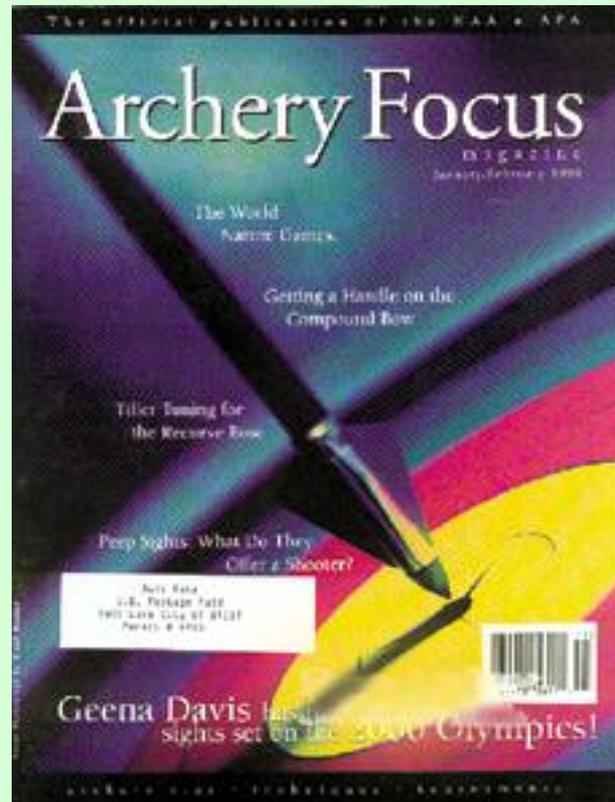


# Archery Focus

Volume 2, Number 1, 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.



## Something for Everyone

Another year gone by, and we're all still shooting away ... well some of us are. For those who aren't shooting, I challenge you to make a New Year's resolution and get back into the sport. Why? Why not, the sport has something for everyone. If you want to compete in the Olympics, it can take you there. If you want to win money, we have that too. If you just want to relax, maybe hike a little, the sport can afford you that. And of course, if you choose the sport as a means of hunting, well that's available too. To top it all off, each person in the family can shoot any style listed above, and still practice at one time ... together. What other sport allows you that luxury?

*Archery Focus* magazine brings all these aspects to you in every issue. We also want to give you a taste of the many sides of the sport. For example, has anyone tried the combination of archery and orienteering? Does anyone even know what orienteering is? Our publisher, Rick McKinney, tried it out in the first ever 'Nature Games' held in Brazil. You will be amazed at the extreme nature of the sport. Read more about it in Rick's article. Oh, and he'll explain what orienteering is too.

Not only does archery have many dimensions, but it has a wide spectrum of people who enjoy the sport. You may be aware that Ted Nugent and Bo Jackson are archery lovers, but did you know Geena Davis is? If you're wondering how she got into the sport, don't worry, you're not alone. I had the opportunity to shoot with Geena in her first tournament and I tell all about it in our cover story 'Geena Davis'.

As always, *Archery Focus* magazine 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!

Welcome to a new year for archery and *Archery Focus* magazine!



Sincerely,

Denise Parker  
Editor, *Archery Focus* Magazine

## BOWHUNTING

# Bowhunting Indoors?

*by Denise Parker*



The lighting is dim, the hunter is ready, watching the animal's every move, just waiting for that perfect shot. The birds are chirping as the hunter tries to guess within inches how far the shot is. Slowly the bow is drawn back and the arrow is released - SMACK! The arrow hits the screen and falls to the floor. This is interactive hunting.

Interactive archery is a program where an archer can actually see an animal. The animal can be moving and the archer can shoot at the animal, all of which is only an image on the screen. The computer system can automatically register where the arrow hit and inform the shooter on whether the shot should or should not have been taken. The system can offer much of what hunting in the elements offers - obstacles, wind simulation and true yardage. But the best part is that you get all this without the wind, rain and cold.

There are usually three different segments that are run during an interactive bowhunting session. The first is the *Shot Placement / Shot Selection* section. This section stresses the importance of understanding the game's anatomy in order to understand why it is so important to choose the proper shot placement. In each exercise the hunter sees a picture of a game on screen. The archer then picks a spot on the animal and shoots the arrow. After the release of the arrow, the screen will automatically register the location of the hit. It will then peel away the

different layers revealing the anatomy of the animal to examine whether the shot was well placed.



The second section is the *Shoot / No Shoot* section. This section's emphasis is on identifying the proper shot or no shot circumstances. It discourages the shooter from taking any shot that could be dangerous to either other hunters or the game. It encourages the hunter to hold off shooting if any questionable situation arises. On screen there is a video of the game moving around in its natural environment. The archer is allowed to shoot at the screen whenever he/she thinks an appropriate shot situation arises. Throughout the exercises, students are always rewarded for not shooting, whatever their reason may be.

The final section, *Going Afield*, is a combination of the two above scenarios, It is a series of randomly generated shooting scenarios. The student must decide for themselves when or if there is an appropriate time to shoot and then combine that with a proper shot placement. The sections discussed above are designed specifically for hunter education, but there are many other types of interactive shooting available. Many shops even have leagues set up specifically for interactive shooting. Check out what your local shop has and give it a try.

## **Bowhunting Organizations**

**Becoming an Outdoors Woman**

College of Natural Resources,  
UWSP  
Stevens Point, WI 54481

**Bowhunters of North America**

P.O. Box 1702  
Bismarck, ND 58502

**Int'l Hunter Education  
Association**

P.O. Box 490  
Willington, CO 80548

**National Bowhunter Education  
Foundation**

249B E. 29th Street, #503  
Loveland, CO 80538

**National Crossbow Hunters  
Organization**

4741 S.R. 107 NE  
Washington C.H., OH 43160

**Professional Bowhunters Society**

P.O. Box 246  
Terrell, NC 28882

**Safari Club International**

32045 DeQuindre  
Madison Heights, MI 48071

**Physically Challenged Bowhunters  
of America**

RD #1, Box 470  
New Alexandria, PA 15670

**Pope & Young Club**

15E. 2nd Street  
Chatfield, MN 55923

**The National Crossbowman**

398 E State Street  
Kennett Square, PA 19346

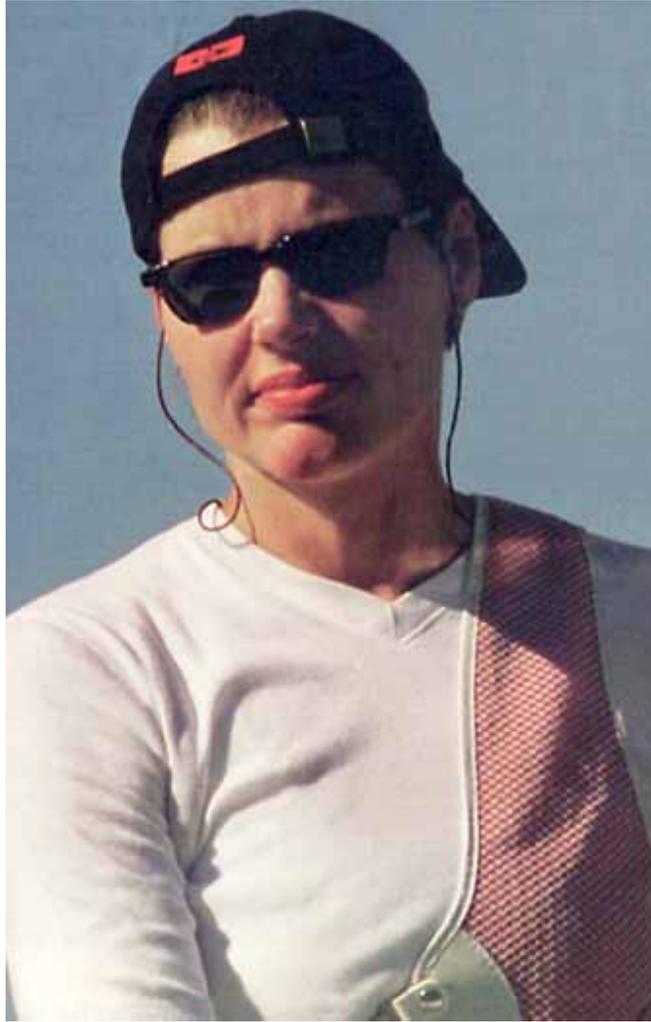
**World Bowhunter Association**

205 Pleasant Avenue  
Park Rapids, MN 56470

SPECIAL FEATURE

## Geena Davis

by Denise Parker



Geena Davis is one of the most sought after leading ladies on the big screen today. She made her feature film debut in *Tootsie*, with Dustin Hoffman. You may remember her better in any one of her following films: *Fletch*, *The Fly*, *Beetlejuice*, *A League of Their Own*, *Hero*, *Angie*, *Speechless* and of course, Geena's favorite, *Thelma and Louise*. Recently Geena has taken a different turn in her acting roles: adventure and action. She's the star in the films, *Cuthroat Island* and *The Long Kiss Goodnight*, where she had to do many of the stunts herself. Ok, this is all great, but why am I talking about movies and Geena Davis in an archery magazine? Well archery world, welcome Geena Davis to the long line of celebrities that enjoy our sport!

How did Geena get involved in archery you ask? Well, if you have seen her recent movie *The Long Kiss Goodnight* you will remember her character Charlie. For those who haven't seen the movie, Geena Davis' character Charlie, who can only remember the past eight years, hires a detective to help her discover her past. It turns out Charlie was a top-secret government-trained assassin. The film is action packed - guns, bombs, blood - you know, all the good stuff in an action film. Geena holds her own with Arnold and Jean Claude as action heroes I can assure you. In Geena's preparation for the part, she had to "get to know guns". In the process she fell in love with shooting. But as Geena puts it, "It's a little hard to shoot a gun in your back yard." So Geena thought the next best thing was to try archery. And so it began. So, is archery like shooting a gun? "Not at all," says Geena, "... but I love it!" And, that's good enough for me.

Geena started shooting in March of '97 when she hired Don Rabska, a top Olympic-style competitor and writer for *Archery Focus* magazine, to coach her. To his credit, he has done a great job with her. She made her public shooting debut on the *Late Night Show* with David Letterman in September, where she shot a variety of trick shots and finished her demonstration by shooting an arrow right through Letterman's head, which

was a foam dummy, of course. Her shot was followed with a roar from the crowd and I must say I was a little jealous, I would love to have been the one to shoot Letterman in the head! In her interview, Geena stated she was going to go for Sydney 2000 shooting her bow! Did you hear that, Sydney 2000! Her comment was followed with a slight giggle so it's hard to know how serious she really is. But it brings up a good question, does Geena really have a chance at the Olympics? As a fellow woman Olympic shooter and past Olympian I think I can objectively look at the situation. I had the opportunity to shoot with Geena at the Duel in the Desert where she posted a 986, an impressive first outing score. So here's my outlook on the situation.

