was the Olympic Team Round, which is a Gold Medal event at the Olympic Games. What a blast - shooting with your friends as a team.

Without fail, the morning sessions were followed by another meal fit for Olympians. Lunch gave way to after noons in the meeting room for lectures and discussions, or videos on topics such as relaxation and visualization techniques; goal setting; exercise and training; nutrition; equipment set-up and tuning; and Olympic, FITA and NAA drug testing rules and procedures. The remainder of the day was spent back on the range. Surprisingly enough, that was followed by yet another great OTC meal. In order to burn a few of the days well-earned calories it was off to the gym for volleyball or, on a couple of evenings, basketball. Those who did not want to play were free to check out videos from the OTC video library and watch their movie selection in one of the athlete common areas, or utilize one of the athlete recreation rooms. Of course this can work up an appetite, so the last trip of the evening was made to the cafeteria before it closed for that ever-important Olympian snack.

For a mid-week break everyone took in a great tour of the U.S. Luge Association training facility on

the OTC grounds. Also during the week Mr. Jon Ansback, the training and conditioning coordinator, took the archers through an extensive hands-on tour of the OTC weight room and gave the shooters some great sport-specific exercises to help stay fit and injury-free. Jon gave us at least five different routines for 'ab crunches' that were real killers, but just what is needed to keep that mid-section strong for good shooting form!

The time went by too quickly. There were new friends made and lots of laughs during the week. It came to an end with a small pizza party for the archers on Saturday evening. Sunday was the travel day and the long trip home.



(Back row): Coach Rebecca Wallace, Joe Dunne, Margaret Kinner, Matt Walkden and Coach Bob Graham.

(Front row): Ben Foley, Aimee Beauvais, Erin Moore, Brian Earnshaw and Robert Hayes.

(Participants Not pictured): Carrie Jump, Patricia Menard, Jessica Sweeney, Jason Moore, Mark Salisbury, Jason Wong and Jacob Vicente.

Huish, Dykman Named Athletes of the Year



Huish Places 4th in USOC voting

The National Archery Association has selected Justin Huish (Simi Valley, CA) and Janet Dykman (El Monte, CA) as its Male and Female Athletes of the Year for 1997. In being selected, both athletes were eligible to receive votes for the United States Olympic Committee's SportsMan and SportsWoman of the Year.

The results of the USOC voting were released in December and Huish placed

fourth in the poll for the second consecutive year. Voting is done by the USOC Board of Directors, Athletes' Advisory Council and the national media. Huish received 288 points, finishing behind tennis' Pete Sampras (400 points), track & field's Allen Johnson (376 points) and figure skating's Todd Eldredge (315 points). Huish was ranked in the world's top 10 the entire year, finishing 1997 as #1 in the world. In international competitions, he placed 2nd at the Moscow Grand Prix and 7th at the World Championships in Victoria, British Columbia. At the National Target Championships in Canton, Michigan, Huish placed 2nd. He also captured the inaugural U.S. Open, defeating Norway's Martinus Grov in the final match.

Dykman is selected for her third straight NAA Athlete of the Year nomination. She earned the Shenk Award for the second time in 1997. The Shenk Award is given annually to the archer with the highest accumulated scores from the U.S. Indoor, U.S. Field and U.S. Outdoor. Dykman won both the U.S. Indoor and U.S. Outdoor Championships, and took 2nd at the U.S. Field Championships. In April, she won the Canada Cup in Victoria, British Columbia. She also placed 8th at the Moscow Grand Prix, 10th at the U.S. Open and 22nd at the World Championships. Dykman ranked as high as 14th in the world and finished the year 22nd.

The First Women's Development Training Camp held in Chula Vista, CA

Participants in the first Women's Development Training Camp, held in November at the ARCO Training Center in Chula Vista, California (left to right): Susan King, Sheri Rhodes, Diane Watson, Leslie Howa, Natalie Wells, LeAnna Giddings, Jo Malahy and Nancy Myrick. The attendees enjoyed great weather throughout the camp, which enabled them to shoot a ranking round one day and several team rounds on the last day. Each participant had her shooting form videotaped and was also tested on leg strength and body fat. Watch for forthcoming information on the next Women's Development Camp.