**Form:**

As you can see from the pictures taken in San Diego, Geena really does have good form. She stands very tall, a bit over 6 foot, but more importantly she stands upright when she shoots. Geena has a great bow arm, as the arrow leaves the bow, the bow arm stays still, a technique the Korean archers are famous for. Her timing is fairly quick on her shots, which indicates that she seems to be moving well through her clicker. She is still inconsistent on her timing, but that is very normal for a beginning archer. Her anchor seems stable, but this is another aspect that will get more consistent over time. Geena's big advantage is her long arms. Geena shoots her arrows at full length, no saws needed for Geena. This gives her an advantage because she can shoot a lightweight bow and still generate more energy than women with much shorter draws.

**Attitude:**

I was curious to know what Geena's real intentions were when I heard she was shooting. Was it really to go to the Olympics or is it just a hobby? Well, it doesn't really matter because she claims to truly love the sport. As Geena puts it, "It suits my temperament." If anything, she probably has a better chance of going to the Olympics if she just enjoys the sport than if she entered the sport specifically to make the Olympic team.

*Geena's Patent Archery Form*

*Stance*

*Hat Backwards*

*Full Draw*

*Follow Through*



**Practice:**

Geena has been practicing at her home. She does a Justin Huish trick, you remember, over the road, through the garage, into the dog ... something like that. Geena shoots over her pool to her target on the other side. When asked if she swims to get her arrows she only laughed and thought it might be something she should try. She shoots six days a week anywhere from 100-200 arrows per session. She definitely practices enough. The true test will be if she can keep up this kind of training when her next film comes around.

**Competition:**

Ok, she's got pretty good form, she seems to have a good mental attitude about the game, she's shooting enough arrows, but what about her competition? Truly, Geena would be pushing it to make the 2000 Olympic team, but of course any thing could happen. Look at Luann Ryan, Olympic Gold Medallist in the 1976 Olympics. She picked up a bow only 3-1/2 years before winning her gold medal. One good thing for Geena is the women's team has not been strong for quite a few years. On average, the women's scores have been quite a bit below the international competition. Janet Dykman is really shooting well, but past that, it's anyone's game.

Ok, enough about the Olympics. Geena has just begun to shoot and look at the pressure we are applying. Olympics or not, it is great to have someone like Geena representing our sport. Her entourage to the tournament consisted of ... well ... there was herself ... lets see ... oh, her bowcase ... oh, and don't forget her chair. I'm not sure what I expected, maybe a body guard or a PR guy or an agent, but no, just Geena and her bow. She was extremely humble and tried her best to fit in with the rest of the shooters at the tournament, She plans to continue shooting tournaments and I hope she does. In the film *A League of Their Own*, Geena and her co-stars inspired young girls to play baseball all over the country and Geena has already inspired young girls to shoot archery. They gathered around her in 'awe' at the tournament, holding on to every word their idol said. Most wanted answers to questions like, "Did you really catch that ball with your bare hands in *A League of Their Own*?" Others asked, "What was your favorite movie?" Yet through it all Geena was patient and even signed a few autographs. So if she doesn't shoot

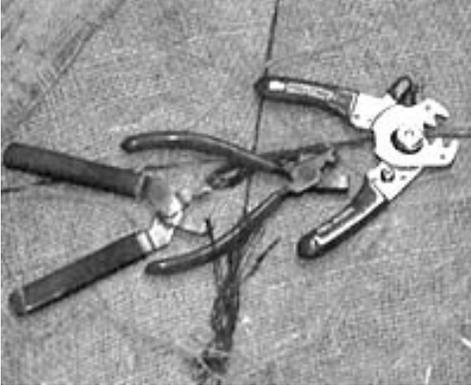
again, thanks for what she has done already. And if she does continue ... watch out women, Geena has her sights set on Sydney 2000!



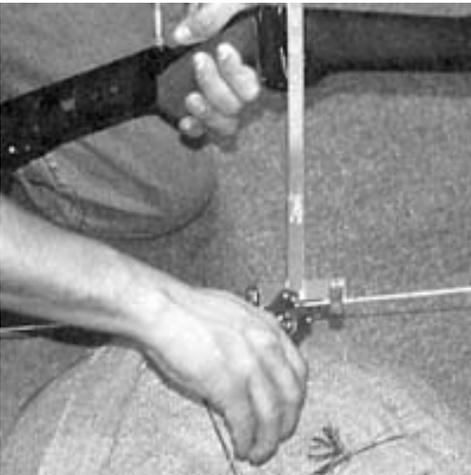
*Geena's interest in shooting started when she shot a gun for the movie, The Long Kiss Goodnight.*

# How are Your Arrows Flying?

*by Jennifer Furrow-Fonua*



*Use a pair of nocking pliers to clamp the nock set on the string.*



*Be careful not to clamp a metal nock set on too tight, it can cause damage to the string.*

Are your arrows flying straight out of your bow? If not, it could be your nocking point. The nocking point is the place on the string where you position the nock of the arrow. The nock set is the device which marks this position and allows you to nock the arrow at the nocking point consistently. If the nocking point is not in the proper place the arrows will fly in a porpoising fashion, where the back end of the arrow is rotating up and down during its path to the target. Each bow has a different nocking point that is perfect for its specific set-up. You will need to find where it is best for your bow.

The nock set is a device that is clamped on or tied into the serving of your bowstring to mark the exact nocking point position and ensure that the arrow does not ride-up on the string when the bow is drawn. There are several different types of commercial nock sets available. The most popular type of nock set is the metal clamp, which is attached with

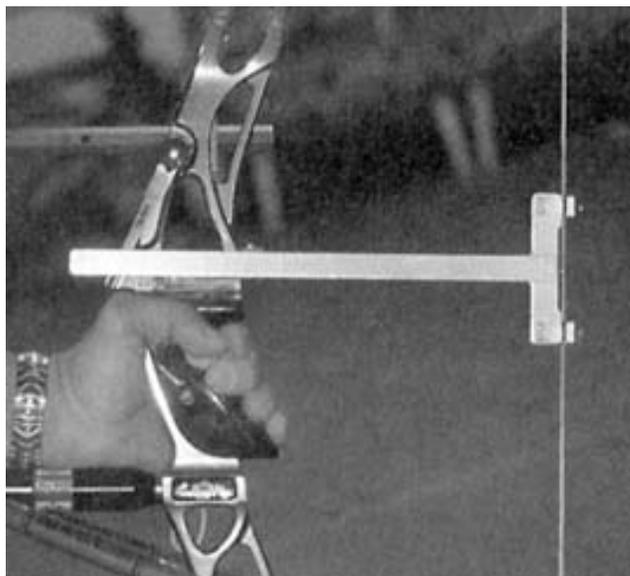
a pair of nocking pliers. This type of nock set is very easy to clamp on the string and can be moved without too much difficulty. Be careful not to clamp this style of nock set down too hard, it can cause damage to your string, even to the point where it could break your serving. Some archers tie on the nock sets using either dental floss, string material, a light serving material or other thread-like materials. Most pro shops can teach you how to tie a nock set on. There are also nock sets that are actually tied into the serving. Beiter puts out a plastic nock set that can be tied right into the string. This is great because you don't experience the wear on your string that would normally occur, but it is difficult if you need to adjust your nocking point. Most likely you will have to redo your serving in order to make an adjustment. Tuning for the Beiter nock set or tying your nock set is very difficult and is not recommended for beginning archers.

In initially placing a nock set on the string, try placing it slightly above a 90 degree angle (approximately 1/8 to 1/4 of an inch above 90-degrees) on a horizontal plane from the arrow rest. Use a bow square to help check the position. A bow square works best because it shows fractional-inch increments that are marked on the square. You can check this location each time you shoot or, if you are setting up a new bow, you will have a good starting point. Bow squares can always be found at an archery shop. They are a must for any archer to have.

The first step after you have a nock on the string is to see how close you are and fine-tune the position of the nocking point. A simple way is to shoot at 20 yards with three fletched arrows and one bare shaft, where the fletching has been removed from the shaft. Shoot the three fletched arrows and then shoot the bare shaft, all arrows need to be aimed in the same place. Do this two or three times to make sure the results are consistent. Use the following guidelines in making your adjustments:

- If unfletched arrow went below the fletched arrows, the nocking point is too high and the nock set needs to be moved down slightly.
- If unfletched arrow went above the fletched arrows, the nocking point is too low and the nock set needs to be moved up slightly.
- If the unfletched arrow shoots on the same horizontal plane as the fletched arrow, the nocking point is correct.

When adjusting your nock set, move it just slightly, 1/8th of an inch at a time until you get the feel for how much each adjustment changes the position of the unfletched arrow.



*(above) Bow squares work best for measuring the nocking point because they are marked in fractional-*

*inch increments.*

*(right) Some people prefer to use two nock sets, one above the arrow and one below. The picture above is an example of a metal nock set and a tied-in nock set.*



Some people prefer to use two nock sets, one above the nock of the arrow and one below. The nock set below the arrow is used to keep the arrow from sliding down the string. If you are experiencing some high arrows on occasion, you may want to try putting a second nock set below the arrow to see if that helps the problem. This is a good system as long as you make sure that there is enough room for the nock of the arrow to fit properly between the two nock sets at full draw. A lot of people will put the nock sets too close together, causing inconsistent grouping or a dry fire since the nock is easily forced out of the string at full draw.

**Good luck!**  
**Jennifer Furrow-Fonua**

# PEEP SIGHTS: what do they offer a shooter?

*by Drew Wilcock*

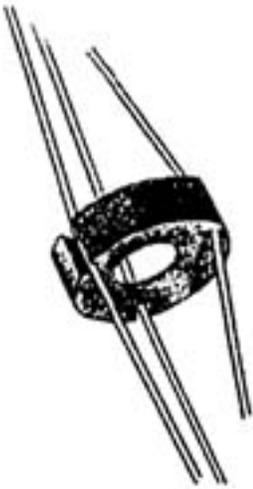


Many first-time archers don't realize that peep sights are available to them as an additional aid to aiming their bow. Peep sights have become a very common tool to compound shooters, serving the bow as the rear sight serves a gun. They make the difference between a rifle and a shot gun. Now, instead of a 'point and shoot' method of operation, the archer is handling an aimed weapon.

There are several different styles of peep sights, and several different opinions as to which type is the best of them all. To be honest, they all do the same job, it's just a matter of personal preference, coupled with your specific shooting needs, that will determine which is best.



*Zero Peep from Fine-Line,  
a self-aligning peep.*



*Scherz-A -Peep, a reliable  
and low maintenance in-  
line peep sight.*

Probably one of the most common styles of peeps among hunters is the self-aligning peep, such as the Zero Peep from Fine-Line. The self-aligning peep splits the string in two and relies on a length of latex tubing to ensure that the peep hole turns to give the archer a proper sight picture. The rubber tubing runs from a post on the back of the peep to either a second post installed on the bow's cables, or an anchor pad mounted on the upper limb. When the bow is drawn, the additional tension on the tubing rotates the peep to an in-line position with the front sight. Although the tubing does deteriorate with age and wear, proper maintenance and replacement will keep breakage to a minimum.

Another popular peep among hunters is what I refer to as an in-line peep, such as the Scherz-A-Peep. In-line peeps split the bowstring three, four or in some cases even as many as 10 times, and install with the aperture perpendicular to the bow string. The in-line peep operates with the principal that as

the string is pulled back to an angle, the peep aperture and sight picture become visible to the archer. Although occasionally the archer may have his sight picture partially blocked by string strands, the ease of operation and the low maintenance of the in-line peep has made them extremely reliable and popular.

Target and 3-D archers tend to lean towards peep sights that split the string only once, but work without alignment tubing. Peeps of this style include the Aluminum Tru-Peep and the Papeep Hooded Peep. Most target-oriented peeps are available in a wide range of aperture sizes to suit your specific shooting requirements. Operating this style of peep requires the archer to 'train' the bowstring so that the peep aperture rolls around to give the shooter proper visibility. While this can prove to be a tedious endeavor, the lack of alignment tubing and the lightness of the peep will usually create a more consistent reaction from the bowstring. Archers should note that string-alignment systems are available on the market which will convert this style of peep to a self-aligning peep. So if you have a hard time 'training' your string, or would like to use this type of peep for hunting purposes, you will be able to do so with one of these kits.

Clarifier peeps have become quite popular with scope shooters. Even with the best quality lenses, at higher powers, target scopes have a tendency to become blurry. Clarifier peeps, such as the peep by Original Brite Sight, serve as the rear lens on a telescope, cleaning up the sight picture to amazing levels of clarity. This kind of peep allows you to have your bubble and the target in focus at the same time. Although clarifiers will generally 'dim' the sight picture slightly, the crispness of the sight picture is well worth the trade-off.



*Papeep Hooded Peep, the most popular style of peep sight for 3-D and Target archers.*

There are also peeps available with slight magnifications, these will magnify the scope's power even more, but most likely these peeps will not allow your bubble to stay clear.

In recent years we have seen the development of peeps with changeable apertures, making it possible

to change the size of the peep hole without having to buy a new system each time. Peeps like the Pick-A-Peep from Fine Line, or the Super Peep from Specialty Archery Products have made converting your bow to fit a wide range of applications as easy as moving a slide or turning an allen wrench. With this added feature to the peep sight, archers are able to change from a large hole for low light conditions to a small hole for pin-point target shooting with almost no effort at all.

No matter which style of peep you choose, you will find the increased accuracy it provides quite pleasing. Installing a peep sight is a relatively simple procedure that most intermediate archers are comfortable performing. Most pro shops will install accessories you purchase from them at no extra charge, so if you're not comfortable with trying it yourself, let the experts do it for you.

# Increase Your Return on Practice

*by Denise Parker*



*Practice ... Practice ... Practice ... Practice ... Practice*

I began shooting when I was 10 years old. By the time I was 13 I was competing Internationally and by 14 I was in my first Olympics. I was involved in basketball, soccer and softball at school. I hated to practice, and I'm still not sure I like it to this day, but I love competition. I love to win and I know the only way to win is to practice. This was my motivation to get to the range each day. Because I have never been a big fan of practice, I have learned that practicing right only takes a little time, and rewards you much quicker. Practice is not about how many arrows you are shooting. Practice is for perfecting your form, plain and simple. I have been able to compete with shooters from around the world who shoot 2 to 3 times as many arrows as me because I was practicing perfecting my form, knowing the scores will come with proper technique.

Before deciding on or applying a practice schedule to your life there is one important decision you have to make. How good do you really want to be. If you choose to be simply a recreational shooter, meaning that you are not worried about competing in tournaments or about how you place, you are simply there for fun, then pick and choose some of these practice techniques but don't apply too much pressure to yourself. You have chosen to just enjoy the game, so just enjoy the game. For those who choose to make archery a big part of their life and want to do well in tournaments and increase their scores, some time is needed. But trust me, if done right, it's not as much time as you think. Let me share with you the practice technique my coach, Tim Strickland, introduced to me.

## **VISUALIZATION**

Before going out to practice, have a goal in mind. No I don't mean score, I mean form, Have an idea of what you want to work on that day. Maybe it's relaxing the bow arm or following through,

whatever it is have a plan for the day. Try not to clutter your mind with too many things. I could easily find 10 things I really should practice, but I try to limit it to only one or two main areas. Once you have your mind made up on what it is you will practice, take about 5-10 minutes and just visualize yourself performing the task. Visualizing only 10 minutes can be as effective as 100 arrows shot if done properly. Really see the shot and the technique, even feel the muscles working as you visualize. This sets your mind up and prepares the mind for the practice session, it knows what it will be working on.



*Practice ... Practice ... Practice ...  
Practice ... Practice*

### **BLANK BALE**

After visualizing your shooting, step up to about 10-20 feet away from the target with the target face removed and shoot at a blank bale. Blank bale shooting allows your mind to really focus on the feel of the shot. Because there is no target, the mind is forced to work strictly on form. Continue to use your visualization through your blank bale shooting. Use the same images that you saw prior to shooting. I like to visualize a shot and then shoot one, visualize and then shoot another. You will be amazed how your body will pick up on what you are visualizing and incorporate it into your form. Shoot at least 20 arrows at the blank bale, but make sure with each arrow you are visualizing and

trying to feel that aspect of your form that was the goal for the day.

## **MOVE THE SIGHT**

After shooting blank bale move back to your desired distance and place the target face back on the target. Blank bale shooting is very valuable, but eventually you have to be able to transfer what you learned shooting at the blank bale to the target, this is not such an easy task. Don't be discouraged when the shots at a blank bale feel nothing like those you are shooting at a target. The whole goal is to get to the point that the shots at the target feel the same as those at a blank bale. If you get to this point then you have fully understood the concept that the arrow will only score better by shooting a good shot. When you first put the target up, move your sight so the arrows are not going in the middle, I usually move the sight up or down. This takes the pressure off the mind to make sure you hit the middle. It is very similar to the blank bale, but unlike the blank bale you are now incorporating aiming into the process. Continue to work on form, but the aiming adds a little more realistic view to it. For some reason, when we know it's not going to hit the middle, because we moved our sights, we are able to accept not hitting the middle and just work on form. With each step try to make the shots feel the same way they did the step before. So, when you step up to the blank bale make them feel like they felt when you visualized them. When you shoot at a target try to get the shot to feel like the blank bale, etc. Always keep in mind, you are only working on one or two things on your form. Shoot about 50 arrows this way before moving your sight back to the middle.

## **SCORING**

Scoring is merely a way to measure your results. If you are shooting well and incorporating proper techniques the score will come automatically. I like to score at least one round every other time I practice. Scoring will put a little more pressure on you and it's good to see if you can transfer what you have worked on with the blank bale and the target shooting (with sight moved) to shooting for score. Many people make the mistake of scoring every time they go out. The problem with this is you never free your mind up enough to work on improving your form. Sometimes to get better we need to work on certain aspects of our form, or try a new technique. Like all times, when you first try something new, you don't shoot as well. Well, if you are always scoring you will never allow yourself to try something new because as soon as the score drops, so does the new technique.

Each of these types of practicing, visualization, blank bale, moving the sight and scoring, are ways to practice. Use any one of them alone and you're missing the boat. Use all of them together and watch how much quicker you can increase your scores. The key to good shooting is consistent, good form using the correct muscles. If you're out flinging arrows you will get consistent, I promise. The problem is you will be consistent with bad technique. Make your practices count, don't fling arrows, have a plan and understand why each part of the process is important.

# Two New Sights for the Olympic Bow

*by George Tekmitchov*



## **I LOVE GOOD BOWSIGHTS**

Good bowsights don't rattle, don't fall apart, don't weigh more than the engine block of my car, don't bend if I happen to miss my bow stand after shooting a seven in an Olympic Round, don't sound like the Horsemen of the Apocalypse on release, don't leave more parts on the field than a plane crash, don't bind, fold, spindle or mutilate or cause me to want to become a Prozac user. Good bowsights will move smoothly, not have parts that rattle loose and look reasonably new after, say, six months. Good bowsights seem awfully darn hard to find.

## **I HATE BAD BOWSIGHTS**

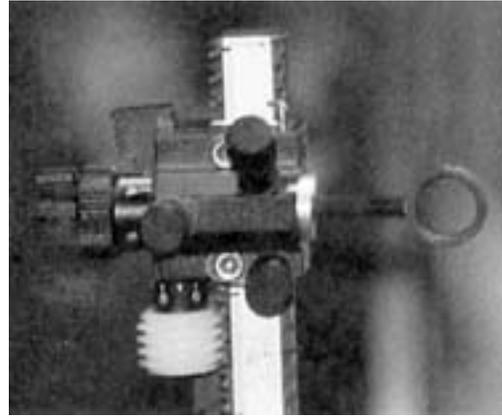
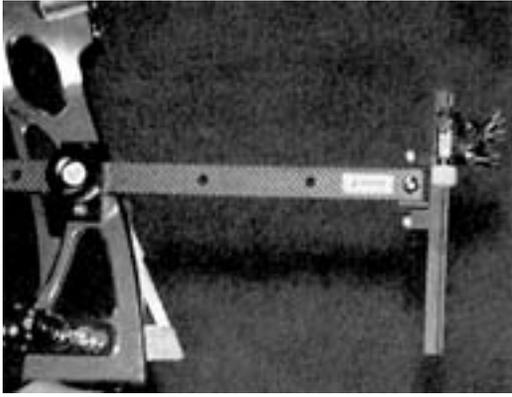
Most bowsights work pretty well 'out of the box'. The test of time, however, tends to uncover problems and issues which are often not apparent in the first few weeks or months of use. I have owned a lot of sights over the years. Only a few have withstood the test of time. Here, I will review two of the best sights on the U.S. market, sights that meet the criteria I feel good Olympic Bow sights must have ... sights worthy of love.

## **SHIBUYA CARBON EXTREME**

Manufacturer: M. Yasui & Co., Ltd, Tokyo, Japan

**PROS:** Elegant design, extremely light weight, solid and reliable, state-of-the-art materials.

**CONS:** Expensive, not easy to obtain in the United States, not bulletproof.



The Carbon Extreme is the latest Shibuya sight, with updated controls and improved design. The first thing you notice, if you have used a Shibuya previously, is the trapezoidal carbon extension bar has been reversed, so now the wide side is on the right (RH bow). It is also a lot more solid and rigid, and the mating surface with the mounting block on the bow is larger and more positive. The lockup screw on the locking knob has also been beefed up.

The extension bar is very simple, but of advanced construction. It is a laminated carbon/carbon sandwich. This makes the bar stronger and more rigid (and more importantly, lends a cool 'carbon look' to the bar). There are 4 detente holes in the extension.

The vertical sight bar on the Extreme is very impressive. This all-carbon laminated component has the rack teeth machined into the carbon fiber itself. Stainless steel helicoil liners are used for the screw holes linking the vertical bar to the extension bracket. It is difficult and expensive to machine a part like this, but Shibuya has done the job extremely well. The weight-savings amount to about one ounce from this component alone. The trade-off is that a strong impact could break this bar (a similar impact would bend an ordinary aluminum bar).

The sight block is of lightweight aluminum construction. Shibuya has now added a click-stop function to the micro-adjust knob for windage that adds functionality to the design.