Spotlight on ... Karl Radde, NAA National Judge

*by Nancy E. Myrick,
Chair, NAA Officials & Rules Committee*



From time to time the Officials and Rules Committee of the National Archery Association will be profiling one of its members. It is one way to honor those judges who have been providing outstanding service in the program. We also hope these profiles allow competitors and spectators alike to get to know these dedicated individuals better. Our first profile is of National Judge Karl Radde.

Radde was born in 1915 in the town of Waconia, Minnesota (current population 3,498). He attended West Point Prep. school and then entered the Army as a private first class based in Hawaii from 1934-37. In 1940, Radde married Geraldine (Gerry) Breitreutz and they recently celebrated their 57th wedding anniversary. The Raddes have one daughter, Karen, two grandchildren, Kathy and Kevin, and two great-grandchildren, Michael and Matthew.

Radde taught archery and wrestling at Glencoe, Minnesota Public School before moving in 1950 to attend the California Police Academy. Following graduation he served with the California Highway Patrol for 25 years, retiring in 1975. Some feel retirement is a time to sit back and relax, but not

Radde. He worked 28 tournaments in 1995, 22 in 1996 and 28 more in 1997 and has responded to every case study during that time period. In his 'spare' time, Radde is Financial Secretary for the Mt. Calvary Lutheran Church and, according to Gerry, a great handyman around the house. His one weakness - "He can't boil water," says Gerry who bakes nearly every day, her specialty being cookies.

Radde works out in his home gym for at least one hour each day (no doubt to work off all of Gerry's cookies). He uses a bench and free weights and his dedication to remaining fit is reflected in his superb physique. At the age of 82, Radde could challenge many of the younger athletes on the bench press.

Radde has been a member of the NAA since 1950 and holds a lifetime membership. We thank you, Karl, for all your efforts on behalf of the sport of archery. The 28 tournaments you worked in 1995 and 1997 must be a record. We also want to thank Gerry for being so understanding when it comes to that much time away from home.

Stabilizing Your Bow

by Larry Wise

In 1963 I bought a used Hoyt Pro Medalist recurve. It had two stabilizers, one above and one below the grip, mounted on the handle and was the most beautiful bow I'd ever owned. I knew the man that owned it and watched him shoot it and had to have it. Dad consented so I had my first bow with any kind of stabilizers. It shot like a dream; at least it seemed so to a naive sixteen year old.

I liked the feel that the stabilizers gave the bow after the string was released. I still like it and so does every one else in archery and since you read about handle types and designs in my last article you're ready to enhance your own handle choice with some type of stabilizer. The final choice is up to you but following a few guidelines might speed the process a little.



The stabilizer performs two functions, it balances the bow in your hand and it absorbs wasted energy when the bow string is released. Lets look at the balance aspect first.

Balance

In most cases the bow you use has a sight, maybe a bow quiver, an arrow rest and maybe some other attachment. All of these accessories affect the weight and balance of the bow as it sits in your hand. The stabilizer counteracts the weight of those accessories so the bow feels good in your hand when drawing, aiming and after the release. Without one your bow may feel clumsy and hard to control throughout the shot sequence.

The deflex handle with a center grip (grip in the vertical center) is the easiest to balance since the weight of the handle riser, the heaviest part, is balanced above and below the grip. Usually any below-grip stabilizer with a small weight on its end will balance the bow. I like my handles to thrust forward after the shot while many like the top limb to tip gently forward and rotate down.