The simple vertical adjustment components are familiar to anyone who has used a Shibuya sight in the past. One turn of the vertical adjustment knob results in a 1/10th-inch movement of the sight block. Sight marks can be referenced with the built-in scale on the front of the vertical bar, which also makes a good mounting surface for a sight tape.

The Extreme comes with an 8/32-threaded 1/4-inch ring-and-pin aperture with a glare-proof, rounded outer body and a removable pin. The sight also comes with mounting block screws for both AMO standard and metric tapped bows, and a set of Allen wrenches.

At 5 ounces, the Carbon Extreme is currently the lightest sight on the market for the competitive

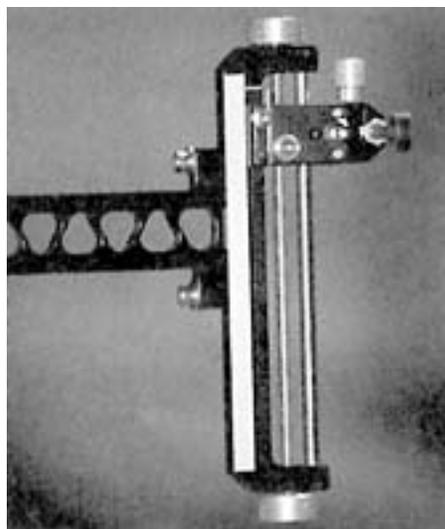
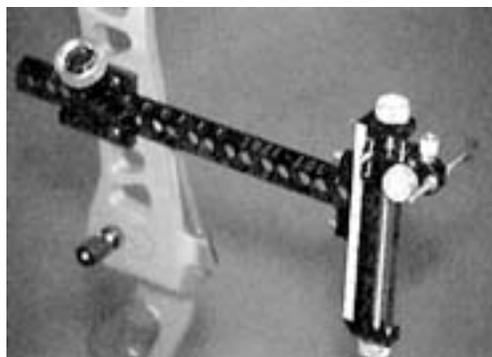
FITA archer. The sight is priced at the high end of the spectrum. I would recommend this sight to advanced archers looking for the ultimate in quality and performance.

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## **SURE-LOC FITA EXTREME**

Manufacturer: C.S. Gibbs Co, Inc South Beloit, IL USA

**PROS:** Rock-solid construction, simple and precise adjustments, very reliable, reasonable cost. **CONS:** Slightly heavier than most Olympic Bow sights from Japan, aperture lock needs work.



The Sure-Loc, which started life as a compound bow sight, has been refined to the point where I consider it to be a world-class Olympic Bow product.

This all-aluminum design traces its roots to the early 1990's and the original Sure-Loc shot by Butch Johnson in the 1992 Olympic Games in Barcelona. At the time most Olympic bow shooters found it too heavy. Sure-Loc has put a full isogrid pattern in the one-piece extension bar (very much like the pattern of the Hoyt Radian riser), and larger holes in the vertical bar, to remove several ounces compared to the original Sure Loc. Now, the Sure Loc is as light as any other all-metal sight for the Olympic Bow.

Weight is important, but functionality is also very important. The Sure-Loc has extremely good functionality.

The FITA Extreme is of 100% CNC machined aluminum and stainless steel construction. The main feature of the product line is a 'one touch' major adjustment system, and an ultra-precise micro

adjustment system. One design element that is still compound oriented, on this sight is the hyper-precision of the vertical adjustment system. Compound shooters need ultra-precise sight movement with their scopes and releases, but Olympic Bow shooters need comparatively coarse adjustments. It takes about two turns on this sight to equal one turn on a Shibuya or K sight.

A double scale system (both precise numbers and a tape) with dual adjustable pointers means it is easy to correlate your sight marks to a scale number for reference.

Compared to the vertical adjustment system, the major horizontal adjustment lockdown is a little crude and seems out of place on this quality product. Simple cadmium plated jam nuts hold the aperture in the quick-release block. They seem a little cheap compared to the quality of the rest of the sight. However, the micro windage adjustment is very smooth and precise.

The substantial mounting block and sizable string lock knob complete a very solid package. The lock knob is knurled for a good grip. The set screw in the knob has a plastic tip to avoid marring the sight bar detente. The sight bar has multiple detentes for full adjustability.

The FITA Extreme model is not recommended for the compound bow, and carries a disclaimer to that effect, but it certainly seems as solid as any sight intended for the compound. All in all, it is an excellent and competitive product for the Olympic Bow.

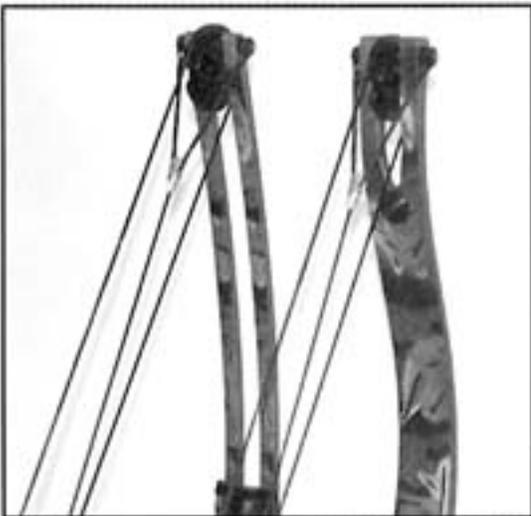
**“Ah, bowsights. Love ‘em or hate ‘em, unless you want to be the next Skip Trafford or Bob Burns - you need ‘em.”**

George is a member of the 1996-97 U.S. archery team, a Hoyt international staff shooter and a senior development engineer for Easton, inc. the views expressed here are his own and not those of his employer or sponsors.

# Learn from the Best: Material Survey from the World Indoor Championships in Istanbul, Turkey

*by Philippe Humez*

I was privileged enough to be able to work at the equipment repair booth at the past World Indoor Championships. We were able to fix some problems and the booth always seems to be a big help to the international shooters. During the time I was there I surveyed many of the compound shooters and I would like to thank all of them for their help in completing the survey. Good communication between archers is so important because we all still have a lot to learn.

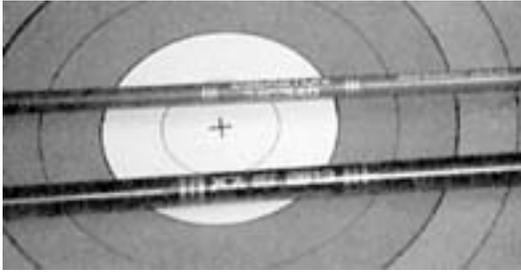


*Split limbs are the newest trend in  
compound bows.*

Here is the full compilation of the answers I received.

## **BOWS**

The newest trend in compound bows seems to be the split limb bows. There were not a lot present at the tournament, but they are becoming more popular. The split limb design improves the durability of the limb and when combined with a harness, it gets the same or better torsional stability I have not proven they are faster, but they seem to be.

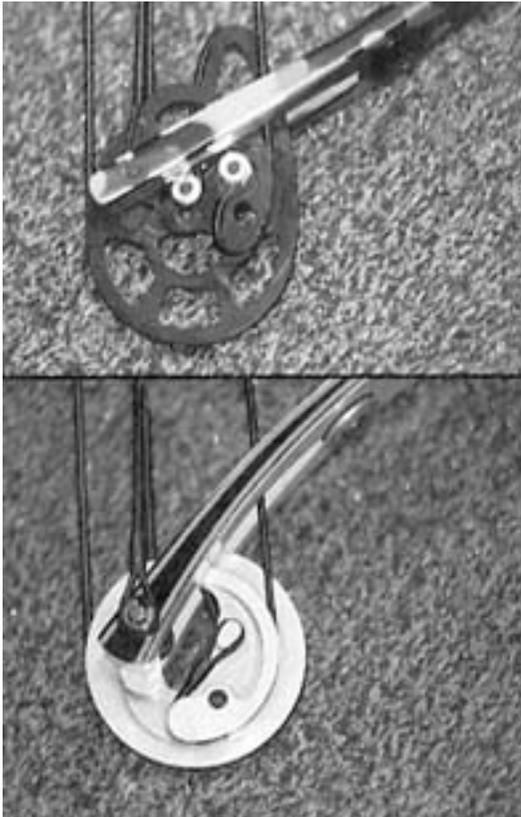


*Large diameter shafts can make up to a 5 point difference per 30 arrow round.*

## **SHAFTS**

The shafts used were almost all Easton large diameter aluminum shafts. The 25 and 26 wall sizes were the most popular. It is a clear advantage to have a large shaft size in order to cut the scoring lines. According to many people, a 26 diameter shaft brings about two to five points per 30 arrows round more compared to an ACC 3-49 for instance. Of course, getting good arrow flight is still very important. Because many shooters were shooting such a large diameter shaft, there were many who were shooting their shafts uncut (not cutting any aluminum off the front end of the arrow), With a 125-150 grain point they were able to tune the shafts for their bow. I believe that for indoor, 18-meter distance, perfect tuning is not as important as it is for outdoors.

## **ECCENTRICS**



*Above: An example of a cam wheel.  
Below: An example of a round or energy wheel.*

I remember when I began shooting a compound, everyone told me to shoot in the center of the valley. This was for the round wheels and still holds true for the round wheel. Since then, the material used has improved and there is no problem shooting from the wall (wheel drawn to the max). It is even preferable when you use cams. I was also told that cams were not forgiving, but once again the manufactures have improved them and given them better profiles which allow good scores to be shot with hard cams. With cams some things are more critical: the timing must be perfect. To insure this, draw your bow up to the wall, you must feel a solid wall, if not make some corrections in the eccentrics timing. It is better to tune the eccentrics at full draw because it is there that you can feel the wall. When the timing is bad, one wheel arrives before the other on the wall. The archer can feel an increase of weight maybe one inch before it stops. In order to shoot well at the wall you need good and solid timing on both wheels. Timing your wheels correctly can also improve your aiming. Results show some archers have decided to stay with the round wheel for indoors.

<b>Personal Best Indoor</b>	<b>Wheels</b>	<b>Personal Best Indoor</b>	<b>Wheels</b>
596	Cams	584	Semi-Cam
593	Energy	584	Energy
593	Cams	584	Round
592	Energy	579	Round
590	Semi-Cam	575	Energy
589	Semi-Cam	574	Round
589	Energy	574	Round
589	Cams	573	Round
586	Round	573	Semi-Cam
584	Energy	572	Round

## **REST**

The Pacesetter was the most used rest at the championships. Some rests are made with micro-metric lateral and vertical adjustment capabilities. Some drop out rests were also used. There were two main types used:

1. The inertial rest: The arrow, when released, is pushed in front, so by reaction the bow is submitted to an opposite force which pushes it back and this will react on the

inertial rest which will then collapse. 2. The cable attached rest: An elastic is attached to the slider or the cables and just before full draw the tension pulls up the mobile rest.

Only one thing is important: When the shot is released, the rest must hold the arrow at the beginning of the travel (approximately two inches). After that, the shaft will leave the rest. The important thing is that the rear of the arrow, the vanes and nock must clear the rest. The fall down rest clears easier, but they are mechanical. A well tuned pacesetter or springy will do the same job but are much simpler.

## RELEASE

While different techniques are present, we can see some patterns in the styles of releases. The back tension release is used by the best shooters: Increase the pressure on the trigger, when the pressure is high enough it will fire without conscious decision. For those who prefer the conscious decision, a slow increase of the pressure, than an action with a small difference of pressure is preferred.

Indoor Personal Best	Sensitivity of the Release	Trigger	Action
596	very hard	thumb	surprise
593	hard	index	slow
593	hard	index	slow
592	light	thumb	surprise
590	light	thumb	quick
590	light		slow
589	light	thumb	quick
589	medium	back tension	slow
589	medium	thumb	surprise
586	light	back tension	surprise
584	light	index	surprise
584	hard	index	quick
584	light	index	slow
584		thumb	quick
575	light	index	surprise
574	light	index	slow
574	medium	index	quick
573	light	thumb	surprise
573	light	thumb	quick
572	hard	index	slow
572	hard	index	relax

## ACTION OF THE SHOT

The aiming is the most important action at any time. Many focus on the target not on the dot.

<b>Indoor Personal Best</b>	<b>Aiming Focus</b>
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596	Dot
593	Dot and Target
593	Target
592	Dot
590	Target
590	Target
589	Dot and Target
589	Target
589	Target
586	Dot and Target
584	Dot and Target
584	Target
584	Target
584	Target
584	Target
579	Dot
575	Dot and Target
574	Dot and Target
574	Dot
573	Target
573	Target
572	Target

# Getting a Handle on the Compound

*by Larry Wise*

The craving for arrow speed by the average bowhunter has driven the bow manufacturers toward top-of-the-line reflex handles. The lower brace heights achieved with this design increases by two or three inches the distance the bow string is attached to the nock which, in turn, increases the amount of energy that is transferred to the arrow. But if your main objective is something other than speed, you must look at more than each manufacturer's most advertised model; look at all the models.

I thought you should take a good look at the different kinds of handles available along with the application of each. Then you can assess your goal and choose a handle that will best help you achieve it. Once again, an informed decision is the best one.

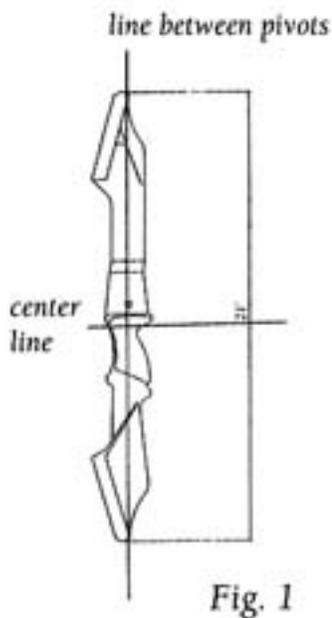


Fig. 1

## CENTER GRIP AND BELOW-CENTER GRIP HANDLES

There are eight types of handles based on the position of the grip relative to the straight line connecting the limb pivot points or rockers (fig. 1). The first pair to consider are defined by the location of the grip relative to the vertical center of the handle. Recurves, and most compounds until several years ago, have had the grip at the vertical center. More recently, the compound designers have moved the grip below center by 3/4 inch or more to allow for a shorter, faster handle while maintaining a six inch sight window. Below-center grip handles have the advantage of the nocking point being very near to the string center. The center grip models place the pressure point of the bow hand at the center. Each design makes its own compromise with the ideal design which would place

both the hand and arrow at the middle of the handle. This, of course, is not feasible unless you have a hole in your hand to allow for arrow clearance. So a compromise has to be made.

The choice you make here must depend on your purpose in shooting archery. If you want higher speed then choose the below-center grip on a short handle. If you want aiming and hand stability, choose a center grip model that might be a little longer and slower.

### **DEFLEX, STRAIGHT, REFLEX AND HYPER-REFLEX**

The other four choices are defined by the grip's position relative to both the bow string and the straight line between the limb rockers. Each one of these can be either center grip or below-center grip making eight possible handle types. Assess them carefully so you recognize the difference.

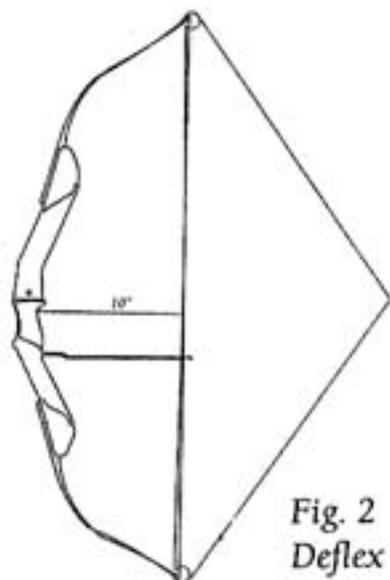


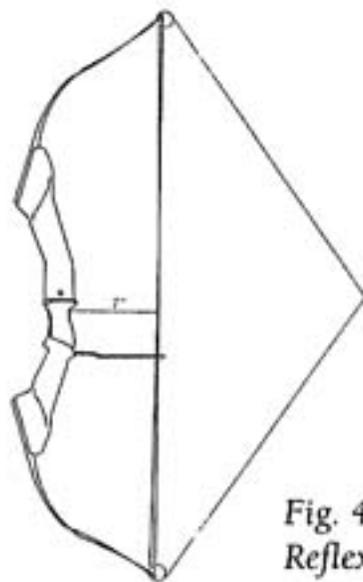
Fig. 2  
Deflex

The deflex handle places the grip and string on the opposite sides of the rocker line (fig. 2). This yields a higher brace height than the other designs and subsequently less speed because the nock is not on the string for as many inches. Usually a deflex handle will have a 10 inch brace which yields only about 18 inches of string travel during the power stroke. The up side has more aiming stability due to the bow hand pulling the bow toward the target.

The straight handle puts the grip on the rocker line and is a compromise between the speed of a reflex handle and the stability of a deflex (fig 3). Lots of pre-1990 compounds were straight handles while more and more recent bows are reflex.

The reflex handle places the grip between the rocker line and the bow string (fig. 4). This creates a low brace height, around seven or eight inches and leads to higher speed. The string has to travel

from seven inches to 28 inches at full draw which allows for 21 inches of string travel; that's more inches for the string to transfer energy to the arrow. Figuring that each inch of power stroke gives the arrow about eight feet per second in velocity, that's 24 fps more in arrow speed. This increase is traded against aiming stability since you now have to push the handle toward the target because your hand is behind the rocker line. Extend the reflex a radical amount and you create the hyper-reflex. This design has a really low brace height around five or six inches. String travel gets up to 23 inches for this type handle and arrow speeds increase by another 16 fps. The trade-off, of course, is less stability in aiming.



## FOOD FOR THOUGHT

If you plan to shoot 3-D archery, you'll want to use the reflex handle to get the speed you need without high draw weight. To overcome the inherent instability in the aiming department, you'll also have to practice good shooting form technique. Especially critical here is the bow hand placement in the handle grip. Keeping your hand relaxed and torque free is important with any handle but even more so with the reflex. I'd recommend that only the very skilled use the hyper-reflex handle since it requires an exceptionally good bow hand.

Shooting FITA rounds at 70 m and 90 m requires some speed, and more and more archers are choosing a slightly reflexed handle to do this. The speed is an asset in the wind and shooting lots of practice to build a good bow hand is not a problem for anyone who has already made a commitment to shoot FITA rounds. Go with the reflex only after you practice your hand position.

Indoor archery is demanding of form and not of speed so if you plan to shoot lots of indoor archery, choose a straight or deflex handle. Usually the round wheels you get on these bows reflect their primary use for indoor or field archery where wind is not usually a factor. I would also recommend that beginners start on one of these handles in order to get good results at the target while first learning good shooting form.

Tuning any of these handle types is essentially the same. The deflex and straight handles show fewer effects as a result of bow hand torque and may tune a little easier than the others, although some of that may be due to the round wheels involved. When tuning the reflex handle bows, be careful choosing arrows as one that is too light can put you through the tuning ringer, so to speak. Of course light arrows do that to any bow.

The bottom line on handle selection is “know your purpose” and how much you’re willing to practice to learn good bow hand form. Then look at all the handles available before you decide on which one to buy

**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: *Tuning Your Compound Bow*, *Tuning Your Broadheads*, *Bow and Arrow: A Complete Guide* and *Tuning and Shooting Your 3-D Bow*. They are all available from:

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

*Bow and Arrow* is \$15.95, while the others are \$10.95. Please include \$1.50 per book for shipping.

# Measuring Tiller Setting Tiller for a Recurve

(for the intermediate and advanced archer)

by Don Rabska

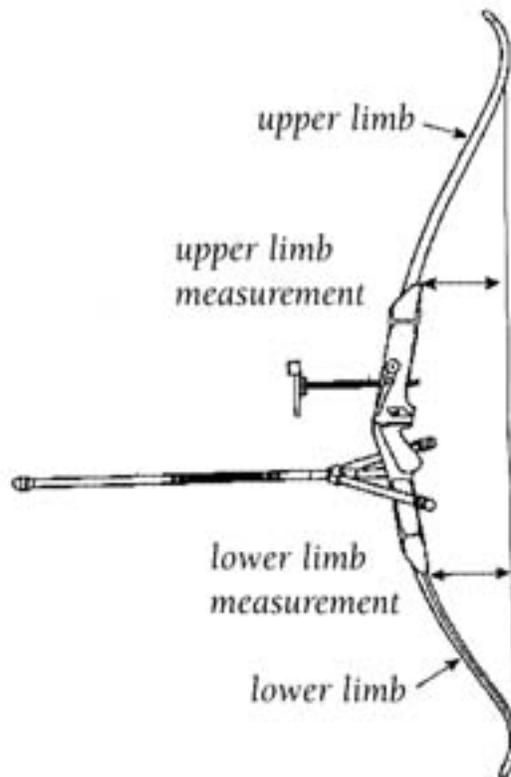


Figure 1. Measuring tiller.

Tiller is the physical difference in initial draw weight between the upper and lower limbs. This variation is gauged by measuring the distance from the base of the bow riser to the bow string on both the top and bottom bow limbs. Correct tiller setting for most modern recurve bows will show a greater distance between the top limb and the bow string and a slightly shorter distance between the bow string and the bottom bow limb. See Figure 1.

Proper tiller setting is often overlooked as a part of the entire bow tuning process. You may have heard some bow makers or archers say that tiller is not important due to the modern materials used in the construction of today's equipment. This is not true. The correct tiller setting for each individual archer's bow is very important in stabilizing the bows position during the drawing process.

The main function of tiller is to allow the archer to move easily and comfortably aim during the draw and release of the shot. This is accomplished by achieving a balance in the draw weight of both limbs at full draw. When drawing the bow, the upper and lower limbs must be in balance when the archer reaches full draw. Because all archers have differences in their shooting form and physical characteristics, equipment must be individualized. Variations in grip height, bow hand pressure, finger pressure on the bow string, bow geometry, stabilizer configuration and other factors all effect tiller.