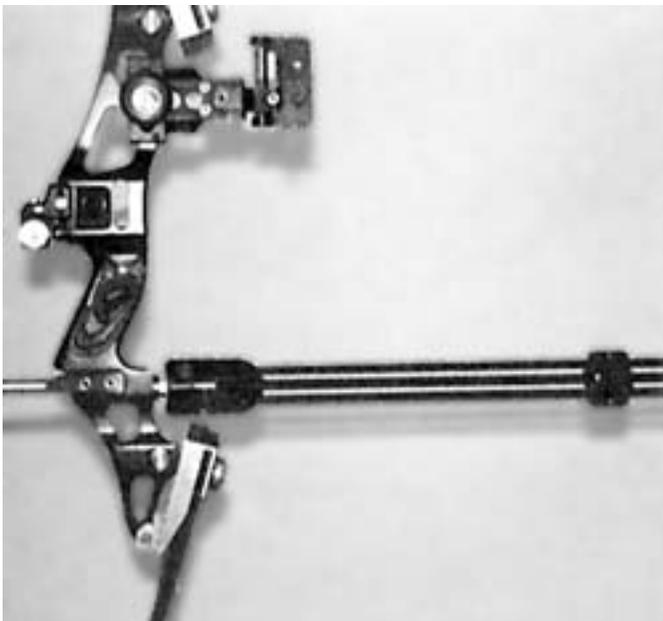
If you put too much weight on the stabilizer end, it tips downward too quickly and may have an effect on the arrow as it crosses the arrow rest; you want the rest to be stable until the arrow has passed it. If your bow wants to tip too much you may need to add V-bars with counter balance weights facing the string side of the bow or lighten the end weight of the stabilizer.

If you're shooting a deflex handle with a below-center grip you will probably need to add some

weight at the base of your stabilizer. This added weight will help prevent the top limb from tipping backward after the shot because of the hand pressure below the riser center. I've had to work at getting the right balance on several of these handles but succeeded by using this base weight.

The below-center grip, reflex handles I've shot all balanced well without a stabilizer until the string was released. At that point I could tell a small amount of weight was needed to balance the bow as the arrow was passing the rest. I added a small weight to the end of my straight stabilizer and corrected the balance of the bow so the top limb did not tip back toward me.

On my hunting bow this year I added a five inch hydraulic stabilizer to the lower left side instead of to the front. My objective was to stop the top limb from tipping backward and to counter balance the sight and quiver which were mounted on the upper right side of the handle riser. It worked. In fact, I may continue using a stabilizer like it for my 3-D tournament shooting.



The popular four carbon rod stabilizer.

Stabilizer Material Types

Stabilizers are made of two different types of materials; aluminum and carbon. Each has its own properties which lend it

to dampening the vibrations caused by the release of the string. So, besides the feel of the bow the stabilizer can eliminate vibrations and improve the shooting characteristics of the bow. In particular, it

can improve the harmonics of the arrow-arrowrest system and have a significant impact on the groups you are able to shoot.

Most aluminum stabilizers are tubes with a tapering diameter toward the far end. The tube dampens wasted energy from the bow by vibrating out it's length. Some aluminum tube stabilizers are filled with foam, mercury or rubber which aid energy dissipation. Others contain a built in hydraulic device to help absorb the wasted energy from the bow while others are covered with carbon fiber to do the same. All work well with some better than others; test several before you buy.



Adding a hydraulic stabilizer to the side opposite the site and quiver will help counterbalance their weight.

The carbon stabilizers are also tubular in design. Some are a single large diameter tube while another very popular style is made from four small diameter tubes like the carbon arrow shafts. The single large diameter tube is more effective than a single small tube because of the amount of carbon present in the tube. Since carbon oscillates at a high frequency, more carbon dampens better.

The multitube design also has more carbon available to dissipate energy. The advantage in the newer multitube stabilizers is the extra weights available and their adjustability. Not only can you add weight to either end, you can also place one or more weights in between and move them to different locations to achieve tighter arrow groups. Just be sure that the center weights don't attach directly to the carbon and stop the vibrations from traveling the full length of the individual tubes.

Attaching the Stabilizer

Regardless of the type of stabilizer you choose, your method of attaching it to the bow is critical to how well it works. All of the models mentioned work best if they are connected directly and solidly to the bow. A soft connection buffered by a rubber collar will not allow the vibration energy to pass from the bow to the stabilizer. A hard direct connection between the two units will and then the stabilizer can do it's job of dissipating those vibrations.