Therefore, tiller settings must be customized for each individual. The following tiller chart indicates a common tiller range for most archers, but this is meant only as a starting point for tiller adjustment. Fine tuning of the bow's tiller is highly recommended to achieve maximum performance from the equipment.

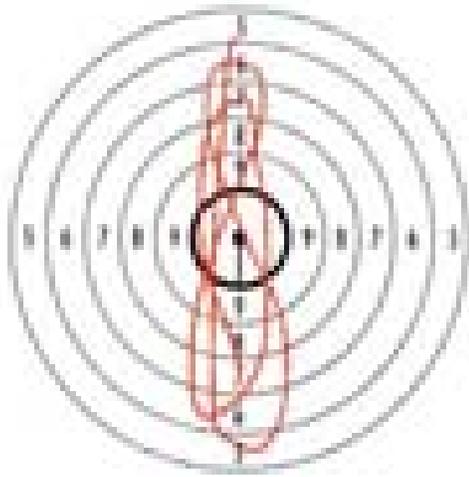
There are rare cases where large variations in tiller occur due to bow design. This is dependent on the pivot point position of the bow grip in relation to the center of the bow as well as variations in bow design. Some new recurve bow manufacturers have placed the center of the bow nearer to the cushion plunger hole rather than the traditional pivot point of the bow grip. This difference can create a need for a tiller setting that may be reverse to normal settings.

For ease of understanding the preliminary tiller chart noted in this article, the information will refer only to the common recurve bow center location (pivot point of the grip in the center of the bow) found in most competition recurve bows, such as the Hoyt ,Yamaha, Sky, Nishizawa and others.

### **Why Correct Tiller Settings Are Necessary**

Because the pivot point of the bow grip is in the center of the bow, the archers drawing hand is placed above the bows center. This creates a shorter distance between the fingers of the drawing hand (or arrow nock location) to the tip of the upper bow limb than the distance between the fingers of the draw hand to the tip of the bottom limb.

Since the distance between the draw fingers and the upper limb is shorter, the upper limb will be drawn a further distance than the bottom limb. As the bow limbs approach full draw, the upper limb becomes stronger than the bottom limb because of the longer distance it is drawn. This is the reason most bow manufacturers set the bottom limb slightly stronger than the top limb, i.e. to compensate for the variation in the distance the two limbs travel.



*Figure 2. Sight picture is unbalanced, moving more vertical than horizontal.*

If the tiller is not adjusted correctly it is common to have the bow 'rock' in the hand or the upper limb starts to tilt toward the archer. You will note this reaction when watching archers draw their bow. The bow sight will appear to raise upwards rather than staying on a level plane toward the target. If the tiller setting is not correct, this imbalance will also cause the sight to move up and down in the aiming sequence as shown in Figure 2. If tiller is adjusted correctly the limbs will be in 'dynamic' balance and the sight will remain level as the bow is drawn. Archers shooting incorrectly tillered bows also experience difficulty in keeping the sight pin held in the center of the target as they attempt to draw through the clicker. It may cause difficulty in getting the sight pin 'down' to the center of the target. If the archer has too much tiller they may find that the sight pin wants to stay at the bottom of the bullseye and not easily raised 'up' to the center of the target.

When the bow limbs are in complete balance, the archer will have a much easier job aiming the sight. They will not be fighting against the tendency for the bow to rock upward or downward when approaching full draw. The tiller balanced bow offers increased steadiness allowing the bow sight to stabilize easily on the center of the target. This increased stability often reduces shot time and allows the archer to draw the arrow through the clicker with greater confidence.

### **How to adjust**

There are two things to check for when determining the correct bow tiller for a particular archer. First, stand to the side of the archer and have them draw the bow back to anchor, without the draw hand going below the anchor point. That is, draw the bow straight back without dropping the drawing hand under the chin to anchor. Many archers pull slightly below anchor in order to come into full draw, but for this particular exercise, just have the archer aim at the center of the target and draw the bow directly to the chin. If the stabilizer or sight rise slightly during the draw, increase the poundage of the lower limb (decrease the distance from the string to the base of the bottom limb or base of the riser as shown in figure 1) by 1/16".

Continue these adjustments until the stabilizer or bow sight remain level (or very nearly level) when drawing the bow. The next step is to have the archer shoot several arrows with their normal technique. Have them go through their normal shot sequence while you are standing behind them. Watch their sight pin to observe the aiming pattern. You will not be able to see the sight on the target, but you will be able to see the sight on some object in the distance.



*Figure 3. Sight picture is equal in horizontal and vertical movement.*

If the bow sight raises slightly when drawing and the sight pattern is mostly up and down, as shown in Figure 2, increase the bottom limb poundage slightly. That is, decrease the distance between the string and the bottom limb by 1/16" and have the archer shoot again. Watch the aiming pattern again.

Observe the sighting pattern for any changes. The total sight motion should start to reduce with a tendency toward more equal motion in all directions rather than a vertical or oval pattern. Continue these adjustments until the sight moves the same distance up and down as it does from side to side, as shown in Figure 3. At this point the archer should now feel that the bow pressure in the hand is more stable and the bow is easier to draw and aim.

In order not to change the actual draw weight of the bow, it will be necessary to make equal adjustments between the top and bottom limb. To do this, make the same amount of adjustment for the top limb and bottom limb in equal but opposite directions. This will change the tiller without changing the bows draw weight. When adjusting tiller, it will be necessary to make minor nocking point adjustments, but these adjustment should be very small.

**Good Shooting!**

## **Recurve Bow Length of 66" to 70"**

<b>Draw length:</b>	<b>Approximate Tiller Range</b>	
24" to 25"	1/16" to 3/16"	(1.5 to 5 mm)
25" to 26"	1/16" to 3/16"	(1.5 to 5 mm)
26" to 27"	1/8" to 1/4"	(3 to 6.5 mm)
27" to 28"	1/8" to 5/16"	(3 to 8 mm)
28" to 29"	1/4" to 3/8"	(6.5 to 9.5 mm)
29" to 30"	1/4" to 7/16"	(6.5 to 11 mm)
30" to 31"	1/4" to 1/2"	(6.5 to 12.5 mm)
31" to 32"	1/4" to 1/2"	(6.5 to 12.5 mm)

## Barrs and Dykman win Shenk Award; Wilde and Pearson earn Easton Award

**Jay Barrs** of Salt Lake City, Utah and **Janet Dykman** of El Monte, California were presented with the 1997 Shenk Awards, while **Dee Wilde** of Pocatello, Idaho and **Becky Pearson** of Vail, Arizona were honored with the inaugural Easton Awards at the National Target Championships Awards Banquet in Canton, Michigan in August.

For Barrs, it marked the seventh time he has won the award, including his third straight win. Dykman walked away with her second Shenk Award.

The Shenk Award was established in 1980 to recognize Clayton Shenk for his many years of service to the NAA. The award is presented each year at the NAA Target Championships to the male and female archer in the Olympic Bow division with the highest accumulated scores from the U.S. Indoor, U.S. Field and U.S. Target for that year. Archers are considered from the Adult, Masters, College and FITA Competitive divisions.

The Easton Award, named in honor of FITA President, Jim Easton, is the Compound Bow equivalent of the Shenk Award, using the same criteria for selection of its recipients.

Barrs recorded scores of 1151 at the U.S. Indoors, 656 at the U.S. Field and 2596 at the U.S. Target Championships for a total of 4403. Dykman posted a total score of 4292 by shooting 1155 at the U.S. Indoors, 531 at the U.S. Field and 2606 at the U.S. Target Championships.

Wilde scored totals of 1179 at the U.S. Indoors, 629 at the U.S. Field and 2632 at the U.S. Target Championships for a total of 4440. Pearson totaled 1161 at the U.S. Indoors, 568 at the U.S. Field and 2593 at the U.S. Target Championships for a cumulative score of 4322.



Jay Barrs - SLC,UT



Janet Dykman - El Monte, CA



Dee Wilde - Pocatello, ID



Becky Pearson - Vail, AR

## Williams and Harris honored by USOC

Archery coaches John Williams (Fullerton, CA) and Glen Harris (Seattle, WA) were recently honored at the 1997 United States Olympic Committee's annual awards banquet for National and Developmental Coaches. The event took place on September 13 in Indianapolis. Williams and Harris were nominated by the NAA Coaches Development Committee.



**In 1996, Williams was one of five National Archery Coaches** named by the NAA Coaches Development Committee to serve as head coaches for the 1997 world archery events. He was selected to take the 4th World Indoor Team to compete in Istanbul, Turkey, in March.

Under his leadership, the United States team captured two gold and two silver medals at the World Indoors. In the men's individual compound bow competition, gold and silver honors were earned along with a world record 36-arrow finals total by Dee Wilde. In the men's individual Olympic bow division, Shane Parker was a silver medal winner. In the men's compound ranking round, the U.S. placed all three of its archers in the top 10. In the women's team event, the United States team of Glenda Penaz, Theresa Berthold and Jamie Van Natta took the gold with a strong finish. In the individual ranking round, the U.S. women all placed in the top seven.

Williams has been working with archery talent for a number of years. Prior to writing *Archery for Beginners* in 1976, he was busy earning archery titles at all levels. At the Olympic Games in 1972 he took home the gold. This was a renowned accomplishment, since it also marked the return of archery to the Games.

Williams is certified as an NAA Master Coach and serves on the NAA Coaches Development Committee, He is currently working as a project leader on the archery competencies project for the USOC. He also served as head coach at the 1997 U.S. Archery Team Camp.

In addition, Williams works with young archers and conducts archery programs and activities at the Little John's Archery JOAD Club in Santa Maria, California.



**Harris was selected in 1996 to serve as one of 15 National Development Coaches** by the NAA Coaches Development Committee. In 1997, he served as a Junior Olympic Archery Development (JOAD) Camp Coach, earned Level 4 National Coach Certification and founded the Targeteers JOAD Club and the Emerald City Archery Academy in Seattle.

Harris was a member of the support staff for the 1996 U.S. Paralympic Archery Team. He was recently named as Wheelchair Archery National Coach and was a 1997 coaching staff member for the U.S. Archery Team Camp. Harris organized the Shoreline Community College Archery Team and, acting as their team advisor and coach, successfully took his team to the 1997 U.S.

Intercollegiate Archery Championships. One team member, John Mulholland, received the 'Best New Male Archery Award' and another, Roman Spromberg, was ranked 23rd overall. The Shoreline

team is now ranked 10th in the country.

Harris also coordinates and conducts NAA Level 1 and 2 Archery Instructor Courses. He is a member of the International Shooting Coaches Association International Elite Training Camp and a consultant to the city of Duvall, Washington, to establish a public archery range and a club in the community. Harris periodically writes coaching articles for the NAA newsletter, *Nock Nock*, and other archery publications.