Using one of the many quick disconnect devices will ensure that you get a hard connection between your bow and stabilizer. If you're going to invest money in a good stabilizer then spend a little more to get it hooked up right to the bow and reap all the benefits from your investment.

**Until next issue,
Shoot Straight, Keep Well.**

Larry Wise is an archery coach, a math teacher in the Pennsylvania public school system and author of four books on archery: no, Tuning Your Broadheads, Bow and Arrow: A Complete Guide to Tuning and Shooting Your 3-D Bow. They are all available from:

Larry Wise
RR#3, Box
678
Mifflintown,
PA 17059

Don't Read This Article!

by Lisa Franseen, Ph.D



It sometimes takes a bit of reverse psychology to encourage archers to talk about setting goals for performance. If you're thinking, "I do set goals, but why an entire article on it?" then you actually DO need to read this article.

Most of us set goals all of the time in all areas of our lives: "I want to get up at 5 am and exercise before work." "I want to make enough money this year so that I can go to Cancun." "I want to lose ten pounds so that I can fit back into my jeans." For archery, too, we set goals: "I want to break 1200." "I want to place in the top 5 at this competition." "I'm not going to let John (or Jane) beat me again." "What's wrong with these goals?" you ask. Actually, nothing is wrong with these goals. The problem is not identifying goals; it is setting a certain kind of goal and then learning how to stick to and achieve that goal. Most of us would agree that having goals is important - but we also need help to set effective goals; goals that can help to motivate you, give you very specific things to work on, and that can increase

your focus. In fact, there is much research to show that goal setting works and helps to improve performances, but only when it is accomplished correctly. As a mental skills consultant, I like to work with archers to help them learn to take advantage of goal setting. I have the archer write them down, as though it is a contract (actually, it is a contract!), and sign it. This makes the goals very official.

Kinds of Goals

Having fun, doing your best, giving it your 'all' are called subjective goals. Only you will know when you have achieved subjective goals because they are difficult to measure. Having fun to one archer can mean some thing completely different than having fun to another archer. Objective goals, on the other hand, focus more on achieving a particular standard of performance, usually within a certain amount of time. They are very specific and can be measured. There is no debate, for example, if you have reached a goal of shooting a 1200 FITA by the end of the outdoor season.

Sport psychologists usually help athletes develop objective goals. There are two main kinds of objective goals: outcome and performance goals. Outcome goals focus on, you guessed it, the outcome of your performance or the result of your shooting. Your score, your place, who you outperformed are the most common types of outcome goals. In order to achieve these kinds of goals, it not only depends on you and your performance, but also on factors outside of your control like the

performance of your opponents or the weather. Let's say you have an outcome goal of winning a local tournament and you know that, to achieve this, you have to shoot a personal best. You might actually shoot the best score of your life but still not win the competition because the archer next to you shot even better. Or, say you want to shoot a personal best. The execution of your shot is your responsibility and makes you mostly in control of your score, but galing winds or a torrential downpour could surely make shooting the score you want near to impossible. Many archers have asked me, "What other kinds of goals are there besides wanting to win, to beat someone, or beating your best score?" Performance goals is the answer. Also called process goals, they focus on "achieving standards or performance objectives that are compared with your own previous performances" (Weinberg and Gould, 1996). Performance goals are specific things that you do and that are within your control. Achieving them does not depend on factors outside of your control like the performances of other archers or the weather. This makes them more achievable and thus gives you more success. For example, you might set a goal of improving the percentage of full follow-through after the release of the shot. Previously, you followed-through 50% of the time, and would like to increase that to 75% in the next competition.

Goal Setting Strategies

Through sport psychology research and practice, many strategies have been shown to make goal-setting a more effective practice and to make it work better for you.

- 1. Be specific.** Rather than setting a goal of "having fun" it is more helpful to make goals that are specific and measurable so that you know when you have achieved them. "Having a relaxed bow hand 90% of the time" is an example of a specific goal.
- 2. Set challenging but realistic goals.** A challenging goal would be to make it to the 2000 Olympic Games. This might be unrealistic, however, if you have not yet made it onto a national team or had any international experience. It would feel fantastic to reach this goal but frustrating not to. On the flip side, a realistic goal might be to shoot one strong shot in practice today but it is not a particularly challenging goal. To reach this goal would not feel much like an accomplishment because it is rather easy to do. What is challenging and realistic will vary, depending on who you are and what kind of a shooter you are.
- 3. Be flexible.** It is difficult to set challenging and realistic goals. You might realize that what you thought would be realistic to accomplish within a season is not. This is why it is important to be flexible in setting goals. Frequently monitor your goals to evaluate them as to how challenging or realistic they are. Don't spend an enormous amount of time developing goals only to fail to follow-through with evaluation and feedback - it's a waste of time and usually leads you to giving up on goal setting as a way to give you incentive. Being flexible also means to give yourself some room for movement so, rather than say "I will practice Monday, Wednesday, and Friday" say "I will shoot three times a week."
- 4. Set performance goals.** As I've already explained above, performance goals are more effective

because they are in your control and are not dependent on the performance of others. Research shows that performance goals help keep you more motivated and focused, and less tense than outcome goals.

5. Take one step at a time. Goals are like a carrot dangling in front of you (actually, for me, it would be a big piece of chocolate cake - forget the carrot!) that remind you of what you are going after. Having a specified goal can 'pull' you toward that goal. Unfortunately, long-term goals are sometimes too far into the future and we begin to lose sight of the carrot and begin to lose direction and focus. There is not enough 'pull' toward that goal because it is too far away. To prevent losing sight of the carrot, we need to establish goals within goals, or short-term goals. We need a series of small goals so that we can reach them often. This will give us the motivation and confidence to go after the next one, and the next one, and the next, until we reach our big long-term goal. Daily goals, monthly goals, and season goals are just as, or more important as, long-term, dream goals.

6. Write them down! It is amazing, but writing down our goals makes them real and further increases our motivation, focus, and commitment. And, once you write them down, don't let them get lost in the pile of papers on your desk! Put them in a place where you will see them often, like in your bow case or even on your bathroom mirror on a 3x5 card.

7. Make them your goals. Coaches, parents, and significant others can all have a big influence on what we think is important to achieve, but our goals need to be ours. They need to be important to us and something we think is worth going after. Your coach might think you have the potential to make a national team and have that as a goal for you but, if making a national team is as important to you as memorizing the Elements Table in chemistry, then it will be a difficult achievement, to say the least.

Goal Setting Problems

1. Increased pressure to perform. Sometimes archers feel pressured to reach the goals that they have set for themselves. When they are not making progress on their goals they feel like they are failing. They get frustrated. They lose confidence in themselves and begin thinking that maybe they can't reach their goals. If this has happened to you, take a step back and ask yourself how attached you are to your goal. It might sound strange, but you can become over-attached to achieving your goals and forget about the process, or journey, that is required to reach those goals. Goals should only be used as markers or as encouragement toward reaching your potential. Trying to reach goals for the pure sake of achievement can make it tough to relax into the moment, to be in the here-and-now of executing your shot.

2. Another thing to do! As busy as most archers are, setting goals can also feel like "one more thing to do". If you carefully set goals as we have discussed here, they will be useful and helpful and worth spending time on. In fact, they will actually make the time you spend shooting more efficient. Without goals, your shooting has a tendency to be unfocused and without direction which amounts to wasted time.

3. Not a habit. It takes a certain amount of commitment to sit down and develop good, helpful goals. For many archers, doing this is not part of their routine. It has not become a habit to set goals and, therefore, it doesn't ever seem to get done. Again, if you carefully set goals as we have discussed here, it will be worth making time for.

4. Too many goals at once. It is easy, in our quest to improve and reach our potential, to get over-enthusiastic and set too many goals at once. It is best to start with one or two goals at a time and to focus on that, rather than get overwhelmed with too many goals. Once we become experienced at setting, following-up, and evaluating our goals, we can safely increase the number of goals we are working on at one time.