## Junior United States Archery Team Offers Glimpse of Future Stars

Archery's brightest young shooters, ages 18 and under, headline the 1997 Junior United States Archery Team. Junior members must be ranked in the top five for Olympic or Compound Bow. The top-ranked Junior division archers (Olympic Bow only) also qualify. Ranking points were determined by placement at the National Target Championships plus the two highest finishes at one of seven other selected tournaments throughout the year (JOAD National Indoor, National Indoor, JOAD National Outdoor, North Regional JOAD, South Regional JOAD, East Regional JOAD, West Regional JOAD). FITA Competitive class champions (Olympic and Compound) and the Junior division champions (Olympic Bow only) automatically qualify for Jr. USAT. Team members must also pass a cardiovascular fitness test. The 1997 Jr. USAT rosters are as follows:

### **OLYMPIC BOYS**

1. Brent Boilman (Elma, NY)
2. Christopher Shull (Columbus, OH)
3. Brad Fiala (Chatham, NJ)
4. Guy Krueger (Blessing, TX)
5. Caleb Heller (Wilton, NH)
- (Junior) Phillip Accetturo (Denver, CO)

### **OLYMPIC GIRLS**

1. Karen Scavotto (Enfield, CT)
2. Leah Clawson (Evans City, PA)
3. Dawn Chudy (Media, PA)
4. Stephanie Crosby (Cheektowaga, NY)
5. Lorinda Cohen (Angola, NY)
- (Junior) Susan King (Oxnard, CA)

### **COMPOUND BOYS**

1. Jeremy Snyder (Toledo, OH)
2. Logan Wilde (Pocatello, ID)
3. Adam Teal (Topeka, KS)
4. Adam Wheatcroft (Clarkston, MI)

### **COMPOUND GIRLS**

1. Ashley Kamuf (Dale, IN)
2. Christie Bisco (Raymond, ME)
3. Jahna Davis (Helena, MT)
4. Erin Thomas (Sylvania, OH)
5. Bruce Ramsey (McDonald, PA)

## NAA Names 1997 United States Archery Team

The National Archery Association has announced the rosters for the 1997 United States Archery Team. To qualify for USAT, an archer must be ranked in the top eight for Olympic Bow, or the top five for Compound Bow. Ranking points were determined by placement at the two required tournaments (World Target Trials and National Target Championships), plus the highest finish at one of the six other selected tournaments throughout the year (World Indoor Trials, National Indoor Championships, Texas Spring FITA, Arizona Cup, Gold Cup, National Field Championships). Archers received one point for first place, two for second, etc. Senior division champions at the National Target Championships and individual medalists at the World Indoor and Outdoor Championships automatically qualify for USAT. The USAT members were also required to shoot one qualifying score between August 9, 1996 and September 1, 1997 (Women: 1230 FITA or 612 half-FITA; Men: 1250 FITA or 625 half-FITA) and pass a cardiovascular fitness test.

The 1997 USAT rosters are as follows:

### OLYMPIC MEN

1. Butch Johnson (Woodstock, CT)
2. Rod White (Hermitage, PA)
3. Justin Huish (Simi Valley, CA)
4. Jay Barrs (Salt Lake City, UT)
5. Jason McKittrick (Moore Hill, IN)
6. Ed Eliason (Stansbury Park, UT)
7. Vic Wunderle (Mason City, IL)
8. Mike Gerard (Bluffdale, UT)
9. Shane Parker (Hurdle Mills, NC)

### OLYMPIC WOMEN

1. Janet Dykman (El Monte, CA)
2. Ruth Rowe (McLean, VA)
3. Judi Adams (Scottsdale, AZ)
4. Lindsay Langston (Mesa, AZ)
5. Courtney Kane (Phoenix, AZ)
6. Janet Barrs (Salt Lake City, UT)
7. Leslie Howa (Park City, UT)
8. Lori Mitchell (Gilbert, AZ)

### COMPOUND MEN

1. Kevin Eldredge (Roosevelt, UT)
2. Dee Wilde (Pocatello, ID)
3. Jeff Button (Cottage Grove, WI)
4. Roger Hoyle (Cedar City, UT)
5. Peter Swanney (Bradford, MA)

### COMPOUND WOMEN

1. Diane Hooper (Lockport, IL)
2. Tara Swanney (Bradford, MA)
3. Jamie Van Natta (Davisburg, MI)
4. Sally Wunderle (Mason City, IL)
5. Ann Bakken (Barneveld, WI)

## The World Nature Games

*by Rick McKinney*

In one hand, slipping from the sweat, is your bow. The other carries your map and compass. Your back quiver holds the arrows you pray won't fall out while you are running through the mud and past the trees of the forest. Running in reeds 6 to 8 feet tall with only a small path that led to other paths give you a wondering idea if you were headed in the right direction or did you take a wrong turn? Once you get out of the reeds there is a target waiting for you. Shoot the three arrows quickly, run to the target, score, pull the arrows, run back and get into a boat and row your way across the lake. On the other side is another target. No time to recover from the intense pain of rowing quickly to keep the time to a minimum. Getting to the position to shoot, you try to draw your bow back to find new pain and exhaustion. Trying to keep your breathing to a minimum, realizing the better the score the more time is deducted from your running time, you get the three arrows shot and hurry to the target to score and pull. Off to the next target. A mile and a half later, you get to the target hoping there is water there in order to sustain your needs and trying not to take too long because every second counts.



*This was the Brazilian's idea of a moving target. The archers had to run up to the target, shoot an arrow and catch up to the car to shoot another.*

And so it went for most of the archers in Iguassu Falls, Brazil where a 'Green Olympics' was introduced in this distant area near the Paraguay and Argentine border with over 700 athletes from 60 countries participating in 13 sports. The purpose of the Green Olympics was to celebrate man's interaction with the environment, and sports that promote contact with nature.



Archery was chosen as one of these sports with the combination of orienteering, using a map and compass to direct the archer to the next target and running.

Each male archer was given a 36 pound generic wood bow with only a string and an arrow rest. You were given full length arrows that were definitely not the right size. Women were given 34 pound bows, and arrows three inches shorter than the men. Everyone was treated equally. All were given back quivers and told to get their bows set up with no sights. The distances were unmarked but in the range of 10 to 30 yards. The scoring was plain and simple. An inner bulls-eye gave you two minutes off your time. The next ring out gave one minute off. The next ring gave you 30 seconds, the next 20 seconds, the next 10 seconds and the last ring gave you no time. If you missed the target they added 20 seconds to your time!

Most of the archers worked on trying to get some 'barebow' markings by 'walking' the string on their face. Others used the 'gap' system using the point as the sight pin and aiming below the target. It took about a half a day to get some good idea of what to expect out in the jungle. Unfortunately most people are not prepared to draw, anchor and aim while breathing hard and feeling exhaustion.



At an average of four miles per course, there was two courses per day with 10 targets at each course. The archer had to get through the courses as quickly as possible, going to the targets in sequence. If you skipped a target you were given the longest time of the day on the course with an addition of 10 minutes. Many archers got lost, many hobbled back in after the long day. Others treated their cuts, scrapes and bites from the trees, brush and insects. Blisters were common. The smell of 'Ben-Gay' was in the air after the first day. Most athletes tried to keep their muscles from screaming out in pain. However, after all three days only one archer could not finish after injuring his leg. Forty-five out of 46 archers finished all six courses - almost 30 miles of intense effort. It just shows the competitive spirit archers have.

The oldest athlete was Franc Vengust of Slovenia at 56 years old. Not only did he finish great (11th), during the rounds an archer got lost. Franc just finished his run, took off his archery gear, ran out after the lost runner and told him to turn around and go in the right direction. Franc came back and told the people that he found the runner and he would be here in about 35 or 40 minutes. A true sportsman!

The Netherlands brought a world-class runner who had never shot a bow before, Marco Koers, who finished 6th at the World Championships in the 800 meter run (he finished 12th here). They also brought in the world barebow champion, Rensco Van Wees, who finished 3rd. It was clear that shooting experience was an advantage.

There were compound archers competing as well, Jean Paul Laury of France finishing 14th. The top female runner was Tatiana Muntian of Ukraine who finished in 15th place; there was no separate

class for women. The top traditionalist was Lucien Labrosse of Canada who finished 32nd. But the big talk was about the man who was not only shooting fairly well, but running almost as fast as the professional runner: Sebastien Flute, 1992 Olympic Gold Medalist. It was obvious that he was in excellent shape when he ran without effort and was able to keep his arrows near the gold most of the time. Victor Wunderle of the USA finished 2nd, 31 minutes behind Sebastien and Van Wees came in 25 minutes behind Victor.



*Sebastien Flute came away with a cool \$10,000 for his first place finish.*

Many of you may wonder what in the world this was for and why would archers of all kinds from all over the world would take on such a challenge. As one of the contenders, I must say that I questioned that myself. However, after questioning it, I must admit that it was one of the most exciting and fun events I have ever experienced in archery. Were we insane? Most of the archers said they really enjoyed it. Some European officials said it was so exciting that they want to try to develop it in Europe. I agree. It brings to the sport something that has been so hard to show. Archers are athletes.

What was the motivation? First place was a cool \$10,000. Sebastien took home the first prize and the respect of the archers for his ability to show the world that being in excellent physical condition is an advantage to an archer. Victor took home \$3,000 while Van Wees received \$2,000. They paid all the way to 8th place where Juan Carlos Holgado of Spain (Spanish National Coach Coordinator and 1992 Olympic Team Gold Medalist) came away with \$250.

This event is being planned every four years in the region of Parana, Brazil. With this new mixture of running, map reading and shooting, archery could find another sport that could be considered in the Olympic Games. This may not happen right away, but at least it is a possibility to mix a sport with another one that could make the world see what archery truly is; The mental calm of an athlete.

## **Top 10 Results**

- 1. Flute, Sebastian - FRA**
- 2. Wunderle, Victor - USA**
- 3. Van Wees, Rensco - NED**
- 4. Arias Castillo, Ismely - CUB**
- 5. Kolesnik, Yaroslav - ISR**
- 6. Lipponen, Jari Matti - FIN**
- 7. Rytter, Jan - DEN**
- 8. Holgado, Juan Carlos - ESP**
- 9. Vermeiren, Paul - BEL**
- 10 McKinney, Richard - USA**

# Archery Participation in the Scouts Program is on the Rise: Scouts Honor!

*by Denise Parker*



Would you have guessed that through one program alone over 37,000 kids were introduced to archery? 37,026 young men between the ages of 12 and 18 earned the coveted archery merit badge from the National Boy Scouts Program in 1996, which was up nearly 3,000 from the previous year. Interesting when you consider that the archery merit badge is one of the hardest merit badges to achieve. Take a little test, can you do the following? The Boy Scouts who earned their archery merit badge can.

## **Do The Following:**

1. Name and explain the archery safety rules.
2. Tell about the local and state laws on ownership, use and registration of archery tackle.
3. Name and point out the parts of an arrow.
4. Name and point out the parts of a bow.
5. Describe and show how to use an arm guard, shooting glove, finger tab and quiver.
6. Explain proper care of and storage of the bow, bowstring, arrows, and leather items.
7. Make a bowstring and use it.
8. Make one complete arrow from a bare shaft.
9. Explain the following terms: cast, bow weight, string height, aiming, spine, mechanical release, freestyle and bare bow.
10. Describe the different types of arrows.
11. Show the nine basic steps of good shooting method.
12. Locate and mark with dental floss, crimp on, or other method, the nocking point on a bow string.