5. Failure to set specific goals. This might be the most common mistake in goal setting. It is too easy to make vague goals like "I want to shoot better" than to set a specific, measurable goal with a numerical focus, like an improved percentage. To avoid failing to set specific goals, state your goal as such: "I will shoot better by ..." and then fill in the blank with a specific behavior. For example, "I will shoot better by focusing on keeping my shoulder down in 65% of my shots."

6. Failure to follow-up and evaluate goals. OK, maybe this is the most common mistake in goal setting. I just want to reiterate how important it is to follow-up and evaluate your goals on a regular basis. One archer that I worked with actually made it his goal to follow-up and evaluate his other goals on the first of every month! Goal setting really is a waste of time if this step is skipped.

Lisa Franseen received her Ph.D. degree from the University of Montana and is a sport psychology consultant in Denver, Colorado.

She has provided applied mental skills training to Olympic archers during training camps, national and international competitions and the 1996 Olympic Games in Atlanta. Lisa also teaches sport psychology for Level 3 and 4 Archery Coaching Certification Courses. While working with the United States Olympic Committee, she specialized in the development of mental skills programs and performance enhancement with elite individual athletes and teams which included the U.S. Archery, Swimming, Judo and Taekwondo resident teams.

Product News



Golden Eagle's new Natural Grip™

ODESSA, FL - The grip is your only point of contact with a bow, and how well it's constructed has a huge affect on your accuracy. A no-torque marriage between hand and bow is essential. The Natural Series riser features the new Natural GripRM, a revolutionary 15 degree angled grip that permits you to use a very natural hand position while locking you into the kind of form required to accurately shoot today's low brace height speed bows. And

since the arm is naturally rotated outward, it's out of the way of the bowstring. No more wrist slapping!

Golden Eagle/Satellite Archery manufactures the industry's most technologically advanced bows, broadheads, arrow components and accessories for today's discriminating archer.

PSE's Baby-G Lightning Cam - Taking archery on a new adventure

The short but feisty Baby-G is back for '98 with another trick up its sleeve. The 36" X-treme reflex riser and Magnaglass limbs are powered by PSE's all new Lightning Cam.

PSE is the Grand Master when it comes to combining features and benefits and this cam proves the point. The Lightning Cam is as fast as they come (naturally) but it is the only one this versatile. With one cam you have a choice of five draw lengths without dismantling the bow simply by exchanging one module for another. You then have another two quarter-inch adjustments up or down.

The Baby-G is at home in a treestand, in the field, or on the range. Choose from three popular camos or three competition finishes.

Precision Shooting Equipment, Inc. P.O. Box 5487,
Tucson, AZ 85703 www.pse-archery.com





Nikon Announces Improved Zoom Binocular

Nikon has given its popular Scoutmaster Zoom binocular a new look and boosted its optical performance. The biggest news, however, is that the price of the Nikon

Scoutmaster III has been dropped by 33%!

Nikon's 7-15x35 Scoutmaster III Zoom has an updated look with a new, more compact and ergonomic body style. The appearance of this new central focus zoom binocular is patterned closely after Nikon's Action B Series, introduced in 1996. The new Scoutmaster III weighs 27 ounces, is 5.5" high and 6.7" wide.

The Scoutmaster III has a generous 12.4 mm of eye relief at 15x and at 7x, has a field of view of 288 feet at 1,000 yards, and a close focus distance of 26.4 feet. Featuring a 7-15 power zoom range, multicoated lenses, and BaK4 high resolution prisms, the Scoutmaster III provides tremendous viewing performance at an affordable price. Like all Nikon Binoculars, the Scoutmaster III is covered by Nikon's 25-year limited warranty.

For more information on the 7-15x35 Scoutmaster III Zoom binocular, plus information on Nikon's full line of Binoculars, Spotting Scopes and Field Scopes, write: Nikon Sport Optics, 1300 Walt Whitman Rd., Melville, NY 11747-3064, or call 1-800-247-3464.