**NFAA: Shoot with bow and arrows, using a finger release, one round from any one of the following NFAA field rounds and indoor rounds:**

A field round of 14 targets and make a score of 60 points. An indoor round and make a score of 50 points. A 900 round and make a score of 225 points. An indoor FITA round and make a score of 80 points.

**OR as a member of the NFAA Junior Division, qualify as a Cub or Youth by earning 100 score Progression Patches.**

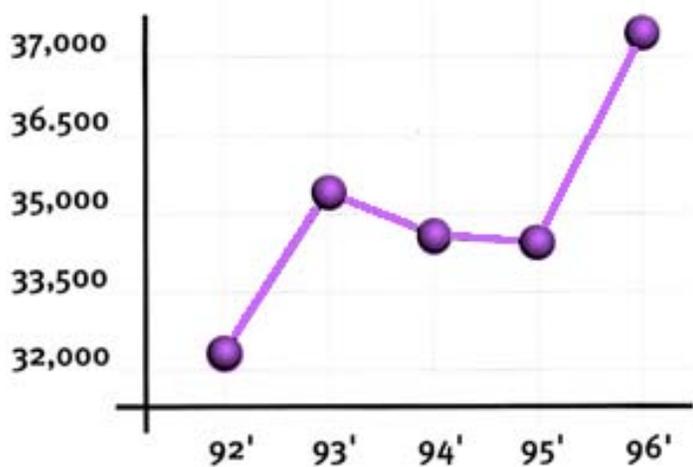
NAA: As a member of a National Archery Association (NAA) Junior Olympic Archery Development Club, qualify as a Yeoman, Junior Bowman and Bowman.

**Explain The Following:**

1. The difference between field and target archery
2. Field round, hunter round, and animal round.
3. Scout field round.
4. Indoor field rounds.
5. 900, Junior 900, Easton and Junior Easton rounds.
6. Indoor FITA rounds I and II.
7. FITA and Junior FITA rounds,
8. Junior Olympic qualification rounds.
9. The importance of obedience to a rangemaster or other person in charge of a range.

Whoa! Those are some tough requirements - how did you fare? Nevertheless, the program put out approximately 37,000 young men last year who passed these strenuous exams. What a great start they have in the sport. The National Scouts Program (12-18 years old) had 1,400,000 enrolled last year. When you add that number, to the 1996 Cub Scouts (7-11 years old) number of 2,100,000, you have a whole lot of prospective archers. How does archery participation fare against some of the other popular activities offered to Boy Scouts? Take a look:

**Archery Scout Participation**



Activity	Badges awarded 1996
Swimming	93,488
Camping	73,831
Canoeing	54,697
Wood Carving	48,234
Rifle Shooting	37,029
<b>Archery</b>	<b>37,026</b>
Fishing	29,726
Rowing	27,330
Orienteering	26,018
Shotgun Shooting	19,713
Forestry	14,986
Photography	4,715

Archery fares very well, especially when you consider the many choices that are offered to scouts while they are in the program. The Boy Scouts of America is a great organization that is dedicated to supplementing and enlarging the

education of youth. From the organization's inception in 1911, 805,000 young men have achieved the archery merit badge. The merit programs are designed so the scout can explore more than a hundred fields of skill and knowledge, gaining self-confidence which comes from overcoming obstacles and achieving set goals. If you want more information on the Boy Scouts program in your local area call (972) 580-2000 or look in your local phone book for the council in your home town.



# Continuing on about Mental Imagery

Part 2 of a 2 part article

*by Lisa Franseen, Ph.D.*



In Part 1 of this article, I briefly discussed the current research that has been done in the area of mental imagery. The bottom line is that research shows that a combination of mental practice and physical practice leads to better performance than just physical practice alone. What is really amazing is that mental practice alone shows more improvement than no practice at all! In Part 1, I also highlighted the most common types and uses of imagery which go far beyond just visualizing yourself executing a perfect shot. In Part 2 of this article, I will provide specific guidelines on how to develop your visualization skills and incorporate imagery into your actual shooting sequence.

Mental imagery is a skill that improves with practice, just like your shooting skills. As Terry Orlick says in his book *'The Pursuit of Excellence: How to Win in Sport and Life Through Mental Training'* (1990), "Mental imagery often starts out simply, as you think through your goals, your moves and your desired competitive performances. With practice it will develop to the point where, through imagery, you can draw on all of your senses to pre-experience the achievement of many of your goals, moves, competitive performances and coping strategies." The best place to begin practicing is at home, in a quiet place (turn off your phone and ask your family not to disturb you) where you won't be interrupted. Set aside five minutes per day, either before you go to practice or before bedtime, and try to imagine the place where you practice your archery. Gradually increase the complexity of what you are visualizing and increase the amount of time that you spend practicing to

at least 15 minutes a day. It can be helpful, instead of lying down, to stand in the position you take when you are shooting and actually move your body while doing the imagery. This will help you to feel what you are doing in addition to seeing it. As your imagery skills improve and you are practiced at feeling the movement, the sensations that come with the movements will occur even when you are lying down or are sitting still. It can also be helpful to watch another archer who is very skilled at shooting and then try to see yourself shooting as they do. It is a form of copying, or learning through observation, but in this case there are no copyright laws!

Visualization is most helpful, once you feel you have mastered it at home or off the archery field, when it becomes a part of the execution of your shot. Many elite archers, before each shot, will look at the target, then close their eyes and visualize themselves shooting a perfect shot. Imagery clears and quiets your mind (which will help get rid of any negative thoughts!) and helps you to focus on what it is you are doing, as well as helps to improve your performance. Following is a revised version of an actual visualization 'script' used by Dr. Franseen in her work with several elite archers. Ask your coach or a friend to read it to you while you are sitting or lying down in a comfortable position. You will want to have it read very slowly and softly, with to pauses at the '...'.

Close your eyes and begin by focusing on your breathing. Just spend a moment noticing the air moving in, your lungs and abdomen rising with air ... and moving out, your lungs and abdomen falling. Now take a long, slow deep breath ... allow the air to go as deeply as it will and then exhale slowly until all the air is out of your lungs and diaphragm. Take two more deep breaths and, each time you exhale, say to yourself 'relax' and you will begin to feel your muscles letting go ... relaxing ... letting go. Inhale deep, slow ... and exhale ... 'relax.' Feel your whole body letting go ... all the muscles throughout giving way to relaxation as they release any tension. Continuing to breathe comfortably, slowly and relaxed, your whole body now feeling more relaxed ... heavier and even more relaxed. Now, in this very relaxed place in your mind's eye ... take yourself to the archery field where you practice. You have just arrived at the field, bow case in hand ... look around you and see what it looks like ... how it smells ... how it feels when you walk onto the grass ... the temperature ... notice the people there. Imagine yourself finding a place to assemble your bow ... the things going on around you as you put it together. Feel yourself going through your usual warm up ... stretching ... feel your muscles stretching ... getting warmer. You begin to think about your shooting and what you want to accomplish today ... You notice yourself feeling motivated ... and ready

to shoot, focused and confident that it will be a good practice. Imagine yourself putting on your quiver ... leaning over to pick up your bow ... and walking to the shooting line. Feel yourself planting your feet in position ... you notice your weight on the ground, the grass beneath ... and you look over to your target. In preparation of beginning practice, you decide to ready yourself ... and to clear your mind by taking a deep, slow breath ... inhale ... and exhale ... and in your mind's eye feel and see yourself setting your arrow ... pulling up your bow ... hand on the string ... pulling back, anchoring ... aiming ... releasing ... and following all the way through with the shot. Now that you have visualized the perfect shot, you are ready to perform. In your mind's eye ... feel and see yourself setting your arrow ... pulling up your bow ... hand on the string ... pulling back anchoring ... aiming ... releasing ... and following all the way through with the shot. Good job!

As you improve in your ability to visualize clearly and with control, you can begin to use it for many other purposes. Read on and see if you might be able to improve any of the following areas through the use of mental imagery.

### **Learning new skills and refining old skills:**

Use imagery to help you learn new skills in the execution of your shot or to refine old ones. In your visualization 'script', develop a specific shooting sequence, focusing on those things that you are trying to improve. For example, it may be a relaxed bow hand, back tension, shoulder placement, anchoring or your follow through. Incorporate these into the imagery, visualizing yourself performing these skills correctly and with ease and confidence.

### **Increasing motivation:**

I have worked with several archers who love the thrill of competition but complain of getting bored at practice. They have a difficult time motivating themselves to practice or work on specific skill areas. Imagery can be used to increase your motivation. Picture yourself looking forward to practice, enjoying the sport not just for the competition but for your ability to do it. Imagine yourself in practice focusing on those things that you like about archery. It may be being out-of-doors, being with friends, getting away from other responsibilities in your day, the quiet and solitude or the accomplishment of meeting your goals. Imagine yourself talking to those that might help you to be more motivated, like your coach, friends or parents, and asking them for ideas.

### **Increasing confidence:**

Many archers only feel confident when they are shooting well. When they are not shooting as they expect themselves to, their confidence nose-dives. Your confidence does not have to depend on how

you're shooting, you can feel confident in your ability to stay calm and to overcome a dip in performance. If you practice visualizing yourself staying confident despite your score, it will help you to be more confident while you shoot. Good, consistent archers must do this, because if they lose their confidence every time they shoot less than a 9 or 10, they wouldn't be good, consistent archers!

### **Dealing with new situations:**

For those of you who are working your way toward bigger and bigger competitions, visualization can help tremendously in preparing you for tournaments that you have never been exposed to. It can be intimidating and scary to think about shooting a tournament with elite archers for the first time. Most of us get used to competing against many of the same archers, like those in our archery club, and we can approach these tournaments feeling relaxed and confident. Of course, this leads to higher scores and we soon find ourselves off to bigger tournaments. Rather than choke under the pressure of competing against those who you 'think' to be better than yourself, use imagery! Imagine yourself standing right next to and sharing a target with so-and-so-elite-archer (you name him or her), feeling confident, calm and focused. See yourself having fun conversations with him or her as you walk down to the target together. Imagine yourself looking down the line of archers, seeing the faces of those archers who have led the sport for years and not feeling intimidated but self-assured. In your mind's eye, you say to yourself, "I deserve to be here as much as anyone else" and you believe it as you say it.

### **Focus and concentration:**

Imagery can also help archers maintain their focus and concentrate while ignoring all the possible distractions. The media, parents and coaches, your competitors, the scores, the weather, fatigue and many other factors can potentially distract you and pull your focus from the execution of your shot. In your visualization 'script', be sure to include some of these distractions and then see yourself overcoming them, not allowing them to distract you, and as you regain your focus on the task at hand. As Terry Orlick stated in his book, "If, in your mind, you can see yourself, hear yourself, feel yourself, and think yourself through situations in a constructive manner, you will be better prepared to deal with these situations the way you would like to approach them in the real world."

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.